

UNITED STATES OF AMERICA

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DEPARTMENT OF AGRICULTURE
AND
DEPARTMENT OF HEALTH AND HUMAN SERVICES

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DIETARY GUIDELINES ADVISORY COMMITTEE

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SECOND MEETING

+ + + + +

FRIDAY, JANUARY 30, 2009

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The meeting came to order, at 8:00 a.m., in the Jefferson Auditorium of the USDA South Building, 1400 Independence Avenue, S.W., Washington, D.C., Dr. Linda Van Horn, Chairperson, presiding.

PRESENT:

LINDA V. VAN HORN, PHD, RD, LDCHAIR
NAOMI K. FUKAGAWA, MD, PHD, VICE CHAIR
CHERYL ACHTERBERG, PHD, MEMBER
LAWRENCE J. APPEL, MD, MPH, MEMBER
ROGER A. CLEMENS, DRPH, MEMBER
MIRIAM E. NELSON, PHD, MEMBER
SHARON M. NICKOLS-RICHARDSON MEMBER
PHD, RD
THOMAS A PEARSON, MD, PHD, MPHMEMBER
RAFAEL PEREZ-ESCAMILLA, PHD, MEMBER
XAVIER PI-SUNYER, MD, MPH, MEMBER
ERIC B. RIMM, SCD, MEMBER
JOANNE L. SLAVIN, PHD, RD, MEMBER
CHRISTINE L. WILLIAMS, MD, MPH, MEMBER

ALSO PRESENT:

CAROLE DAVIS, CO-EXECUTIVE SECRETARY, USDA
KATHRYN MCMURRY, CO-EXECUTIVE SECRETARY,
DHHS
ROBERT POST, ACTING EXECUTIVE DIRECTOR,
CNPP,
USDA
CAPT. SARAH LINDE-FEUCHT, DHHS
JOAN LYON, CNPP, USDA

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1 P-R-O-C-E-E-D-I-N-G-S

2 8:11 a.m.

3 CHAIR VAN HORN: Good morning.

4 Yesterday we heard public oral
5 testimony and data presentations and an update
6 from the Sodium, Potassium, and Water
7 subcommittee. We had an excellent discussion
8 and lots of interesting feedback.

9 So today we are going to cover the
10 remaining six topics. Some of the cross-
11 cutting issues I mentioned yesterday may come
12 up during these discussions.

13 We have scheduled 45 minutes to an
14 hour for each topic area, and some discussion
15 may be warranted between subcommittees for
16 cross-cutting issues.

17 With that, I am going to turn the
18 floor over to the Chair of the Nutrient
19 Adequacy subcommittee, Dr. Shelly Nickols-
20 Richardson.

21 DR. NICKOLS-RICHARDSON: On the
22 first slide, just to acknowledge other members

1 of the Nutrient Adequacy subcommittee, Cheryl
2 Achterberg, Naomi Fukagawa, Miriam Nelson,
3 and Joanne Slavin have been working.

4 We have had three conference calls
5 to talk about components of the nutrient
6 adequacy area.

7 I will refer to the last part of
8 the slides. One of the first things that I
9 think we have really done is to identify our
10 sort of broad research areas in which the
11 questions fall. So we have identified several
12 areas.

13 One is just the shortfall
14 nutrients, food pattern flexibility, dietary
15 patterns, dietary behaviors and food
16 environment, specific nutrient needs, and then
17 nutrient adequacy within range of dietary
18 protein intake. Then, lastly, nutrient
19 composition of foods and bioavailability of
20 nutrients. That is the last slide.

21 But to get started with what those
22 broad questions mean then, we did look at the

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1 2005 Dietary Guidelines and those questions.
2 Again, we did identify our broad-scope
3 questions.

4 There are some new research
5 questions that have emerged that are
6 specifically related to or surrounding around
7 dietary patterns, behaviors, food environment,
8 and then the specific nutrients, to update
9 those.

10 So in terms of one of the previous
11 questions, this was the first question in
12 2005, what nutrients are most likely to be
13 consumed by the general public in amounts low
14 enough to be of concern? Our task here is
15 really to identify shortfall nutrients, which
16 I think we had a wonderful presentation
17 yesterday that identified those shortfall
18 nutrients for Americans.

19 So a subquestion related to this
20 is, what are the health effects, then, of --
21 and then inserting whatever the shortfall
22 nutrient happens to be.

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1 So an example of this would be
2 calcium. This is our PICO format. Looking at
3 the primary population, adults, children, and
4 adolescents, we know that there still
5 continues to be inadequate intake of calcium.

6 So, for the overall question
7 related to shortfall nutrients, I reviewed the
8 2005 guidelines again, and it looks like we
9 are still the same. We are on par with how we
10 were five years ago in terms of, what are
11 those shortfall nutrients. So I won't really
12 focus too much on that. Just to say that we
13 will take a look at those, and then, in
14 relation to outcomes, so health outcomes.

15 So this is just an example of
16 calcium, in particular, and then, of course,
17 we will insert each of those shortfall
18 nutrients and take a look at what we know in
19 terms of when those are deficient or lacking
20 in the diet, what kind of health outcome does
21 that have? We don't think that that is likely
22 to change much. So we probably won't spend as

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1 much time on those particular questions.

2 The second question that was
3 included in the 2005 guidelines -- this is
4 actually question No. 4 -- was related to the
5 flexibility of food patterns. So how can the
6 flexibility of food patterns be increased?

7 We believe that this question or
8 the answer to this question won't change too
9 much. So one of the considerations on one of
10 our calls is, should we eliminate this
11 question? We felt that we don't want to lose
12 this component. We want to continue to take
13 a look at flexibility of food patterns, but
14 that it might make more sense to move these
15 subcomponents to other content areas or other
16 questions.

17 So, for example, the lacto-ovo
18 vegetarian food pattern, could we move that
19 into either dietary patterns or can that be
20 moved into carbohydrate and protein, and have
21 it be a little bit more prevalent or a little
22 bit more obvious what the answer to that

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1 particular question is, and how that fits
2 within the overall dietary patterns.

3 Again, looking at nuts, seeds, and
4 legumes, can we switch that also to dietary
5 protein, and that range of protein, and where
6 those proteins come from, animal-based, plant-
7 based, and how that fits into an overall
8 healthy pattern of protein intake, a range of
9 protein intake in those sources.

10 So this is a question where we
11 probably won't address it specifically as a
12 complete question on its own, but try to
13 consider the components.

14 The third aspect of this question
15 was milk and dairy products, and we will
16 continue to take a look at that in relation to
17 calcium and vitamin D being shortfall
18 nutrients.

19 So, just as an example of one of
20 our PICO formats, looking at the question of
21 the milk and milk products, and then what
22 happens with higher or lower levels of milk

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1 and milk product consumption? How do we meet
2 intakes of calcium, vitamin D, potassium,
3 magnesium, three of those which have been
4 identified as shortfall nutrients? So just an
5 example of one of those subquestions.

6 Another question that we are
7 looking at -- and this is really a
8 modification of a previous question, and then
9 moving into some new areas. For the previous
10 question, we think that the recommendations
11 may change. For the new question, obviously,
12 we will be taking a look at that completely
13 from a new set of eyes, fresh eyes, on that.

14 So the previous question was,
15 what dietary pattern is associated with
16 achieving recommended nutrient intakes? This
17 was question No. 2 in 2005.

18 There has been some discussion
19 about what is the operational definition of
20 dietary pattern. That has been discussed in
21 the Science Review Committee. So we are using
22 this operational definition of amount and

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1 types of foods and nutrients in the whole
2 diet, and, again, focusing on dietary rather
3 than diet. So trying to not emphasize so much
4 on the weight loss programs, but taking a look
5 at whole diet total foods.

6 So this has been tweaked a little
7 bit to look at, again, what are the dietary
8 patterns associated with achieving recommended
9 nutrient intakes, but also taking a look at
10 not only micronutrients, but also some
11 phytochemical properties of diets, and then
12 patterns that include things such as breakfast
13 intake, knowing that we need to take a look at
14 this within a fixed energy intake, and keeping
15 in mind that nutrient recommendations have
16 been modeled and patterned for energy intake
17 levels and trying to consider that, and
18 continue to look at nutrient needs within
19 those energy intakes.

20 So one of the PICO formats, to
21 break this down into more specific
22 information, is looking at, for example,

1 compliance with MyPyramid dietary pattern.
2 What does the literature tell us about
3 compliance with the MyPyramid pattern of
4 eating and what are the health outcomes or
5 what are the nutrient intakes specific to the
6 Nutrient Adequacy subcommittee? What do our
7 food groups look like? How does diet quality
8 appear to be based on different dietary
9 patterns?

10 Something that really was included
11 in the last guidelines, and what we would look
12 at in terms of nutrient adequacy, is not
13 looking at individual components of SoFAAS.
14 So, obviously, the saturated fats will be
15 within the Fat subcommittee; added sugars and
16 carbohydrates, and sodium is included then
17 with the Sodium, Potassium, Water group.

18 But what we are looking at is, how
19 does this contribute, then, to overall diet
20 quality, nutrient adequacy of the diet? So
21 taking a look at this as a lump sum, if you
22 will, and what that does to main nutrient

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1 intake.

2 This is where we get into, with
3 dietary patterns, one of the newer questions.
4 What dietary patterns are associated with
5 positive health outcomes? So really looking
6 at health outcomes all the way from healthy
7 growth and development in children to lowering
8 disease risk for cardiovascular. You can read
9 the list here, but those really highly
10 prevalent conditions that we would see, and
11 then premature mortality across the lifespan.

12 Really trying to identify dietary
13 food patterns that have the most robust, the
14 most literature that would give us some
15 guidance here. So suggestions or types of
16 patterns include the DASH diet, MyPyramid,
17 vegetarian eating, and so on and so forth.

18 I am going to pause here a moment
19 and ask if anyone else on the subcommittee
20 wants to add any comments or jump in here. I
21 am specifically looking at Mim.

22 DR. NELSON: I think you are doing

1 a great job. So I would say just keep going
2 on and we could talk about it later, but I
3 think that I don't have any comment at this
4 time, but Tom does.

5 DR. PEARSON: The fatty acid group
6 had a particular question that was very
7 similar to his. We would be happy to ship
8 this to you.

9 (Laughter.)

10 But we had an interest in the
11 evidence relative to the last point, to this
12 robust bodies of evidence. Part of that
13 robust body of evidence has to do with long-
14 term versus short-term evidence. In other
15 words, there's a number of studies with
16 relatively short-term -- with metabolic
17 endpoints. We were obviously interested in
18 those longer-term ones, but that was an issue
19 that, I think one facet I think we would like
20 to see if you could emphasize. Because I
21 think our concern is that the evidence isn't
22 really robust in that greater-than-six-month

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1 area.

2 DR. NELSON: This question is
3 really an overarching question that I think
4 isn't -- I mean, if you look at it closely, it
5 doesn't necessarily need to be in the nutrient
6 adequacy chapter. It is an overarching
7 question around health and dietary patterns.

8 So I think that we just have to be
9 careful that we don't have a duplication of
10 effort. I mean we are asking, Rafael is
11 asking basically the same question in the
12 energy balance one. I think that, when I look
13 at a number of these questions, I get
14 concerned about duplication. So I don't know.
15 At some point, we are going to have to pare
16 down.

17 DR. PEARSON: Yes, I would agree.
18 I think that, after your presentation and ours
19 on energy balance, we might talk about that.

20 DR. NICKOLS-RICHARDSON: Points
21 are all received and well-taken. So we will
22 note those.

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1 Then the next question that we are
2 considering -- and this was question No. 3 in
3 2005, and again, this is a modification where
4 we think that recommendations may change and
5 sort of a new spin on this previous question.

6 So the past question was, what
7 factors related to diet or physical activity
8 may help or hinder achieving recommended
9 nutrient intakes?

10 We are looking at this more from
11 an environmental factor now. So what
12 environmental factors related to diet are
13 associated with achieving recommended nutrient
14 and food group intakes?

15 We are still sort of considering
16 this environment operational definition. So
17 this is a place where I think, again, some
18 cross-cutting aspects -- Mim?

19 DR. NELSON: Yes. If possible,
20 because I think this may need some more
21 discussion, I am going to talk quite a bit
22 about that in the energy balance. I think

1 that, to me, this construct, framework,
2 question is probably even more relevant in the
3 energy balance one. It is a little easier to
4 actually put together. I have a whole
5 framework slide.

6 So if it okay, could we talk about
7 it there?

8 CHAIR VAN HORN: Larry?

9 DR. APPEL: Yes, I was just
10 thinking, this could be very difficult to
11 implement as a question. I am wondering, are
12 you planning on doing your best guess as to
13 factors that might be associated and then
14 targeting your search on those factors? Like
15 -- I don't know -- poverty or --

16 DR. NELSON: Yes.

17 DR. APPEL: -- other things?

18 DR. NELSON: But, Larry, is it
19 okay? I have a whole -- I can, hopefully,
20 frame it a little bit better in the next
21 session.

22 DR. NICKOLS-RICHARDSON: Okay,

1 thanks.

2 So to somewhat answer Larry's
3 question, and know that this will come some
4 more in the next segment, just some of the
5 things we are looking at are things like
6 economy, social/cultural issues,
7 accessibility, availability, advertising,
8 away-from-home eating.

9 It will break some of this down
10 into very specific questions, and I am just
11 going to move on, since I know this is an
12 overarching theme.

13 This is also another overarching
14 theme. So, in terms of behaviors, what
15 individual behaviors related to diet are
16 associated with achieving recommended nutrient
17 and food group intakes?

18 Also, having this operational
19 definition then, looking at what and how much
20 people actually eat. So this will include
21 related subquestions such as portion size,
22 meal frequency. Breakfast is included here,

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1 not only as a pattern, a way of eating, but
2 also as behaviors related to eating. So
3 looking at some of these subquestions.

4 What individual behaviors related
5 to diet are associated with achieving
6 recommended nutrient and food group intakes?
7 Again, looking at the individual behavior such
8 as self-monitoring, things like eating
9 competency, and what does the literature tell
10 us about those people who have high eating
11 competency? Are they better able to meet
12 nutrient needs, specific to this particular
13 subcommittee?

14 Again, things like television
15 viewing, skipping breakfast, snacking, meals.
16 I think that this is also, because it is an
17 overarching theme, we will see some more of
18 this with the energy balance, and even perhaps
19 with other of the Macronutrient
20 subcommittee's.

21 DR. NELSON: But I even wonder,
22 Shelly, if because we are going to be diving

1 so much into this, into the energy balance
2 one, and we have to also be cognizant of
3 meeting your nutrient needs, I am not even
4 sure we need to -- we have so many questions
5 in this subcommittee. I am not even sure that
6 we need to be addressing it here.

7 I wonder if we, in a sense,
8 address it in the energy balance one, and then
9 we coordinate to make sure what we are talking
10 about, you still are meeting your nutrient
11 needs.

12 I just think that, especially
13 given that we are really thinking so much
14 about energy intake -- I don't know. It is
15 just I am worried we are going to have a lot
16 of duplication here.

17 DR. PI-SUNYER: I think the only
18 thing about duplication is that you are sort
19 of taking the lead in both committees. So, in
20 a way, you can handle that, the conflict.

21 (Laughter.)

22 CHAIR VAN HORN: Yes, I wouldn't

1 worry at this point about that.

2 DR. PI-SUNYER: I think, again, we
3 should talk about it after --

4 DR. NELSON: Yes.

5 CHAIR VAN HORN: Yes.

6 DR. NELSON: But if you do this,
7 then there is a NEL question that is around
8 behaviors related to nutrient adequacy versus
9 around energy balance. So it is a NEL
10 question.

11 CHAIR VAN HORN: Right.

12 DR. NELSON: So I think that I'm
13 not sure -- and I mean I agree with you, Xav,
14 but I think that I want to address -- and,
15 actually, this isn't my question, and probably
16 we should reconsider that in Nutrient
17 Adequacy.

18 But it is just that duplication of
19 NEL effort with a different dependent variable
20 that we are looking at, that is sort of the
21 question I have. I think we should be
22 focusing much more on energy intake than we

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1 should be on -- but yes?

2 CHAIR VAN HORN: I think that the
3 point right now is just let's get it out on
4 the table.

5 DR. NELSON: Yes.

6 CHAIR VAN HORN: As far as
7 duplication of effort, we can look to Joan
8 Lyon and her team --

9 DR. NELSON: Okay, great.

10 CHAIR VAN HORN: -- in terms of
11 assisting with that.

12 DR. NELSON: Okay.

13 CHAIR VAN HORN: Because they
14 won't duplicate effort.

15 DR. NELSON: That's great. Great.

16 CHAIR VAN HORN: It all boils down
17 to them.

18 DR. NELSON: Great.

19 CHAIR VAN HORN: So let's let
20 Shelly -- oh, Tom, go ahead.

21 DR. PEARSON: Maybe just as a
22 counterpoint, though, in kind of a

1 representative democracy here, one of the
2 questions that I thought for this Nutrient
3 Adequacy group, if we are going to have the
4 attention to the obesity epidemic here, the
5 question is maintenance of nutritional
6 adequacy in a setting in which there will be
7 downsizing of intakes.

8 DR. NELSON: Right.

9 DR. PEARSON: I would like to see
10 that somewhere here --

11 DR. NELSON: Absolutely.

12 DR. PEARSON: -- because for us to
13 fix one problem and gain six others is --

14 DR. NELSON: No, no, no, no.
15 Absolutely, yes.

16 CHAIR VAN HORN: I think we are
17 all saying the same thing.

18 Sorry, Cheryl. One second.

19 Also, I have been asked to make
20 sure everybody identifies themselves when you
21 speak because the transcriptionist is having
22 trouble identifying our voices.

1 But the point I think that has
2 been made, which I think is the essential
3 thing, is we are still talking about, what is
4 the minimum essential intake needed to meet
5 the nutrients that we need?

6 Then the energy balance question
7 kind of gets overlaid on top of that, I think.
8 That is when we start talking about
9 discretionary calories and all of that.

10 So I think right now let's let
11 Shelly and her group get the nutrient adequacy
12 issues on the table, and then I think we can
13 talk about how to make sure we are balancing
14 it, once we get to the second presentation.

15 Does that seem right? Cheryl?

16 DR. ACHTERBERG: The only word I
17 wanted to interject here is integration. It
18 is not so much, in my mind, the overlap.
19 There is an overlap, but what is key here is
20 the integration of those two pieces. So if
21 that is what we keep in mind, it will work.

22 DR. NICKOLS-RICHARDSON: Okay.

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1 Just to clarify, Mim is part of this group.

2 DR. NELSON: I am part of this
3 group, yes.

4 DR. NICKOLS-RICHARDSON: So we
5 have had really, really good conversations
6 centering around this. Again, it is putting
7 the pieces together and making it all work.

8 So part of what we saw yesterday,
9 and the question was, can we meet nutrient
10 needs, given different calorie or energy
11 intake levels, and the answer is yes. So I
12 think we are addressing that, and we will make
13 sure we look at it from that standpoint.

14 This is just an example of a PICO
15 format, that if we go down this pathway and
16 start looking at some of these subcomponents,
17 this was just one related to eating
18 competency.

19 Again, I didn't try to bring the
20 whole exhaustive list of potentially PICO
21 questions, because there are many from this
22 subcommittee, but just some examples here.

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1 One of the prior research
2 questions in 2005 is: are special nutrient
3 recommendations needed for certain groups? We
4 think that some of the recommendations here
5 may change. We plan to conduct some updated
6 literature reviews. The questions, again,
7 will center around what we have heard
8 yesterday about our shortfall information.

9 There were some previous topics:
10 women and iron, individuals over the age of 50
11 and vitamin B12, that I don't know that we
12 quite heard the data on those particular
13 topics, but we can dig into the database and
14 the information and see if those need to be
15 addressed again or not.

16 So, just as an example, this is
17 looking at the subquestion of dietary iron
18 intake in women and adolescent females. If we
19 need to address this question again, we will,
20 but it is probably likely that the
21 recommendations won't change based on that.

22 Part of this question is, what are

1 some of the newer areas? So this is a new
2 research question.

3 Specific to folate, is folic acid
4 intake in the U.S. post-fortification era
5 related to any healthy or unhealthy outcomes?
6 This has actually been looked at with NEL. So
7 there has been a search-and-sort plan
8 conducted. So this particular question is
9 already moving down its pathway.

10 So this is looking specifically
11 at, across the lifespan, what are some of the
12 health implications or health outcomes related
13 to need for folate during different stages of
14 the lifespan, but then what is happening with
15 the higher folate intakes due to
16 fortification?

17 Mim, I am going to turn this over
18 to you to see if you have anything else to add
19 to that.

20 DR. NELSON: So this is Mim.

21 Yes, we have been refining the
22 search-and-sort framework for this. I think

1 that the main thing is we are really looking
2 at, what have the benefits been in terms of
3 health and what have been, if any, some of the
4 negative health outcomes? So we are looking
5 at the full spectrum. So we are moving along
6 with it.

7 DR. NICKOLS-RICHARDSON: And this
8 is Shelly again.

9 Vitamin D is another nutrient that
10 we really want to spend some time with. I do
11 want to acknowledge that the Institute of
12 Medicine has established a panel to review
13 vitamin D and calcium. So we will use any
14 public records, public information, that come
15 from that group and use our own set of
16 resources related to NEL and questions that we
17 can ask.

18 But the Committee has decided that
19 we will really sort of slow this question down
20 to allow the IOM time to do their work. Then,
21 whatever public information that we can take
22 from the work of that panel, we will be able

1 to use and will sort of be doing this in sort
2 of a parallel fashion. But, again, this will
3 be sort of one of the last pieces that
4 probably gets dropped into the Nutrient
5 Adequacy subcommittee, just because of the
6 timing of the way things are. That's fine.

7 Any other comments, questions?
8 Mim?

9 DR. NELSON: At some point -- I
10 don't think today -- but we will have to
11 discuss how we are going to deal with vitamin
12 D because either we shouldn't deal with it at
13 all, because of IOM, or we need to actually
14 ask the health question around vitamin D
15 intakes and blood levels.

16 But I think it may be a longer
17 question and we should sort of slow it down
18 and ask it in the summertime.

19 CHAIR VAN HORN: I will jump in
20 and just add about the food issues, you know,
21 sources of vitamin D in the diet, which is, I
22 think, definitely something that people are

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1 going to be interested in. Because regardless
2 of what the IOM comes up with, the focus will
3 be on, where do I find vitamin D in the diet?
4 So emphasizing that, I think, is important.

5 DR. APPEL: Could I make a
6 comment? This is Larry Appel.

7 I thought a little bit about this.
8 If the IOM does recommend a higher intake, I
9 guess there are at least three ways. More
10 exposure to sunlight, increased food, or
11 supplements.

12 I guess in the modeling that has
13 been done, we have always assumed that we got
14 the nutrients through foods, but it is quite
15 possible that, if they decide to go up, that
16 the recommendation would be, well, we really
17 can't do it with our current food supply.
18 We've got to either fortify or ask people to
19 do supplements or ask people to spend more
20 time outside.

21 So it might be that, even if they
22 go up, we are still not going to really change

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1 the food-based recommendations because the
2 food supply at this point doesn't really lend
3 itself to being the vehicle for increasing.

4 DR. NELSON: This is Mim.

5 But there is precedent in the 2005
6 around some micronutrients and potentially
7 needing to supplement them. I mean, for
8 folate and some of the B vitamins, they talk
9 about that. So there is a precedent for that.

10 I agree, I don't know that we are
11 going to be able to get a lot more out of our
12 food supply for vitamin D, but, anyway, it is
13 a complicated issue. It is one I don't think
14 we should talk about today.

15 The only problem I will say is
16 that the IOM recommendations are going to come
17 out after we finish. So that is a little bit
18 of the tricky piece.

19 DR. NICKOLS-RICHARDSON: Okay.
20 Then we move into a new research question for
21 our group. This is, what pattern of dietary
22 protein intake is associated with achieving

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1 recommended nutrient intakes?

2 So, again, the plan is review of
3 the literature, and then being able to model
4 the protein sources, looking at plant -- and
5 animal-based sources, as well as percentage of
6 total energy within. What has been given or
7 established as the adequate macronutrient
8 distribution range for children and adults?

9 I don't think we have anything
10 more specific than that for this particular
11 question.

12 Joanne, did you want to add
13 anything here?

14 DR. SLAVIN: I think this is one
15 that overlaps with our Committee. So it is a
16 good example of -- with the Carbohydrate and
17 Protein Committee, and it is good to be on the
18 subcommittee. So we will have the knowledge
19 of not duplicating effort.

20 CHAIR VAN HORN: Once again, just
21 to throw in, to remind us of a discussion that
22 took place yesterday, I think that, again, the

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1 vegetable protein sources, which kind of cut
2 across both groups, need additional attention
3 in terms of identifying it for the public, so
4 that they understand where those sources come
5 from.

6 DR. PI-SUNYER: This is Xavier.

7 It seems to me that we shouldn't
8 put aside the vitamin D thing. If truly the
9 timeline is that IOM isn't going to come out
10 with their report until after we write our
11 report, then I think we need to deal with it,
12 and deal with it right now. You know, begin
13 to sort of figure out how we are going to do
14 it.

15 DR. NELSON: Well, this is Mim.

16 Xav, we plan to because I don't
17 think -- we are already sort of late because
18 2005 didn't really address the vitamin D
19 issue. So we are already sort of a little
20 behind.

21 I think that the issue is that
22 there will be, actually, some public meetings

1 with the IOM, that we will benefit from their
2 search. We have plenty to do right now. So
3 I think that my plan, unless I am told
4 otherwise, is that we need to address it, and
5 we need to address it as responsibly as
6 possible, but we can gain some information and
7 guidance from some of the work that the IOM
8 Committee is doing. We have a lot of work to
9 do right now. So I think the plan is to sort
10 of start addressing this further in the summer
11 and the fall.

12 DR. APPEL: This is Larry.

13 Maybe we could -- I am not sure
14 this is the appropriate approach, but you
15 could take the tact that we are not going to
16 be setting whatever that level is.

17 DR. NELSON: That's right.

18 DR. APPEL: Okay. But you could
19 phrase a question like, if the level is
20 increased, what are the possible food-based
21 strategies that would accomplish this? Do you
22 need to fortify foods or not? Do you need to

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1 use supplements or not? Or you could say it
2 is not amenable to either, or that it's
3 physical activity.

4 But that might be an end around
5 this, so that we are posed -- that it is not
6 an irrelevant report at the end.

7 DR. NELSON: But, Larry, I think
8 that is the second question. I think if we do
9 it responsibly, the way I understand the work
10 that we should be doing, first, is there a
11 health benefit? Is there any evidence that
12 higher than recommended levels have a health
13 benefit? I think we have to ask.

14 I don't know that we have to
15 actually -- there may be a way -- I have to
16 look at what the evidence is going to say, but
17 I think you have to look at the health
18 benefits first. Then you can ask, how would
19 we actually get that amount?

20 DR. APPEL: Larry again.

21 We might, though, at risk of being
22 at odds though, if we came to the conclusion,

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1 let's say, that we think there is a benefit on
2 X and then it is judged to be equivocal by the
3 other Committee, we might have a little bit of
4 mud on our face.

5 That is why I am thinking that we
6 should -- I think there, obviously, is a
7 signal out there that people are trying to
8 interpret, but whether we can come down hard
9 and say, yes, there should definitely be an
10 increase, I don't think we are going to be in
11 that position because that is the charge of
12 the IOM Committee.

13 Our role I think could be to more
14 say, if they do this, well, then this is how
15 you would do it. It is probably a mixture of
16 both, but --

17 DR. NELSON: Yes.

18 DR. APPEL: -- we could really not
19 come down very hard on whether there is a
20 benefit or not.

21 DR. RIMM: This is Eric.

22 I think that, obviously, they are

1 putting the panel together because they think
2 the last guideline that the IOM set for DRIs
3 is too low. So it is obvious that they are
4 thinking of raising it.

5 When you write a grant, you do
6 power calculations, and you say, if I have
7 this many, this many, or this many, this is my
8 power at this level, this level, and this
9 level. So there's no reason to say that we
10 can't present a few different levels in where
11 we think the evidence suggests there's
12 benefit. That may point the IOM -- we are all
13 going to be reviewing the same data. So it is
14 unlikely to be that different.

15 DR. NELSON: This is Mim.

16 I so agree that I think there's a
17 way to sort of ask the health question and not
18 necessarily answer it with it's got to be a
19 thousand IUs.

20 I think there is evidence just the
21 way you spoke, and then I think we can address
22 more than that here's how we would do it. But

1 I don't think we can just say, if -- you know,
2 I think you've got to ask the first question
3 first, and then you can answer the second one.
4 I think we can do it in a way where we are not
5 going to be specific to a number.

6 CHAIR VAN HORN: IOM's meeting is
7 in July. We had a conference call with the
8 Chair of the IOM Committee. We were told
9 pretty specifically that we wouldn't be given
10 any advance notice or anything like that. We
11 will hear when everyone else hears.

12 So we have to, I agree, continue
13 working and doing the best we can with what we
14 have, but knowing that in July at least there
15 will be additional attention paid, and we can
16 maybe put our finger on the pulse of the
17 direction that things are going, knowing that
18 we have until November before this report is
19 due.

20 There was somebody else here that
21 -- oh, Naomi, go ahead.

22 DR. FUKAGAWA: This is Naomi.

1 I just wanted to sort of agree
2 with Larry from the standpoint that, if we
3 both ask, if both groups ask similar
4 questions, but depending on what literature we
5 get available to us, we may come down with
6 slightly different interpretations of what the
7 health effects are.

8 So I think, even though that is an
9 important starting point, we do still need to
10 perhaps focus ourselves on whether or not our
11 present approaches for dietary patterns,
12 intake, food supply, et cetera, could meet --
13 well, we know we are not meeting what is
14 recommended now. So what can we do to
15 optimize our ability to meet needs, if they do
16 change, if we come down and say we change,
17 rather than potentially interpreting data in
18 a different manner.

19 DR. NELSON: The only thing I
20 would say is, if we were to ask the question
21 -- this is Mim. I agree we have to spend most
22 of our time on how do we get people to get

1 more vitamin D in their diet, or however.

2 But if the data is so diverse that
3 two committees would look at the data and come
4 up with completely different -- I mean we are
5 not even coming up with numbers. If the data
6 is so bad, then I don't think that anything is
7 going to change.

8 I just think the data is pretty
9 solid. I don't want to come up with certain
10 numbers, but I think there is a way to look at
11 -- it is probably going to be increased, is my
12 guess. But we need to look at the data as
13 well and be responsible. But we have to be
14 careful about not stepping on their toes.

15 DR. APPEL: I guess I would agree
16 and slightly disagree. I think that they
17 could reach the conclusion that the evidence
18 based on observational studies and a few
19 trials is really quite interesting and points
20 us in the direction. But, you know, we could
21 actually do the definitive clinical trial on
22 this, and rather than setting a

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1 recommendation -- you know, some of our
2 recommendations we can't test in formal
3 clinical trials with hard outcomes. You could
4 do that with vitamin D with the right study.

5 So we might reach the same
6 conclusion, that the data is really pointing
7 in this direction, but they could say, you
8 know, we still think that we have this
9 opportunity to actually formally test it.
10 Then we might be saying, yes, go ahead and
11 increase the amount, where they are saying
12 don't increase the amount until the trial is
13 done. So that is a similar -- I guess we
14 reach the same conclusion about the evidence,
15 but have a different next step.

16 DR. NICKOLS-RICHARDSON: Okay,
17 thank you for the discussion. We will take
18 all those pieces of information, and we are
19 going to sit on all of that, for a while
20 anyway.

21 (Laughter.)

22 DR. NELSON: Shelly, I have a

1 question. Are we in discussion phase with
2 this right now for a couple of minutes? Or
3 are you moving on?

4 Go ahead.

5 DR. NICKOLS-RICHARDSON: All
6 right, this is Shelly again.

7 The last two questions that we
8 have are really looking at nutrient
9 composition of foods and bioavailability. So
10 a couple of new questions, the first of which
11 is: has the nutrient composition of foods
12 significantly changed since 2005 in a manner
13 that impacts that nutrient adequacy?

14 So here is where we would look at
15 the nutrient composition database and using
16 ARS information to help us examine this
17 question.

18 The second related question is
19 then: is there any evidence that nutrient
20 bioavailability has significantly changed due
21 to alterations in the nutrient matrix of
22 foods? So including things such as food

1 fortification, functional foods, and what has
2 that done to nutrients within the food supply.
3 So, again, going to the nutrient composition
4 database to the extent that this information
5 available.

6 Just looking at the overall
7 picture of where our questions are, the broad
8 context of those, those are listed here.

9 Now I think we are in a discussion
10 phase.

11 DR. NELSON: This is Mim.

12 I have a question about sort of
13 the approach to our work. This Committee, in
14 particular, has so many different nutrients in
15 a sense that are under our umbrella.

16 Just take calcium, for example.
17 My sense of the literature is that not a lot
18 has changed. There's new studies, but there's
19 probably no reason that things are going to
20 change a lot. So that is just an example of
21 one nutrient in a sense.

22 Should we be really focusing --

1 and I sort of look to the chairs and Shelly
2 -- on the questions which are likely to change
3 or new questions that haven't been addressed
4 before?

5 I am just concerned about the sort
6 of bolus, if you will -- no pun intended -- of
7 work that we have to do. I wonder if there is
8 an approach, a triage, to some of the older
9 questions, and we just sort of update the
10 literature, if you will, as opposed to full-on
11 searches.

12 In a sense, Larry, you did that
13 with some of your --

14 DR. APPEL: Yes. This is Larry.

15 I agree. I mean I am listening to
16 your Committee, and I go, well, you guys have
17 full-time jobs for five years if you are going
18 to do searches on each one of these.

19 I think you have to A, decide
20 which ones where the evidence is not -- based
21 on your judgment and others, you don't really
22 need to do too much, and then focus like a

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1 laser on probably a subset of yours. Because
2 I can't believe you are going to be able to do
3 all of those with effectively a meta-analysis
4 or PICO search and review.

5 The other thing is that I am not
6 even sure that all those fit in the framework
7 of that basic search strategy. Some of them
8 are just dealing with, is there a problem? So
9 it is more of like, what is the evidence of a
10 prevalence of a problem or prior problems?

11 DR. NELSON: Right.

12 DR. APPEL: So I think your
13 Committee is destined to overdrive unless we
14 figure out --

15 DR. NELSON: Well, another
16 question -- I agree. Thanks.

17 But another question is, some of
18 the questions we have I actually think are
19 ones where it is application, like flexibility
20 of the diet. If we know we need to have this
21 many nutrients or this food pattern, you can
22 sit down with a good dietitian, or I mean most

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1 of us could do it as well, and figure out
2 what's the range of patterns of eating where
3 you can get these nutrients, as opposed to
4 doing necessarily a focused -- it is more of
5 the sort of application of the finding of what
6 we need for the nutrients.

7 So like flexibility, I question
8 that because I think it is about sitting down
9 and really figuring out what is the range of
10 the way that you can get these nutrients.

11 DR. PI-SUNYER: Well, this is
12 Xavier.

13 I think one of the problems last
14 time was we gave guidelines, but we talked
15 very little about implementation of the
16 guidelines. In a way, what you are talking
17 about here is implementation of the
18 guidelines.

19 DR. NELSON: Yes. Yes.

20 DR. PI-SUNYER: You know, what
21 kind of patterns are going to work and what
22 kind of flexibility you can use. So I am very

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1 much in favor of that.

2 CHAIR VAN HORN: I would like to
3 just interject something right here. That is
4 that I was incredibly impressed, as I think we
5 all were, with the three presentations we
6 heard yesterday that were right in our face as
7 far as what is America eating.

8 Now impressive as those data were,
9 and recognizing this is in the era of the
10 guidelines, and the data that we were hearing
11 about was from not even the 2005 era, because
12 those data are in the 2001-2002 NHANES
13 dataset, which I might add as a side, I think
14 this Committee would be remiss if we didn't
15 urge and encourage more attention being paid
16 to more current analysis of the data. So that
17 when we have a Committee meeting of this sort,
18 that we can at least be reviewing the
19 situation of the American diet for the era
20 that we are about to make recommendations for.

21 I mean it does seem that in this
22 day and age, with electronics being what it

1 is, that we should have a little bit more
2 rapid analysis available to us as we go
3 forward. I think our Committee might
4 encourage USDA and DHHS to do something about
5 that.

6 But the point I want to make, it
7 relates very much to what Xav said and to what
8 this discussion is all about. That is, as we
9 try to refine and focus on specific nutrients,
10 it would seem to me that the ones that are
11 especially inadequate already, and we saw very
12 plainly calcium, potassium, folate, fiber, you
13 know, there are certain nutrients that we
14 already know are problematic that the country
15 is not eating.

16 So the emphasis, it would seem to
17 me, to do justice to the work, as Xav is
18 saying, is to take advantage now of not only
19 the well-known literature, update that, but
20 also come up with ways to make sure that the
21 sources are purely available and identifiable
22 and recognizable in amounts that are required,

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1 and things of that nature, to make it more
2 practical, and also allow us to focus in on
3 those nutrients that we know are already a
4 problem.

5 Rafael?

6 DR. PEREZ-ESCAMILLA: This is
7 Rafael.

8 Linda, a practical question that I
9 have, can we request a specific analysis from
10 the data that was presented yesterday, if we
11 wanted to look at a subgroup?

12 CHAIR VAN HORN: I was told we
13 could. As you know, my never-ending theme on
14 this Committee will be obesity, obesity,
15 obesity, and what do we need to help the
16 American public do to change this problem.

17 So the analyses that we saw
18 yesterday were not stratified by BMI. I
19 requested to see whether or not that might be
20 possible.

21 It would seem to me that, once
22 again, not only understanding what are the

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1 problems with those who are obese, but also
2 what are the success stories going on with
3 those who are not obese, trying to learn from
4 our own database how those individuals are
5 eating, what kinds of dietary patterns are
6 they following, et cetera, should be possible.

7 So, again, I understand it is
8 possible, if the resources are made available.
9 I don't know if we can do anything about
10 trying to encourage that. But additional
11 analyses to allow us to go forward, so that we
12 can better wrap our arms around what is the
13 problem with our obesity issue, would seem
14 like a perfectly logical thing for this
15 Committee to request.

16 Now I don't know if Rob or Carol
17 or anybody would want to say, yes, it's
18 possible, no, it's not. You know, give us
19 some update on that.

20 DR. POST: In my opinion, we can
21 certainly work at that and look at the
22 resources we have right now and help within

1 the timeframe for this Committee's purpose.

2 CHAIR VAN HORN: Good.

3 Cheryl?

4 DR. ACHTERBERG: Thank you. I
5 want to reinforce everything you said there,
6 Linda, but also return for a moment to some of
7 the previous discussion.

8 Given the scope of what this
9 subcommittee is dealing with, it is perhaps to
10 just ask the group in whole to wait for the
11 subsequent subcommittee discussions, but
12 consider that we might want to restructure
13 things a little bit. There may be a different
14 way to formulate our subcommittees or align
15 people in order to more effectively address
16 the questions.

17 So if we can all agree to sort of
18 put it on hold and be flexible with it, and
19 work it out, rather than bog down trying to
20 figure it out as we walk through each piece.

21 DR. PEARSON: This is Tom.

22 Subsequent to what Cheryl said,

1 and particularly to what Xavier said, I think
2 the research questions on environment and
3 individual behaviors are essentially the
4 observational components of an intervention.

5 One would wonder, pursuant to the
6 development of another area, as I would
7 imagine it, as we go through our working
8 groups, that these will come up in different
9 forms, but they are going to come up over and
10 over again, as they did with the public
11 comments yesterday.

12 So this is maybe an area where you
13 could put all of those. Not only what
14 environments and behaviors cause this, but
15 what is the evidence you can change those
16 environments and change those behaviors, and
17 if you do so, does it make a difference?

18 DR. NELSON: Well, this is Mim.

19 I think I may have been
20 misinterpreted about not dealing with the
21 flexibility. I think that is where we have to
22 deal with most of our effort.

1 I guess what I am trying to say is
2 the question of, do we need more calcium, I
3 mean just for an example, I don't think that
4 is nearly as interesting as, how do we figure
5 out how to get people to eat more?

6 But the reality is that we know
7 where calcium is in the food groups. We can
8 sort of come up with that, but it is around
9 the behaviors, the flexibility, and the diet.
10 It is the interpretation and looking at the
11 literature on what the research is.

12 I voice my complete sort of
13 support to Cheryl. I think at some point
14 dietary patterns, flexibility, behavior, and
15 the environment cuts across all the
16 committees, and we may, hopefully, consider
17 about, again -- I know I brought it up last
18 time about having a subcommittee that sort of
19 deals collectively with that, so we don't have
20 a lot of duplication.

21 DR. RIMM: This may be a little
22 off-topic, and I am not an expert in this

1 area, but I know that somewhere between five
2 and 15 percent of the country reports being
3 hungry or at risk for hunger, which obviously
4 leads to various forms of inadequacy.

5 I think if our guidelines help
6 maybe down the line impact Food Stamp
7 Programs, that it might be something in this
8 area where we could address. I was trying to
9 figure out where that would fall in, but there
10 is clearly a large percent of the population
11 which is overnourished but underfed, such that
12 actually there is a lot of obesity in the
13 hungry or at-risk-for-hungry population.

14 So it may be another area that, if
15 we are setting guidelines and the guidelines
16 get implemented -- what?

17 CHAIR VAN HORN: It is the other
18 way around. They are overfed --

19 DR. RIMM: They are overfed and
20 undernourished. Thank you. Strike that from
21 the record.

22 (Laughter.)

1 I can't believe Tom Pearson said
2 that the wrong way.

3 (Laughter.)

4 Thank you.

5 But I think it is something that
6 would be nice if it could at least be
7 commented on, and potentially if it does lead
8 to changes in policy, that would be great, if
9 you took it up somewhere in your subcommittee.

10 Thanks.

11 DR. NICKOLS-RICHARDSON: And I
12 think we can add food and security with and
13 without hunger certainly easily to that.

14 DR. PEREZ-ESCAMILLA: Can I make a
15 comment?

16 Just for the record, the Food
17 Stamp Program name has changed. It is now
18 SNAP, with the word nutrition very clearly in
19 it, Supplemental Nutrition Assistance Program.

20 The Food Stamp Program is floating
21 around the idea of a healthy incentive program
22 to give a discount to Food Stamp recipients if

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1 they purchase, for example, fruits and
2 vegetables with those Food Stamps. That would
3 fit very nicely within, for example, the
4 Nutrient Adequacy subcommittee.

5 So I think we also want to learn
6 more about things that are already happening
7 in government because very interesting
8 initiatives are on the table right now.

9 CHAIR VAN HORN: For example, one
10 of the benefits of being an editor of a
11 journal is I get a chance to have a sneak peak
12 on what's coming. There is a paper coming
13 out, actually, that will be addressing the
14 fact that, surprisingly actually, in the low-
15 income population, I think it was specifically
16 in the Hispanic population, there was concerns
17 about food security.

18 The issue was that there was
19 adequate intake of the meat group, but
20 inadequate intake of the fruits and
21 vegetables. So it is sort of an upside-down
22 issue compared to what it was maybe 20 or 30

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1 years ago, where protein and iron and issues
2 of that sort were the concern. It is, at this
3 point, the other way around. It is the fruits
4 and vegetables that seem to be inadequate more
5 than anything.

6 DR. NICKOLS-RICHARDSON: I have to
7 say, from a Chair perspective, this has been
8 very helpful for this discussion to have taken
9 place because I think it does give us the
10 allowance, then, that we can break the mold on
11 this, and that nutrient adequacy does not have
12 to be looked at or viewed at in the way that
13 it has been in the past.

14 We've got definitely some new
15 topics and new ways of looking at the
16 questions than perhaps have been done
17 previously.

18 So thanks for this.

19 CHAIR VAN HORN: Yes, this was an
20 excellent discussion. As you can see, we have
21 a lot of overarching comments.

22 Larry?

1 DR. APPEL: Yes, I just had one
2 sort of actually two-part question about the
3 shortfall nutrients. I'm sorry if this goes
4 on.

5 But it seems to me that some of
6 the shortfall nutrients, there really is not
7 and has not been a clinical or public health
8 consequence.

9 A second part of that question --
10 that is a comment, and I think vitamin E is
11 the classic one. I sat next to Xav and I go,
12 "Have you ever run into a case of hemolysis
13 clinically that is related to vitamin E
14 deficiency?" No.

15 It is not like scurvy or some
16 public health problem, and yet we come out in
17 this report with that 90 percent of the
18 population isn't getting enough because they
19 otherwise would have hemolysis. That is just
20 not the case.

21 So I am wondering if the approach
22 to that shortfall nutrients, like is there

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1 now, or has there been, a public health issue
2 related to a deficiency of that nutrient? If
3 you agree to that approach, then it is not
4 really a PICO format to the question. It is
5 really, is there actually some evidence? I am
6 not even sure how the format is. It might be
7 a prevalence question: currently, or in the
8 past, has the condition that you are trying to
9 prevent been a problem?

10 Because I looked at him and I go,
11 "This really is not the kind of search I would
12 do for this question."

13 CHAIR VAN HORN: Yes, that is a
14 very good point. In fact, as we know, a lot
15 of the supplement trials have come up
16 absolutely negative, including vitamin E. So
17 it is an interesting question of inadequacy
18 may or may not be a public health problem,
19 depending on the nature of that particular
20 nutrient. That is a very good point.

21 Yes?

22 DR. FUKAGAWA: I would like to

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1 make the point, however, we are speaking here
2 about specific nutrients. Really, it is the
3 entire diet. So you can supplement or have an
4 excess or a deficiency in one particular
5 nutrient, but not necessarily see the clinical
6 manifestation or a public health issue that
7 comes through.

8 So how to deal with that? And
9 maybe the whole issue is, as Joanne has
10 brought up, the importance of the matrix, the
11 food matrix of what we are consuming.

12 So maybe we could ask the broader
13 question, are there clinical nutritional
14 issues that we have become aware of in the
15 public health sphere? Then maybe narrow down
16 to see whether or not it might be a specific
17 nutrient and contribute it to it or something,
18 like sodium and hypertension.

19 DR. APPEL: Yes, but it starts
20 with, is there a clinical or public health
21 problem currently or in the past related to
22 either a nutrient or food group shortfall?

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1 I am not as familiar with all the
2 nutrients and how they are decided, but I can
3 tell you for vitamin E, when I looked into it,
4 it really did not make much sense.

5 DR. SLAVIN: This is Joanne here.

6 Being on this Committee, our job
7 is to make sure that any recommendation we
8 make, that nutrients are delivered. So if we
9 exclude a whole food group, even vitamin E, to
10 put together a diet that doesn't deliver it
11 would not fit. So even though we could argue
12 about a lot of nutrients, that there are no
13 deficiency diseases, there's no clinical
14 outcomes, I don't think we can go there.
15 That's not where our head should be, because
16 these are accepted. These are nutrients. We
17 have standards for those.

18 So I think our recommendations
19 have to deliver -- you know, calcium, vitamin
20 D, we need to think about how food patterns
21 would deliver those nutrients. That is why
22 our Committee has a lot on its plate, because

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1 there are a lot of nutrients.

2 CHAIR VAN HORN: Yes, absolutely.
3 We all know the sources of vitamin E are
4 primarily vegetable oils, which we would want
5 to advocate anyway. So I think it is not a
6 matter of not paying attention to that. It is
7 just, in terms of the Committee's time, I
8 don't think spending time researching
9 something like vitamin E, even though it is a
10 nutrient that is clearly not being met in
11 terms of the data that we saw yesterday, I
12 don't think there is much in the literature
13 other than the supplement studies that I have
14 mentioned earlier, that relate to having any
15 association with benefit in terms of
16 cardiovascular disease, or whatever the
17 outcome was.

18 So trying to do more on that
19 nutrient when there are others in this group
20 that might rank higher in terms of their need
21 and necessity for update, that is, I think,
22 the only thing that we are trying to point

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1 out. It is trying to prioritize, frankly.

2 DR. SLAVIN: This is Joanne again.

3 I know when our Committee has met,
4 too, we have talked about that 2005 is
5 actually really helpful because the DRIs were
6 already in place, and there was a lot of
7 background that was done. So there's a lot of
8 building that can be -- there wasn't a big
9 nutrient shift, a guideline that happened in
10 between here.

11 CHAIR VAN HORN: Okay. I think we
12 are going to take advantage of our energy and
13 enthusiasm here and turn the floor over to
14 Xavier and his group. We will do one more
15 session, and then we will take a break. Okay?

16 DR. PI-SUNYER: Okay. So this is
17 a report from the Energy Balance subcommittee.

18 The members are myself, Drs.
19 Nelson, Perez-Escamilla, Slavin, Williams, Van
20 Horn, and our staff support is Eve Essery.

21 I want to first go over the 2005
22 research questions, which is what we did in

1 our first teleconference.

2 There were really five questions
3 that we addressed in the energy balance
4 section of the report.

5 The first two dealt with physical
6 activity. We will be hearing from Mim Nelson
7 about that shortly, about what we plan to do
8 about that.

9 The third question was about
10 proportions of fat and carbohydrate. In the
11 original, it said fat and carbohydrate to
12 maintain BMI and to achieve long-term weight
13 loss. We considered that was a high-priority
14 question that needed to be updated with
15 looking at the literature.

16 The fourth question was the
17 relationship between consumption of energy-
18 dense food on BMI. We also considered that
19 was a high priority.

20 The fifth was the relationship
21 between portion size and energy intake. We
22 folded that into another question, and I will

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1 come back to that.

2 The first research question that
3 requires new assessment then is macronutrient
4 distribution. As I said, here we are looking
5 at what might be the best proportion in terms
6 of maintaining BMI and also in trying to
7 achieve long-term weight loss.

8 The second question is the food
9 energy density. Dr. Rafael Perez-Escamilla is
10 taking primary responsibility initially for
11 this. There is a series of questions which he
12 will go over with you when he gives his
13 report.

14 We have a couple of new research
15 questions that we felt were important that we
16 should deal with that were not dealt with in
17 the 2005 report.

18 The first deals with behavior.
19 The two questions that we brought up for
20 discussion were, what behaviors related to
21 food intake most contribute to maintaining
22 healthy weight, and what behaviors related to

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1 food intake most contribute to unhealthy body
2 weight? We thought that was a high-priority
3 question which had not been looked at before.

4 The other one had to do with the
5 environment. We have already spoken about
6 that. Again, Dr. Nelson will speak about
7 that. Again, we thought that was a high-
8 priority item.

9 A new research question also that
10 we thought was important for us to deal with
11 dealt with childhood obesity. That is, what
12 is the role of dietary intake in the
13 maintenance of energy balance and prevention
14 of obesity in childhood? We thought that was
15 very high priority. Dr. Williams will report
16 on that.

17 So I will start talking a bit
18 about macronutrition proportion, then we will
19 move on to the other questions that we have
20 considered high priority.

21 Are there any questions so far
22 about the 2005?

1 (No response.)

2 Okay. So the 2005 research
3 question talked about dietary fat versus
4 dietary carbohydrate. What we decided to do
5 was to add protein to that, with the thought
6 that there has been over the last five years
7 quite a bit of data relating to high-protein
8 diets and high-protein protocols. So we
9 should include that as well as dietary fat and
10 carbohydrate.

11 So what we need to do here is, if
12 you look at it in PICO format, we want to look
13 at the population both of adults and children
14 with regard to this question. The exposure is
15 high or low fat, high or low carbohydrate,
16 high or normal protein. We wouldn't want to
17 look at low protein.

18 The comparators were the other --
19 essentially the same as the exposure, except
20 also there's a comparator which is what you
21 might call a, quote, "normal standard diet."

22 The outcome here which we would be

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1 looking for to judge this would be measures of
2 fatness, measures of central obesity, weight
3 gain and weight loss, and I guess you could
4 add weight maintenance as a final outcome.

5 The plan, then, would be to review
6 the literature from 2004 to present. There
7 was a very extensive review last time of the
8 previous literature, so that I don't think we
9 need to go back further than 2004.

10 Then the Committee would need to
11 review the results and revise the 2005 report
12 as required by whatever we come up with over
13 the last five years.

14 That is the macronutrient part of
15 the report. If anybody has any questions on
16 that or comments -- or do you want us to go
17 through all of them and then go back, Linda?

18 CHAIR VAN HORN: I think if there
19 are any burning questions, you could raise
20 those, but I think you can go through the
21 report and then we can discuss.

22 DR. PI-SUNYER: Okay. Then the

1 next one has to do with energy density.

2 Rafael is going to report on that.

3 DR. PEREZ-ESCAMILLA: As Xavier
4 just mentioned, the 2005 Dietary Guidelines
5 Advisory Committee chose to concentrate on
6 this question as stated in the slide, what is
7 the relationship between the consumption of
8 energy-dense foods and BMI?

9 Based on their review of nine
10 observational studies, the Committee concluded
11 -- I'm sorry, seven observational studies and
12 two randomized controlled trials -- the
13 Committee concluded that eating foods of low
14 energy density may be a helpful strategy to
15 reduce energy intake when trying to maintain
16 or lose weight.

17 However, the Committee also
18 recognized that the available data were
19 insufficient to determine the contribution of
20 energy-dense foods to unhealthy weight gain
21 and obesity.

22 For this reason, we decided to

1 concentrate on the following six subquestions.

2 First, to what extent is dietary
3 energy density associated with body mass
4 index?

5 Secondly, can we extend this area
6 of inquiry to type 2 diabetes and other
7 chronic diseases? And we want to see if there
8 is enough literature out there to find out if
9 the relationship between energy density and
10 BMI and associated adverse outcomes is
11 modified by age group or gender.

12 Of course, as you heard from
13 Shelly's Committee, we are also very
14 interested in identifying the actual dietary
15 intake and nutrient intake patterns associated
16 with diets of different energy densities.

17 So the approach that we are
18 proposing to the Committee to follow is,
19 first, to conduct the NEL searches since 2004
20 to identify studies examining the link between
21 dietary energy density and the outcomes of
22 interest, and then to compare the dietary

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1 intake patterns with an emphasis on food
2 groups, and compare the nutrient intake
3 patterns across different levels of dietary
4 energy density.

5 We propose to concentrate on both
6 adults and children over two years of age, and
7 also on individuals from both genders.

8 The primary exposure that we are
9 concerned about are high energy density diets
10 and primary health problems are obesity, type
11 2 diabetes, and if the literature provides
12 enough data, other chronic diseases as well.

13 The groups to be compared with
14 will be subgroups consuming diets with
15 different dietary energy densities. It is
16 important to acknowledge that there isn't a
17 standard cutoff point for coming up with the
18 dietary energy density category. Different
19 studies have used different approaches, most
20 of them tertiles, quintiles within their own
21 dataset distributions.

22 Once we identify the studies,

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1 again, we will compare the dietary intake
2 patterns for the groups on nutrients. We will
3 look at the body mass index categories as
4 outcomes and type 2 diabetes and other chronic
5 disease indicators.

6 I guess the good news is that,
7 just in 2008, I have read three papers
8 published in 2008 that have all of these data
9 in them, one in the U.K. and two from the U.S.
10 So, hopefully, there will be enough published
11 since 2004 to advance this area of inquiry.

12 So, again, these are the questions
13 that the Committee proposes to concentrate on.

14 Are there any questions?

15 Yes?

16 DR. RIMM: This is Eric.

17 I have two thoughts. One is, just
18 because of the work done in the sort of
19 glycemic index and the glycemic load of the
20 diet, does that fall into the rubric of energy
21 density? Or how are you defining what you are
22 searching for when you say energy density?

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1 DR. PEREZ-ESCAMILLA: Well, it is
2 literally the kilocalories per gram of food.
3 That is the way it is, has been traditionally.

4 DR. RIMM: Okay.

5 DR. PEREZ-ESCAMILLA: We find, I
6 think, the glycemic index, it is related, but
7 a different question. It is a good point that
8 we should consider.

9 DR. PI-SUNYER: Actually, Eric,
10 the Carbohydrate Committee is going to deal
11 with that.

12 DR. RIMM: Good pass, Xav.

13 (Laughter.)

14 But, related to that, when you
15 were talking about stratifying by age and
16 gender, another area where people have
17 stratified this data as well as the
18 carbohydrate data is by BMI. Since our
19 dietary guidance is going to 65 percent of the
20 people that are overweight or obese, it is
21 likely the energy density impacts people that
22 are overweight differently than it does people

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1 that have BMIs less than 25 because they
2 exercise more.

3 DR. PEREZ-ESCAMILLA: Yes, that is
4 a very good point.

5 DR. RIMM: I don't know if that is
6 possible to search for that also in your
7 stratifying variables.

8 DR. PEREZ-ESCAMILLA: Will do.
9 Thank you.

10 DR. NICKOLS-RICHARDSON: I have a
11 question. This is Shelly.

12 This may be one of those
13 integration pieces. So when I look at the
14 slides that say, "Compare nutrient intake
15 patterns associated with diets of different
16 energy density," and then, "Which nutrient
17 intake patterns are associated with diets of
18 different energy densities" -- the same
19 question. Can you share your thinking about
20 how that is distinguished, then, from what the
21 Nutrient Adequacy subcommittee might look at,
22 nutrient intake patterns and meeting nutrient

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1 requirements?

2 Is there something specific about
3 energy density that is different from what you
4 are thinking that we do with our committee?
5 So tell me more about what your subcommittee
6 is thinking in terms of how these are
7 distinguished, how they might differ in our
8 work and our efforts. Or if they are the
9 same, that is certainly okay. Then we can
10 talk in a different way about what we are
11 doing.

12 DR. PEREZ-ESCAMILLA: Yes, I think
13 there is definitely an overlap. As you can
14 imagine, diets of different energy density are
15 related also with different levels of dietary
16 quality and nutrient densities, and so on.

17 But I think something that we are
18 trying to do here, instead of predefining
19 diets as Mediterranean or Atkins, or whatever,
20 we are starting with the outcomes first and
21 trying to go backwards, and then perhaps
22 identify diets that are out there that are

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1 close to the optimal patterns that we are
2 identifying.

3 So that may be a slightly
4 different way of looking at the same question.

5 DR. PI-SUNYER: Okay. We are
6 going to then move on to physical activity
7 initially, and then behavior and environment.
8 Dr. Nelson will present that piece.

9 DR. NELSON: Thank you, Xav. It
10 is Mim Nelson here.

11 So in the 2005 Dietary Guidelines
12 Report, page 83, there were two questions
13 related to physical activity, how is physical
14 activity related to body weight and other
15 nutrition-related aspects of health? And the
16 second question was, how much physical
17 activity is needed to avoid weight regain in
18 weight-reduced individuals or persons?

19 So around physical activity -- and
20 I am not going to duplicate what I spoke about
21 at the last meeting, but with the Physical
22 Activity Guidelines for Americans Technical

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1 Report, our Committee over the past year
2 reviewed the question around the benefits of
3 physical activity on health extensively in our
4 large report. So I am going to be basically
5 just reviewing and summarizing what the report
6 had around health.

7 The next question, question two,
8 the Physical Activity Guidelines Committee
9 addressed that question. We separated it out
10 into three parts. Not just how much physical
11 activity is needed to avoid regain in weight-
12 reduced persons, which is what the question
13 was before, but we looked at three things.

14 How much do you need to maintain a
15 healthy body weight? How much do you need to
16 lose weight, if overweight or obese? And how
17 do you avoid regain in weight-reduced persons?
18 So we looked at that in three areas.

19 So, again, question number one, it
20 confers numerous health benefits. Overall, we
21 recommended 150 minutes per week of moderate
22 activity or 75 minutes a week of vigorous

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1 activity or a combination of the two and, with
2 children, 60 minutes per day. Those are the
3 main things.

4 In regard to the weight
5 maintenance, weight loss and weight
6 maintenance after weight loss, I will tell
7 you that what we saw -- and this is no
8 surprise -- is that we may need more physical
9 activity if you don't balance energy intake
10 with physical activity.

11 I will tell you that the
12 overarching sort of amount of evidence as we
13 interpreted it was that physical activity,
14 while it is very important for health and it
15 is very important for weight maintenance, as
16 we grow older, that dietary energy intake was
17 by far sort of the leading factor that either
18 contributes to weight gain, is a factor in
19 losing weight, or in maintaining weight if you
20 have lost weight.

21 So, with all of the questions that
22 we asked, there is really a big nod to diet.

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1 So, unless we could believe we could get the
2 population to exercise three or four hours a
3 day, which we didn't think was terribly
4 feasible, a couple of hours a day was probably
5 not that feasible -- so really, they
6 absolutely have to be joined together.

7 With weight loss, need more
8 physical activity than the 150 minutes per
9 week, but most successful when combined with
10 energy intake reduction. In fact, there is
11 not a lot of evidence, if you just get people
12 exercising with no dietary intervention
13 whatsoever, they may lose a couple of pounds,
14 but there isn't a lot of evidence for just
15 physical activity for weight reduction.

16 In terms of weight maintenance
17 after weight loss, probably on the order of 60
18 minutes of moderate or 30 minutes a day of
19 vigorous activity. Again, limiting energy
20 intake appears to be a key for successful
21 long-term weight control as well.

22 So what I plan to do is, because

1 these just came out in October, what I plan to
2 do is to basically work with the committee,
3 but to summarize the research that was done
4 from the Physical Activity Guidelines here.

5 The next main question is really
6 around behaviors. We have had guidelines out
7 for a long time. I think we know a lot about
8 the benefits of certain foods, certain
9 nutrients in health, but we have a big
10 disconnect between what we know in terms of
11 health and what actually people are doing.

12 In the last especially, I think,
13 six to ten years or so, there's been a lot
14 more work around behaviors related to food
15 intake. So that is the way I look at it. It
16 is not just sort of a food behavior, but the
17 behaviors related to food intake, that it has
18 a large effect on what people eventually eat.

19 So the hope is to address -- and I
20 will tell you that it is pretty messy. It
21 gets really messy when you look at what the
22 sort of key terms are that you are looking at.

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1 But sort of the overarching
2 question, what behaviors related to food
3 intake most contribute to maintaining healthy
4 weight? We can combine these into one, if we
5 want, but I actually think there may be
6 differences between the two.

7 The other is, what behaviors
8 related to food intake most contribute to an
9 unhealthy body weight?

10 So the approach is sort of the
11 dietary behaviors related to self-selected
12 actions of individuals, the where, why, and
13 how, not necessarily the what. So the what is
14 the sort of food, and the where, why, and how
15 is more around what influences food intake.

16 Some of these are related to the
17 weight regain question as well or weight loss,
18 but self-monitoring, television viewing,
19 including television in the bedroom, maternal
20 feeding practices. There's a lot more work in
21 this area around feeding practices, whether
22 they are restrictive, authoritative, or not.

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1 Breakfast consumption, meal frequency,
2 snacking. I think snacking is a really very
3 large area that we can look at. Family meals,
4 food eaten away from home, late-night eating,
5 mindful eating. I wish that Brian were here.
6 Container sizes, food purchasing patterns,
7 portion sizes.

8 But the trick here is -- and this
9 is only a few things, I think, that have been
10 looked at. The approach -- and NEL has been
11 great, talking to them about this. I think
12 that the approach is that we are going to have
13 to do some initial searches where we then hone
14 down on where the evidence is largest or there
15 is the most evidence. Because there are a few
16 papers here and there are some of these where
17 it is not going to meet what we could actually
18 interpret. We could interpret a paper, but
19 there is not the body of research that we
20 need.

21 So I think that the idea is to
22 sort of hone down on what are the behaviors

1 that seem most related to food intake. Then
2 we can start to then have sort of embedded
3 questions to look at those behaviors and how
4 they relate to food intake.

5 So I think the plan is to really
6 narrow down that key list of behaviors that
7 are most likely to have the most evidence, and
8 then to work with the subcommittee and the
9 full Committee.

10 I will say that Chris is working
11 with me on this as well. So that is sort of
12 where we are right now. We have not begun the
13 NEL search, but I am just starting to talk
14 with them about this.

15 I think the tricky part with both
16 behavior, and if we agree to move ahead with
17 environment, it is where the research is
18 going. It is not necessarily pretty with a
19 nutrient and a health outcome.

20 We do have some RCTs in this, but
21 we are not going to be able to rely entirely
22 just on RCTs.

1 It is kind of the nature of where
2 nutrition is going in terms of sort of
3 ultimate intake and what people take in. So
4 this is going to be an experiment, is what I
5 will say.

6 I think the tricky part will be to
7 try to do it in a deliberate way where we
8 start and then we narrow down the factors.

9 If you want, we can discuss this
10 right now or we can move on to the next
11 question, which gets even more messy.

12 DR. ACHTERBERG: Can I do a point
13 of clarification?

14 DR. NELSON: Yes. Sorry. Yes.

15 DR. ACHTERBERG: Looking at your
16 approach, Mim, with your dietary behaviors,
17 have you considered those behaviors that are
18 predictive of food intake and those behaviors
19 that actually influence food intake, and maybe
20 sort those separately?

21 DR. NELSON: I think we will have
22 to sort them, yes.

1 DR. ACHTERBERG: Yes, because the
2 TV viewing is quite different than snacking.

3 DR. NELSON: That's right. I
4 think that the way I have couched it is
5 related to food intake, but I think we
6 probably have to -- duly noted.

7 Larry, you are looking at me like
8 I have three heads.

9 (Laughter.)

10 DR. APPEL: Four.

11 DR. NELSON: Okay, four.

12 DR. APPEL: Yes, this might be an
13 overarching question, but are you thinking of
14 your outcome variable in this being energy or
15 weight? Since the last Committee in 2005,
16 they really focused more on weight as sort of
17 the surrogate outcome that we are going to use
18 for decisionmaking.

19 I have been thinking about whether
20 that was a good decision.

21 (Noise interference.)

22 DR. APPEL: Somebody's trying to

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1 block me.

2 (Noise interference.)

3 DR. NELSON: Is there a cell phone
4 nearby?

5 DR. APPEL: Quick question. Are
6 you thinking that you could use calorie intake
7 as your outcome variable, not just weight?
8 Because I think that it is a more proximal
9 outcome variable.

10 DR. PI-SUNYER: Calorie intake
11 would be very difficult to do. Weight is much
12 easier. I mean, you know, who knows calorie
13 intake?

14 DR. NELSON: Linda, do you have a
15 comment?

16 CHAIR VAN HORN: Well, I think
17 calories, it is all about how the data were
18 assessed. If you are using an FFQ, you can't
19 rely on those data. It is only 24-hour
20 recalls that will allow you to look at
21 individual caloric intake.

22 And weight is an objective marker,

1 whereas calorie intake is always going to be,
2 as we said yesterday, underreported in the
3 heaviest people. So that creates some
4 problems, too.

5 But I do think that the discussion
6 going back and forth here clearly has got to
7 be focused on the weight problem and looking
8 at behaviors that contribute to increased
9 weight.

10 I am just real mindful of the
11 cardio data showing that, you know, for people
12 who eat out at fast food restaurants more than
13 once a week, there's a direct relationship to
14 BMI.

15 So those kind of behavioral issues
16 in terms of people wanting to look at what is
17 it that is contributing to my overweight,
18 well, if you are eating in fast food
19 restaurants more than once a week, that could
20 be one behavior that is doing it. What you
21 are eating when you are in there is a whole
22 other topic.

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1 DR. NELSON: Right.

2 CHAIR VAN HORN: We all know there
3 are ways you can get out of a fast food
4 restaurant better than others.

5 DR. NELSON: Or any restaurant.

6 CHAIR VAN HORN: Or any
7 restaurant.

8 DR. NELSON: Yes, right.

9 CHAIR VAN HORN: But I think it is
10 that consciousness that eating out is a
11 potential risk process in terms of weight
12 control, and unless you know what you are
13 doing, you had better eat at home. I mean it
14 is those kinds of discussions and issues, I
15 think.

16 DR. NELSON: Yes. This is Mim
17 again.

18 My bias, because I think it is
19 cleaner, is weight or weight status. I think
20 that I also don't want to just focus on, for
21 example, portion sizes, which is a food. I
22 think that there are related behaviors, like

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1 television viewing. Possibly I think that the
2 work around parental feeding practices --
3 there are some areas that I think there is
4 enough evidence to look at it.

5 So I think the trick will be doing
6 a deliberate kind of working with NEL, where
7 we do an initial broad search and we see where
8 the domains are of behaviors related to
9 overweight and obesity, and that then we focus
10 down on the ones that have the most evidence.

11 Because I think there are too
12 many. You know, we can't just do a fishing
13 expedition. We have to be sort of deliberate
14 and smart about this, and be able to reproduce
15 how we do that search.

16 CHAIR VAN HORN: You know, the
17 behavioral literature is pretty consistent in
18 documenting that one of the key behaviors to
19 weight control relates to the first thing you
20 have there --

21 DR. NELSON: Self-monitoring.

22 CHAIR VAN HORN: -- self-

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1 monitoring.

2 DR. NELSON: Yes.

3 CHAIR VAN HORN: It may be time in
4 a set of guidelines like this that, again,
5 when we are talking to a public which is the
6 majority are overweight, that one of the
7 recommendations that could be made is monitor
8 your eating or watch what you eat or identify
9 what you are eating or think about --

10 DR. NELSON: Be aware of it.

11 CHAIR VAN HORN: -- your intake
12 for the day.

13 DR. NELSON: Yes.

14 CHAIR VAN HORN: Those of us on
15 this panel probably can tell everybody what we
16 ate for the last three days, but the average
17 person out there doesn't remember what they
18 had for breakfast.

19 So the consciousness-raising and
20 monitoring idea is half the battle in helping
21 people control their weight.

22 DR. NELSON: Well, it is that one,

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1 and with children maybe television viewing or
2 screen time may be the strongest. That is why
3 they are up at the top.

4 I think there are ways to actually
5 interpret and report this that can be usable.

6 DR. PEREZ-ESCAMILLA: This is
7 Rafael.

8 I think that television viewing
9 and childhood obesity is a very interesting
10 and important one because it is a very good
11 example of how you can take into account
12 environmental forces. Because one of the
13 hypotheses is that the marketing for unhealthy
14 food that the kids are exposed to in massive
15 amounts while viewing television may be, in
16 part, responsible for these findings. So I
17 think that is a good example of why it is
18 important to take environmental forces into
19 account.

20 DR. NELSON: Then that is a great
21 segue to my next question. Is that all right?

22 Perfect. Thank you, Rafael.

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1 So the next question is, and I
2 will tell you that this is not going to be a
3 simple one, but I think there is a way we can
4 at least approach this and see where it goes.

5 What environmental factors --
6 access, availability, type, quantity of food
7 -- contribute to an unhealthy body weight?
8 There is a lot of research now. We talk a lot
9 about personal choice and people making
10 choices, et cetera, and making smart choices.

11 But the reality is that the sort
12 of total environment that someone lives in
13 probably has a greater impact on what they end
14 up eating than their personal choice.

15 I know this is an incredibly
16 complex slide, but this comes from some work
17 Mary Story has done. It was published in the
18 Annual Review of Public Health.

19 This is looking at sort of this
20 ecological framework of food intake and sort
21 of four main domains. There's sort of the
22 personal factors, your cognition, attitude,

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1 skills, your motivations, what you choose.
2 That is embedded in your social environment
3 that is around, your family, friends, and
4 peers, which contribute to role-modeling,
5 social support, social norms, which contribute
6 to -- I see there is an arrow here. I don't
7 know. That probably doesn't show up except
8 for our side of the room.

9 Then there is the physical
10 environment. So that is your home
11 environment, your worksite, school, after-
12 care, child care, neighborhood, restaurants,
13 food outlets, supermarkets, convenience
14 stores. It is the access, availability,
15 barriers and opportunity.

16 Then on the far right, which I am
17 not sure that we can necessarily deal with
18 here, but it is what we are dealing with as a
19 committee, but is sort of the macro-level
20 factors of societal and cultural norms, food/
21 beverage industry, food marketing, what Rafael
22 was talking about, policies, economics, food

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1 production/distribution, healthcare systems,
2 assistance programs. This is just a few.

3 So I think that there is a way --
4 there has been so much research. We have got
5 a controlled trial with children around
6 changing different elements of the
7 environment. There are controlled trials out
8 there, and there's a number of other studies
9 that have been done where I think we can
10 actually possibly, like we have done with
11 behavior, narrow in on a few of the key
12 environmental factors that relate to sort of
13 overall unhealthy body weight. What I am
14 interested in is what contributes to an
15 unhealthy body weight.

16 This is a stretch for sort of
17 where we have come from the guidelines. I
18 guess it is my hope that we could at least ask
19 this in a research question that is as
20 intellectual as we possibly and deliberate as
21 we possibly can make it, and we look at the
22 evidence. We can at least interpret the

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1 evidence. We may end up only being able to
2 come up with a paragraph about the environment
3 is important. We may not have enough
4 evidence.

5 But I think at least we should try
6 to approach it because there is a lot of
7 literature, not massive amounts, but there is
8 a body of literature that is there to review.
9 So I leave that for comment.

10 DR. PEREZ-ESCAMILLA: Mim, this is
11 Rafael.

12 I agree. I think there is an
13 emerging body of literature where the very
14 important keyword is neighborhood effects.

15 DR. NELSON: Yes.

16 DR. PEREZ-ESCAMILLA: Some of that
17 work is not being done by nutritionists, but
18 by health economists and public health
19 researchers, and so on.

20 They are using GIS, called
21 Geographic Information Systems, and they are
22 going way beyond simply mapping. They are

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1 truly coming up with mixed statistical methods
2 that allow you to take into account the
3 aggregate neighborhood characteristics as well
4 as individual level behaviors.

5 I am aware of papers in obesity,
6 marketing, density, for alcohol and alcohol
7 consumption. I wouldn't be surprised if there
8 is a critical mass of literature already out
9 there.

10 DR. NELSON: Yes, I think it is a
11 start. I know we have done a little bit of
12 GIS systems and stuff. It is new, but I think
13 there is enough evidence to actually look at
14 it.

15 DR. RIMM: I was just picturing
16 the MyPyramid having a little guy running up
17 one side and having the TV with an "X" through
18 it on the other side.

19 (Laughter.)

20 Is this one of those areas where
21 -- I mean you actually do have a fair bit of
22 expertise here. Is this one of the areas

1 where you would recommend to bring in someone
2 from the outside?

3 DR. NELSON: Yes.

4 DR. RIMM: Like Mary Story or
5 somebody from UNC?

6 DR. NELSON: Yes, or Chris. Or
7 Chris Economos, one or the other.

8 DR. RIMM: Yes, Chris Economos,
9 yes.

10 DR. NELSON: Yes.

11 DR. RIMM: I mean you and Chris
12 don't -- I don't know. I guess you guys do
13 GIS stuff, but it seems like to get someone
14 that could really convince all of us, in
15 addition to the work that you do, that this
16 should be part of the guidelines.

17 DR. NELSON: Yes. Mary would be
18 who I would, Mary Story would be who I would
19 want to invite.

20 I know a lot of what Dr. Economos
21 knows because we work closely together, but I
22 think it would be nice to have another outside

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1 person. That is who I would have.

2 CHAIR VAN HORN: I could just
3 interject that that is the plan for our next
4 meeting, is to have whatever the subcommittee
5 experts might be that are recommended, for us
6 to invite them to attend and provide us with
7 specific content on some of these questions.

8 DR. NELSON: Yes.

9 CHAIR VAN HORN: That would be
10 very helpful.

11 DR. RIMM: Yes, because in this
12 case the expert would actually provide
13 guidance to about three or four different
14 subcommittees, not just yours.

15 DR. NELSON: That's true.

16 DR. RIMM: So that would be
17 useful.

18 DR. NELSON: That's right, yes.

19 DR. ACHTERBERG: I think this
20 question might be the nexus point, too, for
21 looking at, this exact question for looking at
22 food, food insecurity, and nutrient

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1 inadequacy. So this might be the blending
2 point or the intersection that we could bring
3 those pieces together.

4 DR. NELSON: Thank you.

5 We will carry on then. So I have
6 permission to move on then? Okay, great.

7 DR. PI-SUNYER: Okay, Christine
8 Williams will now present the childhood
9 obesity.

10 DR. WILLIAMS: Thank you.

11 I just wanted to add a few points
12 to what Mim said about dietary behaviors. Of
13 course, many of the dietary behaviors that
14 affect adiposity in adults also affect
15 adiposity in children.

16 The list that you see in front of
17 you is from actually the American Dietetic
18 Association Evidence Library. They have done
19 an extensive search on these factors, dietary
20 intake factors, child eating behaviors, and on
21 the next page, family influences, and also
22 physical activity and inactivity. Of course,

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1 the bottom ones were also addressed
2 extensively in the Physical Activity
3 Guidelines.

4 If you look at the first page
5 again, what Mim has been talking about are the
6 bottom behaviors and, of course, these are
7 just a selected number of them which we will
8 be adding to, but these have been looked at in
9 the ADA review. I will briefly talk about a
10 few of those.

11 Then in the second part I will
12 talk about some of the dietary intake factors
13 that have also been looked at in the ADA
14 evidence review.

15 This is also a schematic
16 representation of the ADA review. The food
17 and nutrients on the bottom left part, dietary
18 behaviors on the right part, and then a whole
19 host of other factors that are important in
20 relation to adiposity in children and also
21 adiposity in adults. We will be selecting
22 among these various factors in trying to

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1 choose the ones that have the best evidence
2 and perhaps prioritize the importance of
3 recommendations in each of these areas.

4 So, basically, for the behavior
5 part, a subquestion to Mim's will be, what
6 dietary behaviors associated with maintenance
7 of health, healthy weight, and prevention of
8 obesity in children, and looking at children
9 between two and 19, various dietary behaviors,
10 the ones that the ADA reviewed and perhaps
11 other ones as well, comparing frequent or
12 infrequent practice of this behaviors or
13 expression of attitude. And the outcome:
14 maintenance of healthy weight, prevention of
15 overweight or obesity.

16 These are a sample of some of the
17 ones that have been reviewed by ADA. Each of
18 these dietary behaviors have been published at
19 different dates. So that our goal would be to
20 update them, and especially, usually, the last
21 five years would update these evidence
22 reviews.

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1 For example, eating out and
2 childhood overweight, in their review
3 published in 2004, about 10 observational
4 studies. These are longitudinal, cross-
5 sectional, between eating out and some measure
6 of adiposity.

7 The conclusion, the consumption of
8 food away from home, particularly at fast food
9 restaurants, may be associated with adiposity.

10 Then, in this review, they graded
11 the strength of the evidence. In this case,
12 the evidence was graded Grade III, which is
13 limited.

14 Next, portion size and childhood
15 overweight, a small number of studies, two
16 observational studies, and the conclusion that
17 increased portion size may be associated with
18 increased adiposity, again, with limited
19 evidence.

20 Of course, for young children,
21 portion sizes don't magically appear on their
22 plate. They are put there by somebody, and

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1 that gets into all the family influences. So
2 some of these factors will be looked at as
3 well in that review.

4 Eating frequency and childhood
5 obesity, again, limited evidence, limited by
6 different definitions for what constitutes a
7 meal or an eating episode.

8 Snacking in childhood, 16
9 observational studies, more there, and the
10 conclusion: snacking frequency may not be
11 associated with adiposity in childhood. We
12 will look at more recent evidence and see if
13 this holds up.

14 Again, limited evidence, Grade III
15 because, again, limited by the fact that
16 snacking has not been well defined. Various
17 definitions of what is a snack and what is a
18 snack food, and that makes it very difficult
19 to come to conclusions about this.

20 Breakfast skipping, 15
21 observational studies in this review published
22 in 2004, with the conclusion that breakfast

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1 skipping may be associated with increased
2 adiposity, and again, limited evidence.

3 So, basically, we will be looking
4 at these dietary behaviors, both in children
5 and adults, and extending the searches that
6 were begun by ADA and looking at if the
7 evidence published in the last five years has
8 changed those conclusions.

9 If there aren't any questions, I
10 will move on to the next part.

11 The second part that we will be
12 looking at -- and just for background, I think
13 it is important to remember that the majority
14 of children in the United States are of
15 healthy weight. However, the majority of
16 adults are overweight and obese. Therefore,
17 a major challenge for most American children
18 is to maintain that healthy weight and prevent
19 obesity.

20 Again, in this question, we will
21 be mainly focusing on the top items, the food
22 intake, foods and nutrients. Some of the key

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1 ones, of course, are total energy, dietary
2 fat, dairy and calcium, fruits and vegetables,
3 and sweetened beverages.

4 These are the ones that have been
5 reviewed by the American Dietetic Association.
6 There may be a few others that we will want to
7 look at as well.

8 And family influences, of course,
9 will play into this.

10 Physical activity and inactivity
11 were well-reviewed in the Guidelines for
12 Physical Activity. They actually looked at
13 the role of physical activity in
14 cardiorespiratory fitness in children and
15 adolescents. They looked at the role of
16 physical activity and muscular strength, body
17 composition, cardiovascular and metabolic
18 health, bone health, and mental health for
19 children. So they covered this quite well.
20 I think Mim will be summarizing some of that
21 in her review.

22 Again, with the food and

1 nutrients, we will be looking at the items in
2 the lower lefthand corner that the ADA
3 reviewed in updating these.

4 We will be looking primarily at
5 children between the ages of two to 19, but
6 recognizing also that the nutrient status of
7 the mother is very important, and also the
8 things that happen in the first two years of
9 life are also important factors in development
10 of childhood obesity. So those will be
11 brought into the discussion as part of a life
12 cycle approach to childhood obesity, although
13 we primarily will be addressing children
14 between two and 19.

15 We will be looking at the dietary
16 intake of these factors, comparing higher and
17 lower consumption patterns, and again, looking
18 at maintenance of healthy weight, which is so
19 important for children in preventing obesity.

20 ADA looked at total energy intake
21 in children. This was published in 2004.
22 Although there were a lot of studies, 43

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1 observational studies, they felt that overall
2 it was very difficult. The total energy
3 intake measured using current dietary
4 assessment tools, which they feel may not
5 accurately assess total energy intake because
6 of under-reporting, it is at this point it
7 does not appear to have a strong association
8 with overweight in children. So we will be
9 looking at more recent studies and seeing
10 whether this holds up or whether this
11 conclusion will change.

12 Strength of the evidence here,
13 Grade II, which was considered fair.

14 Dietary fat intake in children, 51
15 observational studies. Usually these reviews
16 went back to the early nineties.

17 And the overall strength of the
18 evidence, it was felt that dietary fat is
19 associated with higher adiposity in youth and
20 that the evidence was graded II, which was
21 fair.

22 Sweetened beverage intake, the

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1 conclusion was from 19 observational studies
2 that intake of calorically-sweetened beverages
3 is positively associated with adiposity.
4 Again, a Grade II, fair, for this evidence.

5 Fruit and vegetable intake,
6 inversely related to adiposity in children.
7 Strength of the evidence, fair.

8 Fruit juice, 100 percent fruit
9 juice, probably not related to adiposity in
10 children, based on 15 studies. Again, rated
11 fair.

12 Dairy intake in children, that a
13 low intake of dairy may be associated with
14 increased adiposity, based on limited
15 evidence.

16 And the same for calcium intake,
17 that a low intake of calcium may be associated
18 with increased adiposity, with limited
19 evidence.

20 So, basically, we would be looking
21 at these dietary intake factors and updating
22 the literature searches that were begun by the

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1 American Dietetic Association, and again,
2 looking at the strength of the evidence based
3 on these reviews, and perhaps adding in a few
4 other dietary intake factors as well.

5 Are there any questions?

6 DR. PI-SUNYER: Any questions for
7 Christine?

8 Yes, Naomi?

9 DR. FUKAGAWA: This is Naomi.

10 I just have a broader question for
11 your subcommittee. That is the issue of what
12 would be considered the older population.
13 Because we do know that cutoffs or definitions
14 of what would be a healthy weight may be
15 different for somebody at the latter end of
16 the age spectrum. We have defined children as
17 being 2 to 19, and I think we all struggle
18 with what is old, as we all get a little
19 further along.

20 (Laughter.)

21 But I think that is an important
22 issue because it comes across, also, with

1 respect to BMI in older individuals. Because,
2 you know, there are some studies that suggest
3 those that are much lower, which may be
4 healthy for a young person, may be unhealthy
5 for the older person.

6 DR. PI-SUNYER: Yes. We have not
7 discussed that, and I guess we should. In
8 2005, that was really not dealt with. It is
9 an interesting question, and there's a lot of
10 controversy about it, as you know. So maybe
11 we should have a question about, is it right
12 to recommend that people above the age of 70
13 lose weight? Or should they just maintain
14 weight?

15 I think that would be an
16 interesting question. I don't know that
17 there's a lot of interventional studies. It
18 would all have to be observational. The only
19 interventional study that I am aware of is the
20 Diabetes Prevention Program which suggested
21 that it was okay for people above 65 to lose
22 weight. But I think it is something that we

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1 did not discuss and probably should.

2 CHAIR VAN HORN: The other
3 question I would raise, and I am looking at
4 Rafael, would be the growing literature on the
5 question of excess gestational weight gain.
6 There are many studies now that are coming out
7 with data regarding that area. So maybe a
8 little attention to that, too.

9 DR. PEREZ-ESCAMILLA: Yes, and as
10 we discussed at the last meeting, what our
11 Committee, I think, agreed to do was, when the
12 IOM report gets released, we will use that as
13 the basis to summarize the evidence and
14 current guidelines.

15 DR. PI-SUNYER: I would like to
16 ask Joanne to give a final slide and then we
17 will open it up.

18 DR. SLAVIN: This will only take a
19 second because these are kind of the handoffs
20 to our Committee. So also on the energy
21 balance.

22 So these are the areas that we are

1 going to be handling: added sugars, the issue
2 about liquids versus solids, and we will talk
3 more about it when we get into the next
4 session. The data on artificial, non-
5 nutritive sweeteners and energy balance, and
6 also just beverages in general.

7 DR. FUKAGAWA: This is Naomi.

8 One more comment about the aging
9 issue. Maybe we shouldn't put a number on
10 what would be that age that we consider old.
11 This is just throwing it out. Maybe it should
12 be something like menopause or andropause, or
13 something like that, where there may be more
14 physiologic data with respect to alterations
15 in performance, health, et cetera.

16 DR. NELSON: Can I comment on
17 that? Having just gone through with the
18 Physical Activity Guidelines, because we had
19 this same issue, we actually ended up using
20 sort of NIA definitions. We came up with a 65
21 cutoff.

22 We figured we had to be consistent

1 internally with government policies. We ended
2 up going with 65. I can go over and look at
3 the transcripts, but there was a lot of debate
4 because we knew with physical activity that
5 there was going to be some differences with
6 the physical activity. So we knew we had to
7 address older adults. In the end, I wanted to
8 do the same thing, but we ended up coming up
9 with a number.

10 DR. RIMM: Xav and Christine,
11 thank you for that presentation.

12 I think the points that Christine
13 made and the way they were summarized were
14 very good and shows that in some cases there
15 is a lot of evidence and in some cases there
16 is not.

17 But I think maybe I am passionate
18 about this area because I don't know enough
19 about it. But we heard yesterday that 36
20 million meals a day are served to children by
21 schools. I think the Dietary Guidelines
22 actually directly impact how those meals are

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1 served.

2 I think if we go back to the first
3 day when Secretary Leavitt said, there's a few
4 key areas that can help us on two or three
5 areas, if we can give solid guidance to
6 children, I think that that is one area that
7 we could really make a big difference on.
8 Because what happens, how children eat and how
9 they live their lives impacts what is going to
10 happen. You know, they get hypertension when
11 they are 30. It impacts how they eat for the
12 rest of their lives.

13 So I think if there is one thing
14 that we really could all help Christine on, it
15 is help her with that section because I think
16 that really can be an important impact that
17 the Committee can make.

18 DR. PEARSON: Just a continuance
19 this time of that. I wonder, Christine, if
20 there was not only a discussion of these
21 determinants of obesity and overweight in
22 childhood, but, also, if there is any new

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1 information on the establishment of these
2 eating patterns in childhood, as almost a
3 bigger issue than the actual obesity, which of
4 course is in a group of children.

5 But, then, of course, these
6 patterns continue into adulthood and continue
7 on. So I wonder if that is another nuance
8 with yours that could be added, if there is
9 any additional tracking of these behaviors, so
10 that the good nutrition habits in childhood
11 not only affect the child, but they also
12 affect as Eric was talking about. And there
13 is data.

14 DR. NELSON: There is some
15 additional new tracking data in children. We
16 will definitely include that in. Some from
17 other countries.

18 DR. APPEL: This is Larry.

19 I think that is a fabulous idea.
20 In fact, I am wondering whether that should be
21 a research question.

22 In 2005, in the Dietary

1 Guidelines, this came up very late in the
2 game. It was sort of like, well, we tried to
3 do it between the last two meetings; we never
4 had a question. But it is really an
5 overarching issue that provides the rationale
6 for our guidelines, because you often don't
7 have outcome data in children, particularly
8 for cardiovascular disease, you know, cancer,
9 if you do find exposures.

10 So I am wondering if there should
11 be a formal question on this. I don't know
12 where it fits in. Do patterns in nutrient
13 intake and behaviors in children continue into
14 later life?

15 CHAIR VAN HORN: Well, we
16 certainly have tracking data. The children
17 who are heaviest continue to track. I mean
18 those data are pretty well-established, and
19 they have been there for a long time. But the
20 diet data to accompany them is more limited,
21 yes.

22 DR. NELSON: But there is some,

1 though.

2 CHAIR VAN HORN: Yes.

3 DR. PI-SUNYER: Well, I think that
4 Mim and Chris will work closely together on
5 this and probably will be able to deal with
6 that, put that in as part of the question.

7 DR. NELSON: I would like to ask
8 that question because I think there is more
9 evidence that these behaviors track. I know
10 the physical activity data does. I think the
11 food intake data does track to some degree.

12 It would be interesting to
13 actually look at that because I think the
14 message is important.

15 DR. APPEL: Part of the problem is
16 that -- and, Chris, you probably have dealt
17 with this more -- is that you don't have
18 disease outcome data in children. So there is
19 always this lingering feeling, you know, can
20 we really make this recommendation in
21 children?

22 You just don't have CVD outcomes

1 in children or even rarely a hypertension.

2 DR. RIMM: You have hypertension
3 and diabetes. I think there's three or four
4 studies on hypertension and some on diabetes.
5 It is not in 12-year-olds, but 19-year-olds.

6 DR. APPEL: Of the blood pressure,
7 but not of the behaviors, the diet. Do
8 children's dietary patterns, what they eat as
9 an adolescent, track into adulthood? That is
10 the point I was getting at.

11 CHAIR VAN HORN: Well, you know
12 what, though? What we do have is weight and
13 we have obesity.

14 I am actually sitting here
15 wondering if this Committee should be so bold
16 as to recognize that the real effective way of
17 controlling and curbing obesity in this
18 country is to focus on our children. Because
19 we all know that the data are dismal in terms
20 of effective weight loss that can be sustained
21 long-term. I am not saying we should give up
22 on adults, and heaven knows we should all be

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1 working to try to lose weight, but we all
2 recognize that primary prevention in childhood
3 is the key, the answer to the question: what
4 do we do about America's obesity problem?

5 It is possible that this Committee
6 could be helpful in trying to raise a flag for
7 that cause by focusing especially on
8 children's lunches and school lunches, as a
9 country, to wrap our arms around that as a
10 particularly important topic, because that is
11 where they are going to be gaining the
12 benefits of learning how to eat throughout
13 their life.

14 Yes?

15 DR. NELSON: But there is a lot of
16 data on tracking of cardiovascular risk
17 factors in childhood and adolescence. One of
18 the strongest predictors is adiposity. There
19 is a lot of recent data on early
20 cardiovascular changes in relation to those
21 CVD risk factors and obesity. So we can
22 certainly bring that in.

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1 DR. PEREZ-ESCAMILLA: And I think
2 that gestational weight gain evidence suggests
3 that waiting until the kids go to school may
4 be very late for a number of them, that we
5 really need to start worrying about the mom
6 before she becomes pregnant with a kid. Then
7 we should also take into account that early
8 infant feeding practices, breast feeding, and
9 so on, also influence later risk of childhood
10 obesity.

11 CHAIR VAN HORN: Right, and as you
12 said, the IOM report should, hopefully, re-
13 emphasize and support that. But the timing of
14 this Committee, I think, is ideal in terms of
15 really embracing that and moving that forward,
16 front and center.

17 Tom?

18 DR. PEARSON: I think we should
19 take an attributable risk approach here,
20 rather than just the tip of the iceberg, which
21 is the adolescent diabetics and hypertensives.
22 Those are just the indicator.

1 But if you look at, say, obese
2 individuals, say, at the age of 40 to 50, what
3 predicted the greatest amount of that? It is
4 not probably the few individual obese. Those
5 children, those now adults are obviously
6 obese, but the biggest number of them are
7 actually going to be probably children who had
8 poor nutritional habits and poor physical
9 activity habits now moving forward. So it is
10 more of an attributable risk than just these
11 really high-risk individuals who happen to
12 have presented first.

13 DR. APPEL: I don't know; this
14 might take more thought about it, but it seems
15 like there are two questions. One is in the
16 area of the energy balances, you know, the
17 tracking, but the other is in terms of
18 nutrient adequacy. You know, do the behaviors
19 related to patterns of nutrient intake, or
20 even specific nutrients -- but you might want
21 to just track into adulthood.

22 CHAIR VAN HORN: Okay. Well, this

1 has been an incredibly rich discussion.

2 I think we will take a break now
3 for 15 minutes, and we will be back with
4 carbohydrate and protein and ethanol.

5 Thank you.

6 (Whereupon, the foregoing matter
7 went off the record at 10:05 a.m. and resumed
8 at 10:31 a.m.)

9 CHAIR VAN HORN: Our next topic is
10 carbohydrate and protein, and Joanne Slavin is
11 the Chair of the subcommittee.

12 DR. SLAVIN: Thanks, Linda.

13 I am representing the
14 Carbohydrates and the Protein subcommittee.
15 So we have added protein to our charge.

16 I would like to acknowledge the
17 people working with me: Dr. Achterberg, Dr.
18 Pi-Sunyer, and Dr. Van Horn.

19 We are going to first talk about
20 some of the questions that were in the 2005
21 Dietary Guidelines Report.

22 Question No. 1: what is the

1 relationship between the intake of
2 carbohydrates and dental caries?

3 In our deliberations, we have
4 talked about some of the recommendations that
5 are unlikely to change and don't need a huge
6 amount of new effort. That really fits within
7 this category.

8 So the exploratory searches have
9 already been completed on this topic. Looking
10 for new studies supporting any type of -- you
11 know, are there studies that support the
12 existing recommendation or other important
13 data? The sense is that this recommendation
14 is unlikely to change. There isn't anything
15 really new.

16 Let's see, No. 2. Question No. 2
17 from the Dietary Guidelines Report: what is
18 the relationship between carbohydrate intake
19 and incidence of diabetes mellitus?

20 The goal in 2010 would be to
21 update any new literature on this topic and
22 build on what was done in the 2005 Dietary

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1 Guidelines Report, which was a fairly
2 extensive literature review.

3 Question 3: what is the utility
4 of glycemic index/glycemic load for providing
5 dietary guidance for Americans?

6 This was the question in the 2005
7 Dietary Guidelines Report. We did refer to
8 this in the Energy Balance. The major effort
9 is going to take place in this Committee,
10 although there will be some feedback to the
11 Energy Balance Committee.

12 So the questions we are asking
13 are: what is the utility of the glycemic
14 index for providing dietary guidance for
15 Americans? And what is the utility of the
16 glycemic load for providing dietary guidance
17 for Americans?

18 Then, No. 4 from the Dietary
19 Guidelines Report: what is the significance
20 of added sugar intake to human health?

21 In 2010, we are going to continue
22 that question as is, looking at what the links

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1 are with added sugar intake and human health
2 that have been published since 2004.

3 No. 5, 2005, from that report:
4 what are the major health benefits of fiber-
5 containing foods?

6 Some of the exploratory searches
7 on this have been completed. There is quite
8 a bit of new information in this.

9 Newer studies really support the
10 existing recommendations. If you go back to
11 the 2005 report, the new dietary
12 recommendations for dietary fiber came out in
13 2002 and were part of the 2005 report. So
14 there is no data, obviously, we don't have any
15 data that suggests that we should go back on
16 our fiber recommendations.

17 If you remember when you heard
18 yesterday some of the nutrients that continue
19 to be a problem, obviously, carbohydrate with
20 130 as the RDA for carbohydrate, it is never
21 going to be a nutrient that people aren't
22 meeting. So everybody is getting

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1 carbohydrate. We don't have to worry about
2 it. It is mostly the quality of the
3 carbohydrate that we are going to be focusing
4 on.

5 But, for fiber, fiber continues to
6 be a nutrient that is not met. So it is a
7 good example of what we need to do to
8 strengthen our recommendations to help people
9 get the recommended amounts of fiber.

10 Let's see, I'm going the wrong way
11 here.

12 In the Dietary Guidelines Report
13 in 2005, there was a Section 6 that was called
14 "Selected Food Groups, Fruits and Vegetables,
15 Whole Grains, and Milk Products." That did
16 not really come under any of our current
17 subcommittees. So we have taken that on as
18 our issue.

19 In 2010 -- this is a big effort
20 that we are involved in, and I appreciated the
21 comments yesterday that there is a lot of
22 interest in vegetarian intakes and broader

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1 reviews on vegetables and plant products and
2 health.

3 So we want to expand beyond -- if
4 you look at fruits and vegetables, whole
5 grains, milk products, I guess the thing they
6 do all have is nutrients, important nutrients
7 that need to be provided, but they also are a
8 source of carbohydrates. So I think that is
9 why most of these plant foods -- obviously,
10 they also have protein.

11 I see a lot of overlap with these
12 with nutrient adequacy, energy balance, fats,
13 obviously, a lot of the nuts. Some of these
14 also contain unsaturated fats, essential fatty
15 acids. So there will be some overlap there.

16 But we want to expand beyond those
17 categories and make sure we pick up anything
18 new that has been published since 2004 on
19 legumes, seeds, nuts, and other plant
20 products.

21 Okay, so some of the other
22 questions that we have gotten from other

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1 committees, and I mention in the energy
2 balance that some of these questions, there's
3 a lot of overlap here.

4 But this question: what's the
5 optimal proportion of dietary carbohydrates
6 and protein to maintain BMI and to achieve
7 long-term weight loss?

8 This was actually included in the
9 Energy Balance subcommittee in 2005. We have
10 identified it as a topic that really meets --
11 you know, it is on both of our plates, but we
12 are going to spend some time on it in our
13 group. We have literature searches planned on
14 this topic.

15 This is another area that is on
16 our plate right now, evidence to support
17 caloric compensation for liquids versus solid
18 foods. This also was in the Energy Balance
19 subcommittee in 2005.

20 You have already heard a little
21 bit when Christine presented some of the stuff
22 on juice, pop, other things. There will be

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1 some overlap in other committees on this.

2 It is a pretty tough area just
3 because, obviously, there is literature on
4 different drinks. There are lots of studies.
5 Then just, what is the endpoint? Is it
6 satiety?

7 There's a lot of ways of
8 approaching this question. We are at the
9 point of we haven't really come up with our
10 strategy of how to get at this and would love
11 input from others that were involved in the
12 question before or anybody else on the
13 Committee.

14 Low-calorie diets, one of the
15 things that we have heard, and I think will be
16 an important issue, is that most people, if we
17 are overweight, then we are eating too much.
18 So we need to think about low-calorie diets.

19 You have already heard from Shelly
20 and Nutrient Adequacy that, as we reduce
21 calories, we have to make sure we get
22 nutrients. We always start with our DRI

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1 recommendations, where carbohydrates are
2 considered to be the main part of the diet.
3 So between 45 and 65 percent of your calories
4 should come from carbohydrate. That really
5 depends on protein changes and fat changes,
6 but that still carbohydrates are the main part
7 of the diet.

8 Should that ever change, if people
9 need to be on a really low-calorie diet for
10 weight maintenance, are there times where
11 other proteins would become a bigger part than
12 the usual recommendation? So we will be
13 thinking about that.

14 A lot of this, as we go through
15 here, too, obviously, for carbohydrates, the
16 whole idea of different types of
17 carbohydrates, sugar versus complex versus
18 fibers.

19 This gets into this next question:
20 does type of carbohydrate, sugar versus
21 starch, high-fiber, alter body weight and/or
22 maintenance?

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1 I think you probably heard a
2 little bit with Christine. Some of the
3 literature that has been done is typically
4 carbohydrates in general are protective, and
5 that really you can't break it down much to
6 show that it matters much.

7 Obviously, we don't have a ton of
8 intervention studies to get at this. So a lot
9 of the data that is available are
10 epidemiological studies where the markers of
11 carbohydrate intake are probably not that
12 good.

13 Obviously, fiber typically comes
14 off as being protective, but carbohydrates in
15 general usually are quite protective for lower
16 body weight and weight maintenance.

17 I think, looking at some of
18 Christine's questions, too, that any
19 carbohydrate seems to work. So trying to
20 translate the scientific basis into that, into
21 recommendations, we will continue to look at
22 type of carbohydrate and how to help people

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1 make better choices on carbohydrates.

2 The glycemic index, glycemic load,
3 most of the recent studies, although our
4 reviews are still in progress on that, a lot
5 of the recent studies are not very promising
6 that that is going to help people make better
7 carbohydrate choices.

8 So the idea of high-fiber
9 carbohydrates, high complex, going way back,
10 that complex carbohydrates is probably the
11 easiest way to think of the carbohydrates we
12 want people to consume. Are there better ways
13 to get that message across?

14 It is another fairly large topic.
15 We have searches in place on that. This is
16 also identified as a cross-cutting issue. It
17 affects nutrient adequacy. As calories go
18 down, putting together diets, energy balance,
19 it is a topic that is also on their plate.

20 This is another question we have:
21 what is the evidence that artificial non-
22 nutritive sweeteners aid in weight loss or

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1 weight maintenance? If you go back in the
2 2005 Dietary Guidelines, it was included in
3 the dental caries. It is kind of a different
4 question of the role of artificial sweeteners
5 in prevention of dental caries. There is not
6 much discussion on the role of artificial
7 sweeteners in weight loss or weight
8 maintenance.

9 We have literature searches in
10 progress or planned on that topic. I think,
11 as we talk about lower calories, it will be
12 more important that, if our recommendation is
13 for people to eat less, than there are aids to
14 help them actually eat fewer calories. What
15 is the research base on that being useful?

16 Then one of the things that has
17 come up, and there's a lot of interest in, is
18 the role of non-digestible carbohydrate or
19 dietary fiber in health, and kind of from a
20 broader way of thinking.

21 Prebiotics, probiotics, whole
22 foods -- prebiotics are really just

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1 fermentable carbohydrates that are thought to
2 have beneficial effects in the large
3 intestine. So a lot of overlap with fiber.
4 Certain fibers probably aren't prebiotics, but
5 there aren't great definitions of prebiotics.
6 So we wanted to make sure we reviewed this
7 literature.

8 Probiotics are actually the
9 bacteria where you eat them and they are
10 thought to have beneficial effects in the
11 large intestines. A lot of products out
12 there, a lot of noise out there, very little
13 recommendations on: are they useful? Are
14 they not useful? Are there certain places
15 where they are more useful? Are they useful
16 in healthy individuals? A lot of the data is
17 more in disease states.

18 Then just the whole idea of whole
19 foods. The whole foods message came across
20 very strongly yesterday, that people know that
21 eating whole foods and high plant-based foods
22 helped them, helped them lose weight, helped

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1 them maintain their weight.

2 Very few studies, no randomized
3 trials really on whole foods. So most of the
4 data is epidemiological data looking at food
5 groups, looking at certain foods. Some of the
6 foods, seeds, legumes, really not much data
7 out there.

8 So it is kind of expanding the
9 whole foods category, that we know that they
10 are important because of the fact that they
11 contain dietary fiber.

12 I know this protein idea, some of
13 these whole foods are actually really
14 important protein sources, too; that as you
15 put together a plant-based diet, if you
16 combine your plant foods correctly, then you
17 get higher-quality protein.

18 So whole foods, it is a really big
19 category of wanting to highlight the role of
20 whole foods and whole plant foods and some of
21 the benefits that they have.

22 DR. NELSON: Did you want to do

1 question 5? You skipped over question 5. Do
2 you want that one or not?

3 DR. SLAVIN: I did. Thank you. I
4 thought it was coming after -- thank you, Mim.

5 This is: what are the health
6 benefits of plant-based protein foods? We
7 have talked about this before. We want to
8 make sure that this is front and center, that
9 people know that there are options to get
10 proteins.

11 There's a lot of ways to put
12 together a diet, and that the usual dietetics
13 advice is you plan your diet with a protein
14 source in mind. So you start your diet by
15 putting together proteins, and there is a lot
16 of good protein sources out there, and that
17 there is no reason not to make sure everyone
18 understands that, and that the Dietary
19 Guidelines can incorporate all those ways, as
20 long as people understand protein quantity,
21 protein quality, and combining proteins, and
22 that those are all good ways.

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1 I think there is some
2 epidemiological data suggesting, if you ask,
3 a plant-based protein, that there's some
4 health benefits associated with that, too,
5 besides just putting together the diet.

6 All right. So we are just going
7 to talk about the plan, and we have already
8 been through this. But what is the
9 relationship between intake of carbohydrates
10 and dental caries? Developing the PICO chart,
11 devising a literature search and sort, and
12 updating the literature.

13 This is just the prior question in
14 putting together PICO charts. I think you
15 have seen examples of this. It is all
16 children ages 2 and above, looking at
17 exposure, different carbohydrate-containing
18 foods and beverages, looking at types of food,
19 more sticky, liquid versus solid, consumption
20 levels, frequency of exposure, timing, and
21 then the outcomes, either dental caries or
22 root caries.

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1 This is one that has already been
2 done in 2005. So it is just a carry forward.

3 Yes?

4 DR. NELSON: Just thinking about
5 the chewing gum issue that was brought up
6 yesterday, is that worth putting that into the
7 chart or is it not germane? Sugar-free, yes,
8 sugar-free chewing gum. I don't know. This
9 is not my area, but just I wonder if it is
10 worth putting it there.

11 DR. SLAVIN: Yes, I think it is a
12 good example of -- with the comparisons, it is
13 not in there very well. If you think of
14 everything that is there --

15 DR. NELSON: I don't see it in the
16 comparisons.

17 DR. SLAVIN: Right, right. No,
18 I'm just saying, of all the ones that are
19 listed there, it doesn't come out there in any
20 way. So I think that that would be fine as an
21 example of putting that in, if there is data
22 on it, actually.

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1 DR. NELSON: I don't know that
2 literature. So I defer to you.

3 DR. SLAVIN: Well, dental caries
4 is not my expertise. So I can't say I know
5 too much about it, either, but I think we
6 could definitely include it in the review.

7 DR. FUKAGAWA: This is Naomi.

8 Along those lines, I think
9 probably looking at oral health is perhaps a
10 broader outcome. Because dental caries, as
11 far as I know, have actually, because of our
12 fluoridation policies, have certainly gone
13 down.

14 But the issue of periodontal
15 disease and then the relationship to systemic
16 disease is significant. I don't know if our
17 diet or specific nutrients influence oral
18 health. I'm sure it does.

19 DR. SLAVIN: Well, when you
20 usually look at, you know, it's bacteria, any
21 fermentable carbohydrates, so really any
22 carbohydrate, sugar or starch, are all

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1 possibilities.

2 For sure, oral hygiene and no
3 question with fluoride, that it has gone down.

4 DR. FUKAGAWA: For caries.

5 DR. SLAVIN: Right.

6 DR. FUKAGAWA: But maybe we
7 should add or consider adding something like
8 periodontal disease.

9 DR. SLAVIN: As an outcome?

10 DR. FUKAGAWA: As an outcome,
11 rather than the actual effect on the tooth per
12 se. I mean it will affect, obviously, root
13 issues.

14 DR. SLAVIN: Right.

15 DR. FUKAGAWA: Gum disease is
16 significant.

17 DR. SLAVIN: I am looking at my --
18 yes.

19 DR. FUKAGAWA: Thank you.

20 DR. SLAVIN: Yes. No, I think I
21 am not that familiar with that literature, if
22 that would generate 10 more references or 30,

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1 but absolutely, that would be great.

2 DR. APPEL: I don't think any of
3 us -- nobody was selected because they are a
4 dentist.

5 (Laughter.)

6 So maybe the way to approach this
7 is simpler, is that we do dental caries as an
8 outcome and then clinical trials. That might
9 give us some hint about what is out there in
10 terms of potential exposures that have been
11 tested.

12 DR. SLAVIN: As an outcome?

13 DR. APPEL: Yes.

14 DR. SLAVIN: Yes.

15 DR. APPEL: It is more starting
16 with the disease and working back, rather than
17 sort of like thinking about some exposures
18 where, obviously, we don't have as much
19 experience.

20 DR. SLAVIN: Thank you for those
21 comments. I am hoping I have good help taking
22 notes, right? Thanks.

1 Okay, another prior question that
2 we are going to update: what is the utility
3 of the glycemic index and glycemic load for
4 providing dietary guidance for Americans?

5 Those are going to be separated.
6 So what is the utility of glycemic index for
7 providing dietary guidance for Americans? And
8 what is the utility of glycemic load for
9 providing dietary guidance for Americans?

10 I think Dr. Pi-Sunyer, within our
11 Committee -- I don't know if you want to say
12 anything, since you are taking the lead on
13 this.

14 DR. PI-SUNYER: I just wanted to
15 say that I think there's been quite a lot
16 written and published since 2004. So we
17 definitely need to update the literature and
18 get the evidence that has become available
19 over that time, particularly with intervention
20 studies, and then apply them to any changes we
21 feel are appropriate.

22 DR. SLAVIN: Okay. Any other

1 questions about glycemic index, glycemic load?

2 Larry?

3 DR. APPEL: More of a comment than
4 a question: this concept is sort of heavily
5 confounded with other concepts, from what I
6 can tell, surrogates.

7 If you are consuming whole grains,
8 high fiber, very little refined grains, you
9 will likely have a low glycemic diet. So even
10 if you look at glycemic index or load, there's
11 sort of an end around, that we might be making
12 a recommendation that is an equivalent to that
13 type of diet, a low-glycemic index diet.

14 DR. PI-SUNYER: Well, if you
15 remember, that is what happened in the 2005,
16 that basically there was a lot of feeling that
17 it was covered by dealing with fruits,
18 vegetables, and grains, and pushing the
19 greater intake of those particular food
20 groups, and that that would inevitably lead to
21 a lower glycemic index and glycemic load diet.
22 So that was how it was handled last time.

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1 I think that it is a good way of
2 handling it, but I think we do need to look at
3 what we have available, particularly as it
4 relates to development of chronic disease.
5 There has been quite a bit on diabetes, on
6 metabolic syndrome, whatever. We have to
7 decide in the Science Review Committee how we
8 are going to deal with metabolic syndrome, but
9 there's been quite a few related to that, and
10 then cardiovascular disease, and then a little
11 bit on cancer.

12 DR. RIMM: I think you are right,
13 Larry, for the most part, but there still is
14 an issue, which I think is some of the
15 confusion. What the glycemic index is, and
16 has become, is that if you highly process
17 whole wheat, the glycemic index actually is
18 pretty similar to white bread. It is more of
19 the processing than -- I mean you can get
20 fiber that is highly processed and still have
21 a pretty similar glycemic index.

22 I think that, since 2005, there

1 has been a great push to increase whole grains
2 in foods, which is great. It is sort of the
3 issue of how you process the whole grains.
4 Then you don't get the same benefit than if it
5 is minimally-processed.

6 I don't know if you had a word in
7 there that said, "minimally-processed," or
8 something, in 2005, but that is the
9 complicated issue that surrounds this area.

10 DR. PI-SUNYER: I don't think we
11 gave enough impact to that. I think we
12 probably should do more in terms of guidance,
13 particularly in terms of implementation of
14 processed versus not-processed food. It deals
15 with the whole food issue.

16 DR. RIMM: We should put a number
17 on it. So if you are above that -- I don't
18 know how you quantitate that, but I think that
19 is the issue.

20 CHAIR VAN HORN: Cheryl?

21 DR. ACHTERBERG: Looking at it
22 from a foods perspective, too, I think while

1 you are going through that, to focus on
2 potatoes. I mean I think there's still some
3 debate about, perhaps, where potatoes ought to
4 be and how they are thought about.

5 When we just say, "fruits and
6 vegetables" and that includes potatoes, it
7 confounds this whole glycemic index
8 discussion.

9 CHAIR VAN HORN: I also would like
10 to put in another word for the whole fiber
11 recognition issue, only because I think we
12 have all witnessed sort of an interesting
13 surge in supplement, fiber supplement use,
14 which, of course, defeats the intent of trying
15 to help people eat the foods that they need to
16 eat that supply the fiber, which would help
17 them in terms of weight control and everything
18 else.

19 I think as soon as you start
20 separating off fiber as something that could
21 be just thrown in on top of whatever diet you
22 are following, that totally disconnects the

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1 message. So I think that this confusion -- I
2 think there is confusion over glycemic index,
3 glycemic load, fiber. How do you make sense
4 out of it? What number are you supposed to
5 follow? What does it mean? How does that
6 translate into a real diet? I think that is
7 a very convoluted kind of message right now
8 that could be cleaned up.

9 DR. NELSON: Well, I think that it
10 is connecting fiber to food. I mean I think
11 it is really important, very important.

12 DR. SLAVIN: I think the nice
13 thing about fiber is we have a recommendation
14 and we have a void, and it says eat more
15 plant-based foods. So it really is a logical
16 way to get to let's eat more plant-based foods
17 that we can justify now.

18 CHAIR VAN HORN: That's another
19 piece of data that we saw yesterday --

20 DR. SLAVIN: Right, absolutely.

21 CHAIR VAN HORN: -- that could be
22 updated as well as emphasizing the foods that

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1 do supply fiber that are available, that do
2 include grains and beans and starchy
3 vegetables, et cetera.

4 DR. APPEL: This is Larry.

5 Actually, just to follow up on
6 that, it is hard for me to understand this
7 question about the prebiotic, probiotic, and
8 whole foods. Are you going to deal directly
9 with the question that Linda posed, you know,
10 the effects of supplemental fiber versus fiber
11 from diet? I think that that's a --

12 DR. SLAVIN: We were not planning
13 to do that. Besides the question about
14 prebiotics, because it has come up enough, and
15 probiotics, and in healthy people, is there
16 any data to support their use? And getting
17 that somewhere in our deliberations, since it
18 fits into our category of carbohydrates, but
19 I don't know, Linda, if you --

20 CHAIR VAN HORN: Only speaking
21 from the fact that I have recently been
22 working with the Pediatric Guidelines. So

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1 looking at the data in terms of children and
2 diet and fiber, et cetera, it is very
3 interesting to see that the only fiber-related
4 data are supplement data, not whole foods. In
5 fact, most of those studies have not shown
6 particularly benefit in kids.

7 But the problem is, again, without
8 the food, diet intervention data on children,
9 which you have all acknowledged is a difficult
10 thing to document, the question continues to
11 rage as far as: is it the food or is it the
12 fiber?

13 I think that even looking at
14 something like the dietary patterns, you know,
15 guidelines/diet, you can see the increase in
16 dietary fiber that is achieved when you follow
17 that kind of an eating pattern. One can only
18 rationalize the knowledge that those foods are
19 contributing a variety of things, and fiber
20 being one of them that is beneficial in terms
21 of all those other outcome measures.

22 DR. APPEL: I wonder, though,

1 whether we should -- I think at least in the
2 blood pressure field, there were these
3 observational studies that high-fiber foods
4 are associated with lower blood pressure.
5 Then they did the clinical trials in which
6 they did supplements of fiber, and they were
7 all null.

8 If we can document disconnects
9 between --

10 CHAIR VAN HORN: Right.

11 DR. APPEL: -- then you basically
12 have a stronger argument to say --

13 CHAIR VAN HORN: Absolutely.

14 DR. APPEL: -- it's fiber from
15 foods.

16 CHAIR VAN HORN: Yes, I think that
17 is the point that we are trying to make, is
18 the data that are there that have been more
19 recent of late, you know, that document, yet
20 again, that supplements aren't doing the same
21 thing that food does --

22 DR. SLAVIN: And, yes, that all

1 fibers are really different. So things that
2 qualify as fiber may have very little
3 physiological effect.

4 I wanted to follow up on Cheryl
5 because I think that is a big problem with
6 glycemic index. Some of the things we heard
7 about yesterday, the enriched grains, enriched
8 rice, which are not high in fiber but have
9 folic acid and are very high glycemic -- you
10 know, for rice, it always gets beat up as a
11 high glycemic. Root vegetables, carrots,
12 potatoes, are always high, and that is a
13 terrible reason -- you know, people will
14 think, well, I shouldn't eat it because of
15 that. Well, now, sugar is low-glycemic.

16 A lot of it doesn't fit what we
17 want, I don't think, and what we know is
18 better eating habits. So it tends to create
19 problems more than it solves.

20 DR. PEREZ-ESCAMILLA: Just a quick
21 question, Joanne. Are you planning to get at
22 soluble versus insoluble fiber issues, or

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1 should it be looked upon just as fiber?

2 DR. SLAVIN: I would say we are
3 not going to go there, just because the 2001
4 fiber recommendation was not to use that.
5 That doesn't really help. So that, overall,
6 we are just going to look at dietary fiber,
7 which is food fiber.

8 So that might be another way -- by
9 their definition, the IOM, it is you have
10 dietary fiber which is fiber in food, and then
11 you have functional fiber, which are isolated
12 fibers. So using that definition, I think
13 would put us in a good position of what we
14 believe and we have seen.

15 DR. FUKAGAWA: In terms of
16 engaging the broader community with respect to
17 helping us, might it be helpful for us to have
18 somebody come to speak to us from the food
19 industry or food processors, or whatever? No?

20 DR. SLAVIN: Well, one topic I am
21 really interested in, and I know it is on the
22 Fat Committee's agenda, too, is satiety. I

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1 guess some of the speakers, I would be most
2 interested in is that, if we can get some
3 people -- because weight loss, calorie intake,
4 are there carbohydrates that are more
5 satiating?

6 I think there is a lot of data on
7 just whole foods and food structure, and it
8 kind of gets into the energy density that we
9 were talking about, too.

10 That would be my highest priority
11 for a speaker. I have great confidence in the
12 food industry that they can make foods that
13 taste good and deliver nutrients. So I think
14 that would be asking them -- I am not sure
15 what we would want them to do. I think they
16 can do it.

17 Except they may be challenged by
18 some of the technologies. I am not a food
19 scientist, and I keep thinking that maybe
20 there are things, which is why it is easier
21 for them to pull out the fiber and add it
22 back.

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1 Okay, I am getting into trouble
2 here.

3 (Laughter.)

4 But I guess also this is about
5 food safety.

6 DR. NELSON: This is Mim.

7 I don't know. I am more
8 interested about satiety. The food industry,
9 whatever we come up with, they will figure out
10 how to add whatever. But I think we are
11 talking about real foods.

12 I think that primarily what we are
13 talking about are sort of real foods,
14 unadulterated foods, I mean where you are
15 getting the most nutrients, besides the
16 fortification issue, fiber. It is from the
17 real foods that are not all that doctored.

18 But the satiety --

19 DR. SLAVIN: I don't know. Roger,
20 I'm curious. What do you think for a speaker?

21 DR. CLEMENS: Do you really want
22 to know?

1 (Laughter.)

2 DR. SLAVIN: Yes.

3 DR. CLEMENS: There are a number
4 of people that are doing some wonderful work
5 on prebiotics, to your excellent comment. We
6 might be able to pull in a number of experts
7 in this complex/simple carbohydrate milieu, if
8 you will, to address some of the issues of
9 fortification as well as satiety.

10 I know many of them. So I would
11 be glad to work with your team to address
12 those issues.

13 Thank you.

14 DR. ACHTERBERG: And just because
15 we haven't actually made it explicit, I will
16 go so far as to try to lay it out on the
17 table.

18 I think there are at least three
19 issues here. Satiety is one, but laxation is
20 another. I think that is what we need to look
21 at here. What's the difference in laxation
22 using prebiotics or probiotics versus whole

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1 foods?

2 Then there are other aspects of
3 gut health. So I think when the lit review
4 was done, we need to look at those three areas
5 and consider it.

6 DR. SLAVIN: I live in laxation.
7 It is my life. So I am glad you would say
8 that, because every time I say it, it is like,
9 well, that's the "poop lady", so she's going
10 to say it.

11 (Laughter.)

12 So thanks for cutting me loose.

13 (Laughter.)

14 Let's see, where are we?

15 DR. CLEMENS: To Cheryl's comment,
16 I believe there has just been a wealth of
17 literature since 2004 to address the laxation
18 issue and the "poop lady", if you will. So we
19 might be able to address that very nicely.

20 DR. SLAVIN: Okay. Let's see, I
21 think we are going to go here.

22 We are going to exclude glycemic

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1 index, glycemic load, some of the things we
2 have discussed about the population, children
3 over two, adolescents, adults, everybody.

4 But we are going to exclude type I
5 diabetes. I don't know if there is any
6 discussion.

7 Our Committee has met and talked
8 about that, because I think glycemic index
9 does work. You know, you need to control your
10 glucose. So it has a role there, and that is
11 really outside of our scope of practice.

12 Then comparisons, higher versus
13 lower levels of glycemic index or glycemic
14 load.

15 Then some of the things that have
16 been measured in studies: adiposity measures,
17 BMI, percent body fat, waste circumference,
18 waste-to-hip ratio, weight gain and loss.

19 The epidemiological studies, some
20 of those measures on top, there's a lot of
21 recent feeding studies that have been done on
22 weight loss, comparing low glycemic and high

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1 glycemic, and then some other biomarkers.

2 This new question: what are
3 optimal proportions of dietary carbohydrate
4 and protein to maintain BMI and to achieve
5 long-term weight loss? Exploratory search.

6 We really want to work with other
7 committees because, obviously, we overlap with
8 the Fatty Acid Committee and Energy in this.

9 Developing the PICO chart and the
10 literature search-and-sort plan.

11 This is a first step at this for
12 the PICO chart, and it is very broad,
13 obviously, including everybody. The
14 exposures, these are some of the things we
15 talked about, and there may be more exposures,
16 things we can get at. Carbohydrate-containing
17 foods, just overall, digestible carbohydrate,
18 complex carbohydrate.

19 One of the problems we have in the
20 carbohydrate field is we don't have great
21 measures of carbohydrate quality. That is why
22 I think the glycemic index has been of

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1 interest to people. It is okay, but it
2 doesn't get at kind of this complex
3 carbohydrate, something like rice that we want
4 people to consume, but it has a really high
5 glycemic index. So trying to come up with
6 sort of complex carbohydrates.

7 Fiber, in here, insoluble versus
8 soluble for body mass index, although I don't
9 think there's much on that.

10 Sugar-sweetened beverages, and
11 then just added sugar.

12 Then some of the comparisons, you
13 can see that we have talked about over there;
14 consumption levels; selected food groups as
15 food groups that contribute carbohydrate to
16 the diet; liquid versus solid forms of food.
17 These are really hard studies to do,
18 obviously. There are some intervention
19 studies where people have been given liquid
20 and solid forms of macronutrient-controlled
21 foods, but there's not a ton out there.

22 Meal patterns, timing of exposure,

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1 and then anything on ethnicity or
2 socioeconomic demographics, and then some of
3 the outcomes, body mass index, weight change,
4 fat distribution, overweight, obesity, and
5 weight maintenance.

6 Then you can see the questions as
7 they go down there. Subquestions, they get
8 pretty complicated, but it is within that
9 chart up above.

10 So a summary of the topics that
11 are on our area, and some of the inputs that
12 you have given already, we will include, and
13 then other things we are open to.

14 But dental caries and
15 carbohydrates, type 2 diabetes, non-digestible
16 carbohydrates or fiber and health, and making
17 sure that we include what we can find on pre-
18 and probiotics, and then whole foods.

19 Food and vegetable intake in
20 health, this is a huge. If you go back to
21 2005, there's a huge review on this. It is a
22 lot more that has been done since then.

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1 Whole grain, and we said we want
2 to include other food groups that are out
3 there, other whole foods.

4 We just got through glycemic index
5 and load.

6 Health benefits of plant-based
7 protein foods, which is a lot of overlap with
8 the fiber question, but looking at it with
9 kind of a different set of eyes.

10 Carbohydrate consumption and BMI,
11 and this is an area where generally
12 carbohydrates are. Most of the data shows
13 they are protective, no matter what type.

14 Weight loss, weight maintenance.
15 When people need to lose weight, and after
16 they lose weight, what kind of diet? We have
17 gotten a lot of comments, outside comments,
18 about high-protein diets. We want to make
19 sure that we review that area well to see
20 that, once people lose weight, there's
21 differences of opinions, if you look in that
22 area, but giving that a good check.

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1 Compensation of liquids versus
2 solids, and that is a really tough area that
3 we have inherited.

4 Best proportion of macronutrients
5 for low-calorie diets. As people are on these
6 low-calorie diets that we are going to
7 recommend, protein is going to have to go up
8 a little bit as the percentage, and
9 carbohydrate, how far, and then it will affect
10 fat, too, because are we going to take mostly
11 fat out of the diet?

12 Anything we can find to make sure
13 that the document includes a review on
14 artificial sweeteners and weight loss and
15 weight maintenance. That is also a very
16 confused dataset because most of the people
17 that use artificial sweeteners are at higher
18 BMIs. So it tends to go together rather than
19 be protective. So that is fairly tough
20 literature, and we are going to try to go
21 through the NEL procedure and just ask the
22 question and see what we can find, because

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1 that wasn't done in 2005.

2 Tom?

3 DR. PEARSON: Just for the fatty
4 acid group, obviously, the sum of the parts,
5 if you are studying carbohydrates and protein,
6 you're studying fats, too.

7 DR. SLAVIN: Absolutely.

8 DR. PEARSON: So just put it in
9 there. We had already, I thought, turned that
10 over to the Energy Balance group.

11 DR. SLAVIN: Right.

12 DR. PEARSON: It doesn't make any
13 sense for us to do something extra.

14 DR. SLAVIN: Okay. Roger?

15 DR. CLEMENS: You may wish to
16 speak with the people at the Whistler
17 Institute at Purdue University, to build on
18 Naomi's comment. They actually have a great
19 understanding of the dynamics of
20 carbohydrates, physical as well as
21 physiological.

22 DR. SLAVIN: Rafael?

1 DR. PEREZ-ESCAMILLA: Joanne, I
2 know you already have a sizable number of
3 questions in front of you. So this is a
4 friendly request.

5 (Laughter.)

6 Would your Committee consider
7 addressing a question of consumers' knowledge
8 and attitudes toward carbohydrates and the
9 relationships of carbohydrates on health?

10 DR. ACHTERBERG: I couldn't hear.

11 DR. PEREZ-ESCAMILLA: I was told I
12 was speaking too loud before.

13 (Laughter.)

14 So let me try again.

15 The issue is if the Committee
16 would consider a question on consumers'
17 knowledge and attitudes toward carbohydrates
18 and also the relationship between
19 carbohydrates and health.

20 DR. SLAVIN: You're right, we have
21 a lot, but it is absolutely true that most
22 people think carbohydrates are bad. I am

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1 telling you the answer without doing the
2 research. But having been in the field,
3 carbohydrates have a bad image on the street.

4 Then just to try to explain, okay,
5 actually, fiber is pretty -- you know, that is
6 the way I always think about it; let's lead
7 with fiber because we know that we need fiber.
8 We have data on that. Then we can go down
9 that path.

10 But trying to explain something
11 like enriched grains or rice that we want
12 people to consume, and it's important, most
13 people probably think that is a negative and
14 they need to get rid of it.

15 So it is an interesting question.
16 It is a big question.

17 I don't know. Linda, being on the
18 Committee --

19 CHAIR VAN HORN: Yes. Well, I
20 think, you know, I totally agree with you that
21 there is a concern, but I think, frankly, the
22 confusion lies in not recognizing that sugar

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1 is a carbohydrate. I mean, when we talk about
2 refined carbohydrates, we really are talking
3 about sugar often, and the consumer doesn't
4 understand that necessarily.

5 So they understand that carbs are
6 bad from the sense of the Atkins diet approach
7 and all of that sort of thing, but they don't
8 even recognize, I don't think, that it is a
9 really low-sugar diet that is being advocated
10 in terms of trying to reduce the carbohydrate,
11 that aspect of carbohydrate.

12 DR. SLAVIN: Well, I think it is a
13 little broader than that because, if you look,
14 grains typically are over consumed as a
15 category. So, within that category, as we
16 heard yesterday, a lot of what is consumed are
17 desserts. So it is not rice that we are
18 worried about, but, yes, this is such a big
19 category. Dairy contributes carbohydrates.
20 So for people to understand all the things
21 that contribute carbohydrates, it is a very
22 large category. Most people think of it as a

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1 negative.

2 If you look at the weight loss
3 data, if 50 percent of your calories are
4 carbohydrate and you get rid of 50 percent of
5 your calories, you are going to lose a ton of
6 weight. That works. I mean it works like a
7 champ.

8 (Laughter.)

9 So that is why people cut out
10 carbohydrates and, magically, they get skinny,
11 just from calorie counting.

12 So I don't --

13 DR. PEREZ-ESCAMILLA: I just want
14 to add that I have done research with low-
15 literacy Latinos, and they don't even
16 recognize the word "carbohydrate". It is very
17 intimidating. It is a very difficult word to
18 pronounce. Yet, the labels, they use those
19 words. We teach them about them.

20 So I think it is an important area
21 of inquiry. That is where I am coming from.
22 Whether it is appropriate for the Committee to

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1 do so, I leave it up to you.

2 DR. SLAVIN: Well, I think it
3 would be good if Colette will write that down
4 as we should consider that in our conference
5 call, and we would call you in to talk about
6 that.

7 CHAIR VAN HORN: Yes, and there may
8 not actually be that much research on the
9 attitude question. I don't know what that
10 literature even looks like or who has been
11 asking that question. So we may find the data
12 aren't really there to really address that
13 question.

14 It, also, though, raises once
15 again the importance of talking about food as
16 opposed to necessarily a nutrient focus.
17 Because for the average American, they eat
18 food; they don't eat nutrients.

19 DR. PEREZ-ESCAMILLA: That is
20 true, but the labels --

21 CHAIR VAN HORN: Yes, the labels,
22 right.

1 DR. PEREZ-ESCAMILLA: The food
2 labels are very important for us to think
3 about --

4 CHAIR VAN HORN: Right.

5 DR. PEREZ-ESCAMILLA: -- the food
6 labels as a major tool for consumers to pick
7 up the foods that we are recommending. That
8 is what is coming to play.

9 CHAIR VAN HORN: Exactly. Again,
10 just picking up one more time on the sugar
11 issue, that is an interesting factor related
12 to the labels because the sugar content is
13 provided. Often, just by pointing that out to
14 a consumer, they start to get it. If they can
15 look at the amount of sugar versus the amount
16 of fiber, they begin to get it.

17 I think those are the kinds of
18 hand-holds that most consumers don't know how
19 to take advantage of. Perhaps we can try to
20 point that out a little more specifically.

21 DR. CLEMENS: Even on the label
22 where it says sugar, to build on Joanne's

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1 comment, if you put milk, lactose is a sugar.
2 So it would pop up on a label as if it were
3 sugar, as opposed to sucrose.

4 It would be wonderful in our
5 communication, to build on what Rafael had
6 indicated, if we generate terms or use terms
7 that are friendly for our reading audience.
8 So, hopefully, we would minimize mis-confusion
9 that is already out there. We have a great
10 opportunity to do just the effective
11 communication.

12 DR. ACHTERBERG: This is Cheryl.

13 I can speak to the fact that there
14 is literature about knowledge and attitudes
15 relative to carbohydrates. Some of it is five
16 to ten years old, but there is definitely a
17 body of literature about that.

18 But I would suggest, again, that
19 we sort of put this question in a holding pen
20 because I think it can and should actually
21 have broader import as we look more
22 holistically about how to translate the

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1 guidelines, and look at the scientific
2 evidence about how to translate the
3 guidelines.

4 So if we could take a more
5 holistic view of that, so hold it, but let's
6 come back to it and see if we can't frame
7 something along those lines.

8 DR. NELSON: Well, just to back
9 that up, this was a lot of breakfast
10 conversation this morning. Cheryl, Tom, and
11 myself, thinking about maybe further on that
12 we do have a question that is, what is the
13 evidence, the research, around the sort of
14 qualities of the health communications that
15 actually create behavior change?

16 That may help us to think about,
17 then, how we also deliver our report that may
18 be helpful. I mean it would great because
19 there is more research in that area.

20 DR. APPEL: Another committee in
21 overdrive.

22 Unfortunately, I think I have two

1 questions that I think might not be covered,
2 and then what I think we need to think about
3 very seriously is reorganization.

4 From what I can tell, there is no
5 question related to the health effects of meat
6 per se. So I think that that was a gap in the
7 2005 report. I think we have to deal with
8 that.

9 The second one is it is not clear
10 to me whether it is covered, and it came up
11 yesterday, which is: what are the health
12 consequences of replacing refined grains,
13 refined, enriched grains, with whole grains,
14 particularly with respect to folate intake?
15 I think we need to deal with that one head-on
16 myself. So I don't know where it goes, but I
17 think it has to be dealt with.

18 My third comment is more something
19 we need to think about, a recommendation which
20 is: sooner than later, decide if we want to
21 peel off food groups as a separate category,
22 I mean a separate subcommittee. Because I

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1 sense that it is bits and pieces here. We
2 might just want to do that. I will just leave
3 it at that.

4 DR. SLAVIN: You are asking for a
5 separate subcommittee on which category?

6 DR. APPEL: On food groups.

7 DR. SLAVIN: Just on this subject?

8 DR. APPEL: Yes, food groups. I
9 think Kathryn has some comment on when we did
10 it. We got far down in the process and we
11 said we're not covering food groups
12 particularly well. Then we developed a
13 separate subcommittee partway through the
14 process.

15 It would be better to start that
16 relatively soon, if we need to do it, rather
17 than waiting closer to the end.

18 DR. SLAVIN: Where was meats in
19 the review, then, Larry? I mean, was it under
20 the --

21 DR. APPEL: Meat was not done in
22 2005.

1 DR. SLAVIN: Okay.

2 DR. APPEL: It wasn't done in
3 2005. So it is a gap in the report in terms
4 of food groups.

5 The other thing is --

6 DR. PI-SUNYER: Wouldn't that work
7 better in the fats group, for Tom's Committee
8 to deal with that?

9 DR. APPEL: It could be if you
10 don't want to create another subcommittee.

11 DR. NICKOLS-RICHARDSON: I think in
12 Nutrient Adequacy we have kind of always
13 considered that food groups would be part of
14 what we are working on. I know I didn't
15 really articulate that today, but thinking
16 about, sort of from a first standpoint, our
17 nutrients and then looking at shortfall
18 nutrients, how does that translate into foods?
19 So I think our group has sort of considered
20 that we were going to be looking at that, but
21 just had not really presented that to date.

22 CHAIR VAN HORN: Yes, I think

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1 maybe what we ought to do -- I hear you loud
2 and clear because I do think food groups are
3 definitely going to be very important. I mean
4 this is it; you are looking at the group of
5 people that are writing this report.

6 To take on the food group topic
7 within the subcommittees that currently have
8 the most affinity for that makes sense,
9 Nutrient Adequacy being one of them, but meat,
10 clearly, could be incorporated perhaps into
11 the fatty acid discussions because that is the
12 key nutrient of concern, I would guess.

13 Then if we see that we are limited
14 in terms of not having adequate attention
15 being paid to the food group question, maybe
16 that is something that the Scientific Review
17 Group could tie together.

18 DR. APPEL: Or it could be that we
19 divide it into certain sections and then pull
20 the pieces into a chapter in the report on
21 food groups, not create a separate
22 subcommittee. That might be the way to do it,

1 too.

2 CHAIR VAN HORN: Right. Because
3 if you think about it, we haven't really
4 specifically identified dairy, either, or
5 eggs. I mean we haven't begun to identify
6 separate foods here as much as the -- yes,
7 nuts and chocolate. Okay, we're good.

8 (Laughter.)

9 DR. SLAVIN: But, you know, it
10 kind of comes back to the choline
11 recommendation we heard about. We are not
12 meeting that. Nobody is really thinking about
13 how that's -- I don't know if that's Shelly's.
14 Is that Nutrient Adequacy would think about
15 how we're going to --

16 DR. NICKOLS-RICHARDSON: Right.
17 So, specifically to choline, looking at what
18 are the health outcomes, what are the health
19 endpoints that we would need to look at, what
20 does that as a shortfall nutrient mean to us,
21 and then where do we go to the foods to meet
22 those recommendations?

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1 DR. NELSON: I think I agree with
2 Larry, what he said earlier though. I think
3 we have to focus on those nutrients, the
4 shortfall nutrients that seem to have a fairly
5 profound health implication. I mean I think
6 we have to triage some of those nutrients.
7 That's all.

8 But eggs, I mean, are we dealing
9 with eggs anywhere? Is that in fats?

10 CHAIR VAN HORN: Fatty eggs.

11 (Laughter.)

12 Joanne, are you finished?

13 DR. SLAVIN: Yes. Absolutely.

14 CHAIR VAN HORN: Okay. Thank you
15 very much. That's, obviously, a very complex,
16 but very interesting topic and very important
17 for where we go from here.

18 Now we have the ethanol
19 discussion.

20 Eric?

21 DR. RIMM: Thank you.

22 I am what stands between us and

1 lunch. So I think ethanol won't be as long as
2 others, although, of course, I am very happy
3 to take suggestions for further questions.

4 I would like to thank my
5 colleagues, Larry Appel and Tom Pearson, who
6 are on the subcommittee with me, as well as
7 Patricia Guenther and Rachel Hayes for keeping
8 me in line. Rachel has actually been cracking
9 the whip and continually reminding me that I
10 haven't responded to some of her requests. So
11 thank you, Rachel, for keeping me in line.

12 So let me start out with a review
13 of the 2005 Guidelines and how those questions
14 will be addressed in 2010, and then talk about
15 the rationale and the questions, specific next
16 steps. Some are looking at old questions, and
17 some will be new questions that I am
18 proposing.

19 So the No. 1 question, and the one
20 that actually led to the guideline, is: among
21 persons who consume four or less drinks per
22 day, what is the dose response between alcohol

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1 and health? I covered this last time. One to
2 two drinks a day lowers total mortality,
3 lowers coronary heart disease, slightly
4 increases breast cancer.

5 Alcohol risks and benefits do not
6 differ between middle-aged and elderly, but
7 there is little, if any, benefit for younger
8 people.

9 So I think, since I do know some
10 of the evidence that has been published in the
11 last five years, which is probably why I am
12 sitting on this Committee, it is unlikely that
13 overall those points will change. I think the
14 first three points, specifically, will not
15 change. There may be more data to support it,
16 and maybe we can do a search to show that.

17 The last question on age groups
18 that may benefit or have risk, I will cover
19 that in a little bit with new questions
20 because I think there may be at least some
21 evidence that that is worth pursuing.

22 The next question was, among

1 persons who consume four or less drinks per
2 day, what is the dose response between alcohol
3 and health? Sorry, I guess that is the
4 followup.

5 So the rationale for further work
6 here is I think, getting to the last point,
7 that we should do a better job of potentially
8 following up on risks and benefits for younger
9 folks. Some of that can be benefit. There
10 may be lower risk of diabetes, and some of
11 that can be to document the risk associated
12 with injury and binge drinking.

13 Also, in the older populations,
14 there is a lot of the documentation on the
15 benefits for coronary heart disease and some
16 for cancer. I think we could expand that to
17 other diseases, as I will talk about in a bit,
18 and also include injury in that.

19 What is the relationship between
20 consuming four or fewer drinks in
21 macronutrient or micronutrient profile on
22 overall diet quality? I guess this probably

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1 touches on about three of the other
2 subcommittees that have presented today and
3 yesterday.

4 For the most part, I think that at
5 that level of four or fewer drinks, it is
6 unlikely there will be big change. One to two
7 drinks per day is not associated with an
8 inferior diet quality.

9 This was the conclusion of the
10 2005 Dietary Guidelines. I think that is also
11 unlikely to change.

12 DR. SLAVIN: Eric, can I just
13 interrupt for a second?

14 DR. RIMM: Please do.

15 DR. SLAVIN: Did you guys consider
16 calories, too? If the calorie recommendation
17 goes down for an older person, I mean four
18 drinks seems like that is all they would be
19 doing. I don't know how they could eat.

20 (Laughter.)

21 DR. RIMM: Yes, I mean I wasn't on
22 the 2005. I think there was the realization

1 that five drinks is considered binge drinking.
2 So they wanted to cover the whole range of
3 risk and benefit under five drinks, because
4 there is no question that there is harm above
5 five.

6 DR. SLAVIN: But just as calorie
7 load, it just seems like that could be half
8 their calories then.

9 DR. NELSON: One to two drinks is
10 the recommendation.

11 DR. RIMM: Yes, well, but even
12 though --

13 DR. SLAVIN: Even so, on a low-
14 calorie intake, there's no space, kind of
15 issue.

16 DR. RIMM: Right. I mean I think
17 if you start looking at the SoFAAS and you
18 start looking at the calories that drop for a
19 65-year-old, you're right; I think that would
20 be worthwhile pursuing.

21 I do have some data from NHANES
22 2005, sort of looking at their average intake

1 and the percent of calories that they are
2 getting from alcohol. So that would be
3 interesting to at least document for the age
4 group 65 and above, or 15 above or something,
5 where there is a decrease in the total caloric
6 needs.

7 So, yes, that is a good point.
8 Thank you.

9 So related to this question, I
10 think there is some rationale for further
11 work. That is to look at the impact of -- or
12 I guess to look at alcohol and define high-
13 risk subgroups.

14 We have said this before, and I
15 think I said it last time: that if 65 percent
16 of the population is overweight or obese, 25
17 percent of adults have hypertension, whatever
18 -- I don't know what the percent is for
19 diabetes; up to 8 to 10 percent of the
20 population has diabetes.

21 So I guess the question here would
22 be: can we explore the literature for the

1 impact of alcohol on diet quality among these
2 people who already may have changes in diets
3 or may have the inability to metabolize
4 ethanol as well?

5 We haven't talked at length about
6 this, to really refine this question. But I
7 think it is worth exploring because the issue
8 of alcohol and diet quality may extend beyond
9 just healthy individuals.

10 There is, historically and up-to-
11 date, there is a fair bit of data on folate
12 suppression. Since we are all worried about
13 folate and folate fortification, I wanted to
14 explore that, the impact of alcohol on diet
15 quality, specifically with folate suppression
16 and, also related to that, nutrient
17 absorption.

18 So that may require a search that
19 goes back a little bit further than just 2004
20 because that wasn't covered in detail. I
21 don't know if that would turn into anything
22 that would impact the guidelines, but I think

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1 it is worth exploring to see what the totality
2 of the data suggests.

3 Please feel free to interrupt me
4 anytime because this is not going to be a 45-
5 minute talk.

6 (Laughter.)

7 What is the relationship between
8 consuming four or fewer drinks and obesity?
9 This is, obviously, one of the more important
10 questions.

11 The conclusions from 2005 were
12 that there's limited data, but there is no
13 apparent association.

14 This is a challenge. There have
15 been a few somewhat longer trials now in
16 alcohol consumption that have been published
17 in the last few years, not specifically
18 focused on obesity per se, but the data are
19 available.

20 The problem with this is there is
21 probably 75 to 100 observational studies and
22 cross-sectional studies that are very

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1 difficult to interpret because one of the
2 things that people cut out when they are
3 overweight is alcohol. So then you sort of
4 create the association that is not there.

5 There are now a few more
6 prospective studies that have looked at
7 alcohol and subsequent change in body weight.

8 So I think in this case it will be
9 one more thing we can add to our overall
10 analysis of impacts on obesity.

11 At one to two drinks a day,
12 previous to 2005, prospective studies did not
13 show an association between alcohol and
14 obesity.

15 So anybody have any thoughts on
16 that?

17 CHAIR VAN HORN: Well, the only
18 question or point I would make is, as we start
19 considering what we mean by discretionary
20 calories, or whatever term we are going to use
21 for that, it would seem that alcohol might be
22 incorporated into that.

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1 I don't think anyone is advocating
2 that, again, as usual, if you're not drinking,
3 we should tell you to start drinking. But if
4 you are drinking, recognize that, from a
5 nutritional point of view, you are not getting
6 added nutrients; you are just getting
7 calories.

8 So that mindset of choose your
9 calories wisely and realize there are some
10 that give you nothing but calories, you know,
11 maybe we need to help people make that choice.

12 DR. PEARSON: I think it kind of
13 puts into question the term nutrient because,
14 if, in fact, there is an inverse relationship
15 to coronary disease, then you would affect HDL
16 metabolism and other things. I think it puts
17 into question what the nutrient is --

18 CHAIR VAN HORN: Yes, yes.

19 DR. PEARSON: -- in all fairness.

20 CHAIR VAN HORN: Right. No, I
21 agree with you, Tom. I just think that,
22 unless there is somebody on this Committee

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1 that really thinks we should advocate that
2 people drink alcohol because it is healthful,
3 I don't see that we can do anything but point
4 out that it does contribute calories. It is
5 a nutrient in that context, but that we have
6 to help people weigh and balance.

7 I guess what would be really
8 interesting, if you think about it, is any
9 data that would document cardiovascular, if
10 that is, in fact, the benefit that we
11 recognize. Is it more important to lose
12 weight or to drink alcohol? I mean, you know,
13 those kinds of tradeoffs need to be
14 considered.

15 DR. PEARSON: Well, I don't know
16 about an intervention, but certainly on an
17 observational basis, obviously, whatever
18 calories that alcohol has added are
19 overwhelmed by the probably lipid, metabolic,
20 and probably some other effects.

21 Because there's probably now a
22 hundred observational studies suggesting that

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1 the individuals with the one to two drinks,
2 which is what Eric had on his first slide, if
3 they are having a cardiovascular detrimental
4 effect from the calories or diabetes
5 detrimental effects of the calories, those are
6 swamped out by something else because the
7 overall risk of those diseases is
8 significantly reduced.

9 CHAIR VAN HORN: Is higher,
10 exactly. Right. Plus, you know, the whole
11 triglyceride issue and all this, alcohol
12 sensitivity to that. I mean I think we have
13 to deal with it, but I just think, as far as
14 the diet guidelines are concerned, it is a
15 question of calories and what those mean to
16 you.

17 DR. RIMM: Yes, I think that is an
18 important point. It is, I guess we can call
19 it discretionary calories, but I think it does
20 have more of a biological effect than other
21 discretionary calories that may be in that
22 group. And maybe not. I mean I think there

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1 is evidence to suggest that at heavier
2 consumption people lose their inhibition and
3 eat more, but at moderate consumption it
4 actually may lower the overall glycemic index
5 of the meal.

6 So it is tricky. So you actually
7 may eat -- you may compensate, if you are
8 drinking 200 calories; you actually may
9 compensate by eating less of other foods.
10 Then once you get up to four drinks, you
11 actually start eating more of other foods. So
12 it is complicated and I think there is a
13 biological effect, which we can talk about
14 here.

15 CHAIR VAN HORN: Yes. The other
16 thing, though, to remember is, just as we have
17 been casting aspersions on the accuracy of the
18 caloric data, the questions related to alcohol
19 recall are also quite high.

20 DR. RIMM: Yes, I think that is
21 true, although I was quite impressed with
22 Susan's presentation yesterday, which showed

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1 that 10 percent of the population, or at the
2 90th percentile, people reported drinking
3 three-and-a-half, the men reported drinking
4 three-and-a-half drinks a day.

5 So I do have a problem with
6 interviews for assessing alcohol intake. When
7 people drink too much, they tend to
8 underreport.

9 But, in fact, 10 percent of the
10 people reported overconsumption by these
11 guidelines. So I mean I think I don't know if
12 NHANES got it right or figured out a way to do
13 it, but that was pretty impressive. It is a
14 serious problem, obviously, but there is some
15 good reporting there.

16 DR. PEARSON: Yes, I would agree
17 with Eric. I think within the one to four, I
18 mean it is the person who has a drink every
19 night, et cetera. I agree that the top one is
20 fraught with error.

21 But it is like coffee consumption.
22 Coffee consumption is really quite reportable.

1 I have my two cups here and two cups there,
2 and whatever. Actually, as we have looked at
3 some of these regularly-consumed beverages,
4 those are some of the more consistent patterns
5 compared to all of the other chaos that goes
6 on with food consumption.

7 DR. RIMM: Rafael?

8 DR. PEREZ-ESCAMILLA: Eric, I
9 think it is possible that the relationship
10 between alcohol consumption and dietary
11 nutrient intake patterns is modified not only
12 by the type of alcoholic drink, but also by
13 the context. So, for example --

14 DR. RIMM: By the context?

15 DR. PEREZ-ESCAMILLA: The context.

16 DR. RIMM: Yes.

17 DR. PEREZ-ESCAMILLA: If it is
18 cocktail party drinking versus drinking a cup
19 of wine with your meals, following the
20 guidelines, with a salad and olive oil and
21 nuts and fish, and so on, I think it is likely
22 that that matters quite a bit. But I don't

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1 know if there is research on whether this is
2 true or not.

3 DR. RIMM: Yes, I mean I think
4 that is a good point. Your bringing it up is
5 confounded by your ethnicity because you come
6 from a great culture where they tend to drink
7 with meals, and it is part of a lifestyle.

8 I think that the evidence on
9 beverage type is not as strong as what people
10 think for diet quality, within the range of
11 one to two and three drinks a day. I think
12 when you get above that, I think there are
13 differences by beverage type.

14 But I think most of the evidence
15 for benefit, most of the evidence for lipids,
16 most of the evidence for biological markers
17 are the same regardless.

18 Now I don't know if there is as
19 good of evidence for the impact on drinking
20 with meals. Some of the evidence on drinking
21 with meals actually is counterintuitive
22 because it is better to drink on an empty

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1 stomach because it increases your HDL quicker.

2 But that is not something we are
3 going to necessarily put in the Dietary
4 Guidelines, but there is some evidence to
5 suggest that.

6 (Laughter.)

7 Obviously, it impacts your
8 blood -- yes, if you drink, it impacts your
9 bloodstream more.

10 So I think it is good to at least
11 have some context to that, to the point that
12 you brought up about diet quality.

13 DR. PEARSON: I think it is very
14 important that we continue to emphasize this
15 slice of the data of consuming four or fewer
16 drinks because this is the group who will be
17 having this as a beverage, and not a drug.
18 You know, when you get up into the higher
19 levels, you are really into other issues of
20 addiction.

21 So I think no one is recommending
22 the higher levels. So just to stay within

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1 that I think is very important for this
2 subcommittee, and to look at the issues there.

3 There are really quite good data
4 that talk about some of these. I mean alcohol
5 has always been confounded by the context and
6 the other things, as have other beverages.
7 Coffee drinking was confounded by cigarette
8 smoking, and high fat creams and things. So
9 it kind of comes with the territory.

10 DR. FUKAGAWA: To expand a little
11 on what Rafael said, it would be also
12 important to know the source or the type of
13 alcohol with respect to distilled spirits
14 versus wine because, certainly, some of the
15 wines may have beneficial components that
16 really contribute to the health-protective
17 effects.

18 DR. RIMM: Yes, I mean that seems
19 to be the dogma, although the literature
20 doesn't support that. I think that, for
21 chronic disease, there are benefits that come,
22 regardless of the beverage type. You see

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1 benefits from beer in Germany as the same.
2 You see spirits in Finland as the same as you
3 see wine in France. The benefits are the same.

4 So I know that there have been
5 great things documented in wine that are
6 antioxidants. The question is, within the
7 range of consumption we are talking about, is
8 there enough and is it absorbed?

9 We can review that literature. I
10 don't know if necessarily that falls within
11 the purview of the Dietary Guidelines that
12 start talking about the B6 that is in beer and
13 the antioxidants that are in wine and spirits.

14 But it is something to at least
15 keep in the back of our mind when we are
16 updating the literature on the differences in
17 beverage type. It actually may come up in
18 some of our new research questions.

19 So some of the research questions
20 that we would like to address relate to
21 drinking patterns. Obviously, it is known to
22 be adverse for binge drinking related to

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1 trauma and accidents. That was covered in the
2 2005.

3 But I would like to do, or we
4 would like to do, a little bit more work here
5 to look at some questions that we may be able
6 to address with the literature. That is age
7 at initiation and effects on young adults. I
8 know there has been some data on this, looking
9 at kids that start drinking at age 13 in the
10 U.S., not in some cultures where they drink
11 with meals, but kids who start drinking with
12 their friends at age 13 and the impact of them
13 having more adverse outcomes later in life
14 versus drinking at age 21, when you're legal
15 age, legally allowed to drink.

16 There are now new data on people
17 not, as Linda was saying, who start drinking,
18 but people who are light drinkers and went to
19 moderate drinkers during their adult lifespan.
20 So I don't know how this would turn into a
21 guideline, but there are at least some data
22 saying that, if you change your consumption to

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1 slightly drinking more, you actually get more
2 benefit.

3 Now the issue is, as Tom
4 mentioned, that there is benefit up to one to
5 two and three drinks a day. What happens when
6 you get to four to five? The question is, I
7 know there is not perfect literature on it,
8 but can you define who it is that goes from
9 one to two up to four to five? Because,
10 obviously, we would want to give guidance to
11 those individuals, either to stop drinking or
12 to drink less.

13 So related to that, we would like
14 to look at, and we have asked NIAAA and others
15 for some help on successful interventions to
16 reduce or stop consumption.

17 The guidelines in the past say
18 that people who drink too much, the guidance
19 is to stop, or if you can't control your
20 drinking, to stop. So there are some
21 successful behavioral interventions out there
22 that, like behavioral interventions for diet,

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1 I think it would be worth at least coming up
2 with a question related to the successful
3 interventions for people who start to drink
4 too much.

5 Then, as I mentioned before, much
6 of the 2005 guidelines that talked about
7 health focused on heart disease, stroke, and
8 breast cancer, and a few other cancers. So,
9 within the moderate range, I would like to
10 expand that to other chronic diseases, that
11 there are now a fair bit of data, including
12 diabetes, gallstones, and other chronic
13 diseases that are in this sort of top 20
14 causes of death that we could look at.

15 Are there segments of the
16 population who should not consume alcoholic
17 beverages at all? We all are familiar with
18 those, based on what's on the side of a beer
19 bottle or a wine bottle. They are also
20 defined in the 2005 Dietary Guidelines, that
21 those that cannot control their consumption
22 should stop; women who are pregnant; if you

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1 are operating machinery.

2 I think we could do a better job.
3 Maybe there are others who should not consume
4 alcohol. Can we identify those at high risk
5 for overconsumption? So it would be nice if
6 we could identify the pool of people who are
7 at risk. Rather than waiting for them to
8 consume too much, can we give some guidance on
9 people who early on, I guess under the mode of
10 prevention, early on should be advised not to
11 drink or to drink less?

12 Then the interesting question,
13 which we now do have some data for, just in
14 the last week or two, is: can we define the
15 prevalence of high risk with as current data
16 as possible? I have some data for average
17 consumption from 2005 and 2006, and it looks
18 like, based on Susan's talk yesterday, we
19 probably can get the prevalence of
20 overconsumption, at least from 2001 and 2002
21 and maybe 2005 and 2006.

22 That could be by beverage type.

1 That could be just those consuming more than
2 the recommended amount, which I think would be
3 important to document because I think that
4 maybe would impact policy. I think there may
5 be more overconsumption out there than has
6 been documented in the past, and it would be
7 nice if this could be a good source for that.
8 For that, I think we have also asked NIAAA to
9 assist us in providing some of that data.

10 Also, we have touched on this,
11 other research questions related to the
12 metabolism of alcohol. Does ethanol, one to
13 two drinks per day, have a metabolic impact on
14 the diet? Does it impact lipogenesis? Does
15 it reduce the glycemic effect of the meal?
16 Does it impact bowel function? I think I have
17 just about touched on everything that
18 everybody else has talked about with their
19 subcommittee.

20 But, again, some of these have not
21 been touched on in past guidelines. So it
22 would require a search further back. But I

1 think it would at least create a foundation
2 for future dietary guideline panels to look at
3 the impact of ethanol, not just as
4 discretionary calories, but as something that
5 may impact other aspects of the diet.

6 So this is my last slide. We are
7 in the process of developing PICO formats to
8 build on what was done last time and to refine
9 new questions for further study.

10 And that is my 45 minutes. Does
11 anybody else have any other thoughts or
12 questions that Larry and Tom will answer?

13 CHAIR VAN HORN: You know, the
14 only other interesting thing perhaps, or one
15 other interesting thing, is the whole issue of
16 economics related to alcohol. If you look at
17 the data, I don't know if there is anybody in
18 the audience that is representing the alcohol
19 industry, but drinking is expensive in some
20 ways. If it is a question between do you
21 spend your dollars on alcohol or on food, I
22 think there are some real issues here that

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1 need to be considered related to the best use
2 of the dollar for purchasing food.

3 DR. RIMM: That is an interesting
4 point.

5 CHAIR VAN HORN: Yes.

6 DR. PEARSON: Well, the issue
7 there, though, is that most of those dollars
8 are taxation. I mean the production of --

9 DR. RIMM: Are you saying there's
10 a conflict of interest if we --

11 DR. PEARSON: Well, it is part of
12 the equation. Obviously, taxation has been
13 successfully used in a variety of tobacco and
14 alcohol to limit consumption, with
15 elasticities particularly in the low
16 socioeconomic groups and the young.

17 So those have always been part of
18 -- and it is not, obviously, the U.S.; it is
19 a worldwide phenomenon. And obviously, in
20 these times, I would imagine that there would
21 be some continued sin taxes in terms of the
22 revenues into governments.

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1 But just to say that this is not
2 an expensive food; it's taxed to make it
3 expensive, to limit consumption, which I don't
4 think is a bad public health strategy at all.

5 CHAIR VAN HORN: No, no, I don't
6 either. I guess all I am suggesting is it
7 will be interesting, actually, to follow,
8 since you have the more current alcohol data,
9 to see what happens in the year 2008-2009, as
10 we go through this economic crisis period, and
11 see what happens to that as a component of the
12 diet.

13 DR. RIMM: Yes. Thanks. That is
14 a good comment.

15 Let me add one or two other things
16 that I forgot to mention.

17 I think, in the past, Dietary
18 Guidelines, they very nicely made a table up
19 of what the average serving size is, what it
20 contributes to calories, and sort of the
21 different distributions of four or five
22 different drinks, to look at equivalents

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1 between wine, beer, and spirits.

2 I would like to update that
3 because there has been a change in the alcohol
4 supply that we consume. So it probably won't
5 be a question; it is more of a documentation
6 to show that the alcohol content of some
7 beverages has gone up, for wine and some kinds
8 of beer.

9 So if you look at the USDA most
10 recent food composition database, it actually
11 has changed since the last one. So the
12 caloric content will change based on the
13 average consumption.

14 Now I don't know if I can get that
15 detail from NHANES data, to look at beverage-
16 specific consumption, but that would be
17 interesting, if we are calculating SoFAAS, to
18 see that if people drink wine, the alcohol
19 content is this for a 5-ounce serving size,
20 and it will differ between beer, wine, and
21 spirits, just because the alcohol content of
22 some beverages has gone up.

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1 DR. SLAVIN: Eric, as the
2 carbohydrate person, I think some of these
3 newer, like hard lemonades and stuff, are a
4 big source of carbohydrate, besides a big
5 source of alcohol. I don't know what kind of
6 information you can get on that, but just
7 looking at exposure.

8 DR. RIMM: Yes, I mean that is one
9 of the things I was thinking about with the
10 NHANES data, if they get specific 24-hour
11 recalls on what people drink. Because the
12 alcohol equivalency is based on a shot of
13 spirits and a 12-ounce can of beer and a 5-
14 ounce glass of wine. But if a shot of spirit
15 is always consumed in lemonade, then,
16 obviously, the caloric content will be -- even
17 though the alcohol, the ethanol will give you
18 the same caloric content. If it is always
19 with something that doubles the calories, then
20 that is, obviously, something that we need to
21 address.

22 I don't know what percent of the

1 population just takes shots versus the people
2 that mix it with something that has calories.
3 I don't know the data on that, but that would
4 be interesting to look at.

5 CHAIR VAN HORN: To my knowledge,
6 the data are documented the way they are
7 given. So a person would say --

8 DR. RIMM: So it exists, right.

9 CHAIR VAN HORN: -- "I had this
10 lemonade," whatever, and the alcohol is -- you
11 heard about the "D", whatever the word is, you
12 know, of the food groups.

13 DR. RIMM: So we can get it both
14 ways, presumably. The table I have is average
15 alcohol, but, obviously, this came from
16 something that --

17 CHAIR VAN HORN: Yes, we should be
18 able to look at it both ways.

19 DR. RIMM: Yes, that would be nice.

20 CHAIR VAN HORN: Because it is
21 documented the way it is given.

22 DR. RIMM: Right.

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1 DR. NELSON: This is Mim.

2 In that same vein, one sort of
3 burning question I have with the database and
4 the foods is, it is fascinating to see this
5 disaggregation, and it goes into the
6 micronutrients and the macronutrients. But,
7 to me, with the work that we are doing, what
8 is more interesting is actually the
9 aggregation of what are people eating.

10 When are they eating and what are
11 they eating? I would love to have where, but
12 we won't go that far yet. But just it would
13 be great if we could get that data on what is
14 the typical, the average dinner. I mean
15 people aren't even eating dinners these days,
16 but sort of, what is the actual pattern of
17 eating? Because, in a sense, that really is
18 universal for a lot of the work that we are
19 doing.

20 I would love it if the next
21 presentation at the meeting we could have sort
22 of the same presentation, but here are the

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1 foods that people -- this is what people are
2 actually eating. Because I think we might be
3 surprised at how the classic sort of foods
4 that people are eating are really quite
5 different than they have been. It would be
6 really helpful for us when we think about
7 patterns.

8 DR. PEREZ-ESCAMILLA: There is
9 actually a nationally-representative survey as
10 to how people distribute their time during the
11 day, doing different activities, including
12 eating. I don't recall the name of the
13 survey, but I don't know if Rob knows about
14 the time survey.

15 DR. POST: No. No.

16 DR. PEREZ-ESCAMILLA: Okay, but it
17 exists. I don't know if it is Department of
18 Labor or Department of Transportation. I saw
19 data presented at experimental biology on what
20 percent of the people spend more than "X"
21 amount of time eating, watching television, or
22 in the car, and so on.

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1 DR. WILLIAMS: Eric, I was
2 thinking, though, for some recommendations,
3 like for sodium, we distinguish between
4 recommendations for healthy individuals and
5 those with hypertension. Do you think that
6 for alcohol there should be some distinctions
7 also? For example, diabetics or overweight?

8 DR. RIMM: Yes, I mean I showed
9 some data last time that the American Diabetes
10 Association used to recommend that you not
11 drink. Now their guidelines are very similar
12 to the U.S. Dietary Guidelines because of the
13 fact that there's now been 10 or 15 studies
14 saying that, if you are diabetic and you drink
15 in moderation, you have lower risk of heart
16 disease, and that is what kills most people
17 with diabetes.

18 So we maybe can note that. I
19 don't know if we want to have a whole separate
20 section on that. I mean the exception --
21 hypertension is the same way. Again, within
22 the moderate range; I think if you get the

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1 excessive range, then obviously that is not
2 good for diabetics; it is not good for
3 hypertensives, and it is not good for anybody.

4 So most of the conditions that we
5 can look at where the prevalence is high
6 enough that those people usually die of heart
7 disease, and so alcohol is beneficial -- I
8 mean you could get into other things like
9 subgroups of people with certain types of
10 cancer; obviously, those people probably
11 should be told not to drink, but I don't think
12 we have enough data on that to document that.

13 DR. PEARSON: Relative to our
14 focus on obesity, I think it is an interesting
15 discussion about the caloric content.
16 Obviously, you have an increased, you know, an
17 energy-dense substance in alcohol, but it is
18 other issues of what else is in it.

19 I am sure, if you have a sweet
20 wine, you've got 5, 6, 8 percent residual
21 sugar in those in and above that of the, say,
22 12 percent alcohol.

1 Then, as you start mixing spirits
2 in with other high-calorie things, you know,
3 I've actually never seen the actual calorie
4 intake associated with alcohol consumption
5 divvied out by actually what the actual
6 sources are. Most of it is carbohydrates.

7 DR. SLAVIN: Well, you know, if
8 you look at a lot of the mixes now, too, they
9 are the energy drinks, the Red Bulls, and some
10 of those are loaded with lots of stuff besides
11 just carbohydrates, the calories.

12 DR. PEARSON: Yes. But, I mean,
13 beer has a lot of carbohydrate in it.
14 Certainly, wine has a lot of sugars, and in
15 spirits you start dumping in all sorts of
16 things.

17 DR. SLAVIN: But, you know, since
18 those aren't nutrition-labeled, it is hard to
19 get good information on calories in those.

20 DR. PEARSON: Part of the "so
21 what?" question would be if, in fact, there is
22 a calorie issue, and you could choose the

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1 right alcohol mix for your weight.

2 DR. RIMM: There is lots of
3 discussion going on in several different
4 agencies about labeling of alcoholic
5 beverages. Something tells me that that will
6 not be passed by the time the 2010 Dietary
7 Guidelines are completed. But we look to them
8 for also equal guidance.

9 MS. McMURRY: The Department of
10 Treasury is currently undergoing a rulemaking
11 process that began in 2004. The proposal is
12 to include calorie information and alcohol
13 content information on all labels of alcoholic
14 beverages.

15 It's a division of the Department
16 of Treasury that is responsible for labeling,
17 the Tax and Trade Bureau.

18 CHAIR VAN HORN: Well, I think it
19 is time to break for lunch.

20 Just a couple of housekeeping
21 details -- sorry.

22 DR. NELSON: I'm not going to be

1 here after lunch, which I apologize. I had a
2 previous engagement that I've got to get to.

3 But can I ask a couple of quick
4 questions?

5 One of which is, with the Physical
6 Activity Guidelines, one of our charges with
7 our Committee was also trying to identify gaps
8 in research. Is that something that in this
9 Committee, as we go through our work, that we
10 should be identifying? For example, the
11 measurement issue is a really big issue in
12 physical activity. I would assume it is still
13 an issue.

14 We had a whole section in our
15 report on the gap. So is that something we
16 should be -- okay.

17 CHAIR VAN HORN: Yes.

18 DR. NELSON: Then the last
19 question I have: thinking about this
20 environmental issue, other thoughts come to my
21 mind. That is, I don't know how the
22 government works right now, but I am assuming

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1 that all guidelines that the government puts
2 out there, there must be some kind of an
3 Environmental Impact Statement, that what the
4 government is proposing doesn't have an
5 adverse -- no?

6 So we don't have to? Because I
7 think about food, and I know there were a
8 couple of public comments, but this has a huge
9 impact on the environment, what we propose and
10 everything else.

11 So we shouldn't be -- okay. It
12 seems like it is a shame that there isn't some
13 kind of connection there.

14 DR. POST: If it was regulatory,
15 there would be that kind of assessment.

16 CHAIR VAN HORN: Okay. Just one
17 comment on yesterday: evidently, there was
18 some confusion in the audience in regard to
19 some of the slides that had the word
20 "conclusion" on it, as they were going through
21 their presentation. I just want to reassure
22 everyone that is not the conclusion of the

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1 Committee. That was the conclusion of the
2 presentation. That's it.

3 So please don't go out thinking
4 that's it. That is not it. That was just
5 ending the talk.

6 And we are going to break for
7 lunch now, but we are going to resume promptly
8 at one o'clock because we have a lot yet to
9 cover.

10 So eat nutritiously, but quickly.

11 DR. POST: And please wear your
12 IDs if you are going to go to the cafeteria
13 down the hall.

14 CHAIR VAN HORN: And for our
15 group, we are going to be working at our
16 lunch. So please grab your lunch, sit down,
17 and we are going to start talking. Okay? Same
18 place.

19 Thank you.

20 (Whereupon, the foregoing matter
21 went off the record for lunch at 11:57 a.m.
22 and resumed at 1:19 p.m.)

1 Department of Agriculture and HHS staff, but
2 particularly Shirley Blakely, who is kind of
3 the glue that keeps us all together and
4 heading in one direction. So I will just say
5 an acknowledgment of her contributions.

6 We have had quite a number of
7 questions put forward. We are actively in the
8 process of winnowing them down. One of the
9 advantages of being a little bit later in the
10 program is that we've got several that we
11 would like to pawn off on earlier speakers.
12 So I think we can probably foreshorten some of
13 our comments with regard to that.

14 I am going to start with some
15 comments, and then turn various sections over
16 to my colleagues here for areas that they have
17 been focusing on.

18 The first activity was to really
19 ask the question: what is the evidence for
20 implementation of the 2005 Dietary Guidelines
21 for fats?

22 So we would like to review those

1 research questions and really identify high-
2 priority and low-priority questions
3 thereafter.

4 Before we do that, though, there
5 is the terminology, kind of the alphabet soup,
6 if you will, of fat terminologies. We have
7 listed them here, so that people don't get
8 lost in the jargon.

9 But we are going to be
10 particularly talking about omega-3, 6, and 9
11 fatty acids and dietary cholesterol, and
12 coronary heart disease and cardiovascular
13 disease. Obviously, we all sometimes
14 abbreviate.

15 The questions relative to those
16 from the 2005 Guidelines, there are a number
17 of questions, as you see here, seven, having
18 to do with the major dietary fats components
19 and looking at their relationships to health.
20 So, certainly, going into 2005, there were
21 sizable literatures on each of these.

22 We will likely update these areas

1 of evidence, but I think we believe that this
2 is unlikely to change in a major way, at least
3 in terms of the relationships. We may want to
4 come up with some subquestions as to specific
5 levels and contexts, et cetera, but probably
6 not a lot more happening in these questions.

7 We would like to look at the
8 trends in fatty acids consumption. We have
9 had some discussions about this already. We
10 have already been looking at the NHANES data
11 from 2000-2001. We would like to further look
12 at 2005 and 2006 and develop trend tables
13 across this period of time.

14 We understand that it takes really
15 a long time for guidelines to really be
16 implemented, so that the 2005 and 2006 really
17 are not obviously going to have a lot of
18 impact from 2005 Guidelines. But it would be
19 nice to know the backdrop upon which any
20 recommendations we have are based.

21 We also want to recognize the
22 limitations of the dietary assessment

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1 methodology, so that we don't mistake trends
2 when the changes may actually be due to
3 methodologic issues, and certainly want to use
4 Healthy People 2010 data to also help assess
5 intake trends and goals. We intend to invite
6 several speakers, as in individual places we
7 will point out in areas of uncertainty.

8 So the second question that we had
9 is, what should the average daily intakes of
10 total fat, saturated fat, dietary cholesterol
11 be in order to achieve/maintain the goal of a
12 desirable plasma LDL cholesterol, 100
13 milligrams per deciliter or less?

14 Now the rationale for this is an
15 LDL goal of 100 or less has been defined as
16 desirable from the Adult Treatment Panel of
17 the National Cholesterol Education Program.
18 It relates, at least empirically, to that
19 level of LDL cholesterol at which point it
20 appears that the progression of arterial
21 graphically-defined coronary disease
22 progression ceases; in other words, at a point

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1 where you could control this disease process
2 of atherosclerosis. So the point is that
3 there is a bit of a scientifically-based
4 program, and the LDL goal had generally been
5 higher than this.

6 We know from the classic work of
7 Keys and Hegsted, and others, that these
8 population-based cholesterol levels, LDL
9 cholesterol levels, are related to saturated
10 fat, dietary cholesterol, and polyunsaturated
11 fat in a protective way, and monounsaturated
12 fats in some equations. So there really is a
13 relationship to fats.

14 But the real concern is, is our
15 total and LDL cholesterol in the U.S.
16 population still above any threshold that
17 would control this epidemic of cardiovascular
18 disease?

19 So our outcomes really are
20 coronary heart disease, other cardiovascular
21 disease, and type 2 diabetes, and to refer to
22 other populations with, say, total

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1 cholesterol in the 160 milligrams per
2 deciliters and LDLs in the 100 milligram-per-
3 deciliter range, in fact, who don't have
4 coronary epidemic, despite very high
5 prevalences of some of the other risk factors,
6 like hypertension and smoking.

7 So this is the basis for this
8 particular question. Should some of the goals
9 for, say, total fat, saturated fat, and
10 dietary cholesterol be reconsidered under the
11 new goal of really controlling atherosclerotic
12 cardiovascular disease?

13 So, in terms of the PICO question,
14 for really the general U.S. population,
15 looking at the relationship between dietary
16 fats and dietary cholesterol across a variety
17 of levels on their LDL cholesterol level in
18 plasma, and the basic research questions;
19 then, coming from this, you can see on this
20 next slide, and really looking at population
21 daily intakes that would be at least evidence
22 for maintaining a plasma LDL cholesterol that

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1 at least the cholesterol guidelines would
2 suggest be desirable and a population basis.

3 Then, also, getting down to the
4 type of fat, saturated fat, monounsaturated,
5 polyunsaturated fat, possibly you could add
6 *trans* fatty acids to this as well in terms of
7 targeting this goal.

8 DR. PI-SUNYER: Tom, can I ask you
9 a question on that?

10 DR. PEARSON: Yes.

11 DR. PI-SUNYER: I'm not sure that
12 first statement is the way you want to state
13 it. It sounds like you are trying to get
14 people to 100 or above, rather than 100 or
15 below --

16 DR. PEARSON: Okay.

17 DR. PI-SUNYER: -- the way you
18 have written it.

19 DR. PEARSON: These are less than.
20 Well, it just says, or less -- Okay, I think
21 we could resubmit this question. Thank you.

22 DR. PI-SUNYER: Say achieve or --

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1 DR. PEARSON: Yes, maybe achieve
2 would be -- or to reach, yes.

3 The next research question is:
4 should the 2010 Dietary Guidelines add a
5 couple of other metabolic endpoints; namely,
6 HDL cholesterol and/or triglyceride levels?

7 The rationale for this would be
8 the epidemiologic evidence for independent
9 association of these lipids with
10 cardiovascular disease endpoints. This is
11 true for both men and women for HDL
12 cholesterol as an inverse relationship and for
13 a direct relationship independently,
14 particularly for women.

15 It should be pointed out that
16 non-HDL cholesterol levels are a secondary
17 endpoint in the Adult Treatment Panel III. So
18 we do have some recommended level, depending
19 on people's risk for the non-HDL cholesterol.
20 This does capture individuals who would have
21 both high LDL as well as triglyceride-rich
22 lipoproteins at above the level we would like.

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1 However, there really aren't any
2 target levels from the Adult Treatment Panel
3 for HDL cholesterol or triglycerides per se.
4 There's certainly a discussion of which levels
5 are at risk, et cetera. But the treatment
6 targets really have not been identified.

7 There certainly is a literature on
8 the relationship of these to dietary fats and
9 other nutrients. *Trans* fats, for example,
10 raise total and LDL cholesterol and lower HDL,
11 for example. But I think we could look at
12 this literature, some additional, and then
13 consider this in relationship to the
14 cardiovascular disease and diabetes outcomes.

15 Larry?

16 DR. APPEL: Yes. You know, I've
17 been thinking about this. For HDL, I mean it
18 clearly is a risk marker, but there are funny
19 relationships, obviously. You know, one way
20 to increase HDL is to increase saturated fat.

21 I know there are drug trials, but
22 you have drug trials with the goal of

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1 increasing HDL, and they increase defense. So
2 I don't think the FDA is even letting people
3 use this as a surrogate marker.

4 I don't think you have that sort
5 of inconsistent literature as much with
6 triglycerides. So I can see using that.

7 But I think somehow it is a marker
8 in people that are not being treated, but then
9 the relationships from intervention studies
10 give me pause for using HDL.

11 DR. PEARSON: Well, you have
12 reviewed the literature of about why there
13 haven't been any target levels so far. I
14 would really exclude the drug trials here.

15 So we are talking really about
16 non-pharmacologic issues in which there is a
17 relationship of things that raise the HDL do,
18 in fact, have a beneficial relationship to
19 health.

20 Alcohol is one of the examples
21 where, if you look at the relationship between
22 alcohol and heart disease, if you add HDL

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1 cholesterol to the regression equation, half
2 of the relationship between alcohol and
3 coronary disease goes away as a likely
4 intermediary variable. There's a lot of
5 clinical trials showing that alcohol raises
6 HDL.

7 Now this is not necessarily a
8 rationale for the use of alcohol, but --

9 (Whereupon, the above-entitled
10 matter went off the record at 1:32 p.m. and
11 resumed at 1:33 p.m.)

12 DR. APPEL: Okay, thank you.

13 So I think this is part of the
14 discussion we are having, but there certainly
15 are a lot of individuals looking for dietary
16 means to raise HDL, some of them having to do
17 with weight loss, and a variety of other
18 things which are the purview of this
19 Committee.

20 DR. RIMM: Yes, and I think
21 related to that, Larry, you brought up the
22 point of saturated fat. I think one of the

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1 reasons that the observational, even
2 experimental literature, finds that *trans* fat
3 is worse than saturated fat is that *trans* fat
4 decreases HDL and saturated fat increases HDL.

5 So I think it helps us understand
6 some of the differences in the observational
7 studies as well as the metabolic studies on
8 differences between sats and trans.

9 DR. APPEL: I think there is
10 this -- when you think about sort of like
11 outcome variables upon which you base
12 decisions, then it is nice to know that, well,
13 you have clinical outcomes that nobody will
14 disagree with, and then you have surrogate
15 outcomes where there are other bodies,
16 professional bodies, that have made decisions.
17 Right now, if we make decisions based on HDL,
18 I think we would be among the first for
19 Dietary Guidelines in the U.S.

20 DR. PEARSON: The Adult Treatment
21 Panel has been convened and they are looking
22 at a variety of issues. I don't know all of

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1 the issues, but this is like the IOM report
2 and other things; there is a parallel process
3 going on out there. You would like to be
4 consistent across the way.

5 So I think the point here is that
6 this is a question. We are going to look at
7 this information as to where it is at and the
8 more recent results of it.

9 DR. PEREZ-ESCAMILLA: Tom?

10 DR. PEARSON: Rafael?

11 DR. PEREZ-ESCAMILLA: Very
12 quickly, going back to the previous slide,
13 should inflammation markers, c-reactive
14 protein, and so on, be considered as metabolic
15 endpoints?

16 DR. PEARSON: Yes. I co-chaired a
17 writing group for the Guidelines from the AHA
18 and the CDC on this subject. I think that is
19 probably not -- it is an incredibly distal
20 endpoint, a marker at best, and probably
21 something that is really well beyond the -- it
22 is too complicated to really, I think, get

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1 those issues across as a risk marker.

2 For example, there is a recent
3 paper with individuals with genetically high
4 CRP levels who had no increased risk. So it
5 is a marker of something else that is bad for
6 you, probably the atherosclerotic process, but
7 as a metabolic outcome, I think it is
8 difficult to say -- I think we have a
9 mechanism by which HDL protects the arterial
10 wall, and if the HDL goes up, we should have
11 less heart disease. I don't think you have
12 that causal pathway with C-reactive protein.

13 It is probably not related to diet
14 either. It is related to -- not directly, as
15 secondary to some other things that are going
16 on, like weight, exactly.

17 So the question, as we had with
18 our PICO, is, I think, a straightforward one
19 that we will look at and then judge whether or
20 not there is something we would want to
21 recommend.

22 I will turn it over to Eric Rimm,

1 who is going to discuss several other
2 questions.

3 Eric?

4 DR. RIMM: Just a few other
5 questions that we may end up honing down a
6 bit:

7 One, this may be of secondary
8 priority since we are already covering n-3
9 fatty acids in coronary heart disease and also
10 going to be covering fish. But there is still
11 now, I think, a growing body of evidence that
12 is quite convincing on n-3 fatty acids in
13 other health outcomes. So that is age-related
14 macular degeneration, cognitive function,
15 mental health, hypertension, prostate cancer,
16 and there may be a few others.

17 One of the reasons that I wanted
18 or we wanted to add this is I think it may
19 help refine some of our understanding of fish
20 among pregnant mothers, only because there is
21 now, I think, much better data out three or
22 four or five years on the importance of the

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1 brain development of the fetus and of the
2 infant among a mother who has higher intakes
3 of n-3 fatty acids.

4 So, instead of just focusing on
5 the downside of the toxicology of eating fish
6 that may be high in mercury, other factors, I
7 wanted to also make sure we include the fact
8 that there is now better-documented evidence
9 that n-3 fatty acids are better for the child.

10 So this will be one research
11 question that may be more of a challenge to
12 break down into the PICO subcategories, since
13 there's lots of other endpoints we can look
14 at.

15 So research question 8 related to
16 that was: now there's been a number of meta-
17 analyses on observational experimental
18 studies. So rather than us having to
19 necessarily try to synthesize the data
20 ourselves from many multiple tables of the
21 observational experimental studies, we can
22 actually count on many others who have done

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1 this, either from just experimental studies or
2 from experimental studies combined with
3 observational studies, both at the level of
4 the food as well as the level of the
5 quantitative amount of fatty acid.

6 So I think this will be important
7 for maybe quantitatively as good or better
8 than other Guidelines that have looked at
9 specific amounts of long-chain n-3 fatty
10 acids.

11 And the next one, oh, this is sort
12 of breaking down the PICO codes for this.
13 This is, I think, in general, healthy children
14 and adults, elderly. I would like to make
15 sure we carefully clarify, and we can do this
16 maybe from the NHANES data as well as the
17 literature, just to break apart the n-3 from
18 diet, from supplements, and then from either
19 long-chain versus the vegetable sources of n-3
20 fatty acids, since for some disease outcomes
21 there does seem to be a difference between the
22 source of n-3 fatty acids, and because of the

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1 fact that the n-3 from vegetable sources does
2 not convert that well into n-3 from -- the
3 longer-chain n-3 fatty acids.

4 Okay, so the last topic that I
5 want to talk about, I believe, is the one that
6 we would like to invite someone in, I think,
7 to be an outside speaker. This is one that
8 has been kicking around in the literature, and
9 everybody in this room has probably seen it at
10 one point or the other, is the impact of the
11 n-3 to n-6 ratio on predicting health
12 outcomes.

13 The rationale for this is that, my
14 reading of the data is there's a fair bit of
15 epidemiologic data and observational data
16 suggesting that there's reduced cardiovascular
17 disease as well as better lipid inflammatory
18 profile for people that have high intakes of
19 both n-3 and n-6. So regardless of your n-6
20 intake, the higher the n-3 and n-6, the better
21 the profile and the more strongly the
22 reduction in risk of cardiovascular disease.

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1 Yet, there is a very vocal group
2 of people who are very concerned about the
3 higher intake of n-6 fatty acids in our diet.
4 That has to do with DHA absorption in the
5 brain with potential for increasing oxidation
6 marker, as increasing cancer. There are some
7 animal models that suggest that a higher n-6
8 in the ratio does lead to adverse outcomes.

9 So we talked about speakers at
10 first, but then we were concerned that we not
11 just invite speakers in that are proven in one
12 camp or the other, because we already know
13 what they are going to say. So the challenge
14 to us will be to try to come up with good
15 speakers, one or two speakers, that may at
16 least present the arguments from both sides,
17 so that we can try to do the best we can to
18 synthesize that data.

19 I don't know if others have any
20 thoughts on the n-3 to n-6 ratio. It has been
21 kicking around for 10 years.

22 DR. PEARSON: Just that the

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1 American Heart Association released a
2 statement three days ago.

3 DR. RIMM: On n-6?

4 DR. PEARSON: On the ratio.

5 DR. RIMM: On the ratio? And on
6 n-6. The ratio snuck in there, yes.

7 DR. PEARSON: Right, right. So we
8 should look at that as well. This is a fast-
9 moving area.

10 DR. RIMM: Right. I think I'm on
11 that statement, the n-6 statement. I think
12 the evidence in humans is not that strong
13 saying that we should be concerned about n-6
14 to n-3 ratio, or vice versa.

15 But, yes, Larry?

16 DR. APPEL: Obviously, we were
17 both on that. But one of the things that came
18 out was that most of us felt that the ratio
19 was not the way to go and to look at them
20 separately.

21 I guess I am trying to think about
22 whether, again, recommendations, when you

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1 think about ratios, those are very tough to
2 implement. Isn't the issue what are the
3 health benefits of increasing/decreasing n-6?
4 Because at this point nobody is arguing about
5 lower n-3, that it should be higher, but the
6 argument seems to be, is it better to have a
7 higher level of n-6 or should it be lower?
8 Isn't that the question that this could be
9 sort of reduced too?

10 DR. RIMM: Yes. I mean I think
11 there's two ways to approach that. One is it
12 is part of our initial screens of questions
13 from last time: what is the health impact of
14 higher n-6? So I think we will be addressing
15 that on a standalone point.

16 But I think some people would
17 argue that, regardless of your n-3, if your
18 n-6 is too high, it is troublesome. The three
19 of us are cardiovascular epidemiologists, so
20 we have to be a little careful that the world
21 is not just cardiovascular disease, even
22 though it is the No.-1-in-three cause of

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1 mortality. I mean there is also a pretty
2 vocal field in the cancer area and also in
3 brain function.

4 So I don't think we would give
5 Guidelines on the ratio per se. I really do
6 think it is going to be, is this important,
7 and if it is important, then we have to
8 reflect back on our Guidelines on n-3 and n-6.
9 I don't think we would give it specific to the
10 ratio.

11 DR. APPEL: Should, though, the
12 focus then be on n-6 and its outcomes, non-
13 cardiovascular outcomes, rather than the
14 ratio? Maybe that is just a nuance to think
15 about.

16 DR. SLAVIN: I want to just talk a
17 little bit about just going way back, because
18 I think omega-3s were naturally occurring in
19 a bunch of plant foods. So people that eat a
20 big plant food-based diet used to get a lot
21 more omega-3s. Then there was a shift with
22 plant oils, and omega-6 went way up and it

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1 went along with cardiovascular disease
2 recommendations.

3 So I think having a speaker in
4 with more of a historical, really different
5 approach would be great, to bring that to the
6 Committee. It is a tough one because people
7 feel pretty passionate about it, once you go
8 down those paths, but I think it is much
9 broader and it does relate more to other
10 diseases, too, than cardiovascular.

11 DR. RIMM: Yes, I mean it is
12 tricky. What you just described is the n-3
13 from vegetable sources. I think true vegans
14 and vegetarians that don't eat any fish, they
15 do convert better their vegetable sources of
16 n-3 to DHA and EPA.

17 But I think a lot of the
18 discussion now is around getting enough DHA
19 and EPA because the n-6 may be interfering
20 with the conversion of the 18-3 to the 22 and
21 24. I think that is what the discussion or
22 some of the discussion is around, is just the

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1 competition of so much n-6 in the diet
2 competes with the ability to convert n-3s,
3 which means you need to have more DHA and EPA
4 in your diet.

5 But I would not be opposed to
6 that. I think that we have to find the right
7 speaker.

8 DR. SLAVIN: You know, it could
9 relate to childhood nutrition, too, because
10 there is a whole area.

11 DR. RIMM: Yes, it does, yes.

12 DR. SLAVIN: You know, that could
13 be the speaker --

14 DR. RIMM: Yes.

15 DR. SLAVIN: -- somebody with
16 expertise in that, too.

17 DR. RIMM: Yes. I should have
18 flipped this around. I think it is the n-6 to
19 n-3 ratio, not the n-3 to n-6.

20 DR. PEARSON: And I think there
21 are a variety with the n-6, obviously,
22 particularly in the whole area of inflammation

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1 that is another non-cardiovascular part of
2 this.

3 We have had a couple of speakers
4 in mind. So I think one of the useful parts
5 of this discussion is that we should probably
6 have them emphasize as much the n-6 as the
7 n-3s, because some of the people we have been
8 talking with, I think, have been very much
9 more focused on the n-3s.

10 DR. RIMM: Yes, you're right.

11 DR. PEARSON: So that is helpful.

12 I am going to talk about this 12th
13 question. This is looking at individual foods
14 which have a fat basis for some of their
15 potential health effects.

16 This is a growing list. I think
17 meat got added a little bit ago. Included in
18 these are whole foods. They have a variety of
19 carbohydrate and protein and also other
20 issues.

21 But there certainly is
22 epidemiological evidence and certainly things

1 that pop up in the literature on these
2 individual foods; namely, nuts, fish, eggs,
3 chocolate, and I guess we can add meat to
4 that.

5 So the epidemiologic data is
6 really: what is the relationship to CVD?
7 Some of these reduce it, such as the evidence
8 is, obviously, with fish and nuts. Others
9 perhaps have a positive relationship, eggs and
10 meat. So we can update those individual
11 foods.

12 Of particular interest to the
13 fatty acid group, of course, there is a role
14 in these foods, particularly the nuts and
15 fish, for n-3 fatty acids, which is the origin
16 of this question.

17 So I think this also relates to
18 the previous question 8 that Eric was talking
19 about as well, that it is part of a treatment
20 of the subject.

21 We do expect to invite at least
22 one outside speaker on particularly the issue

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1 of nut consumption and its effects on health.

2 DR. SLAVIN: How do you think
3 about like the saturated fat in that, though,
4 the chocolate and the meat? So you are
5 thinking mostly as omega-3s, not stearic acid
6 or any of that?

7 DR. PEARSON: I think it is worth
8 talking about these. Certainly, I have been
9 involved in studies of stearic acid's effects
10 on lipids, which, of course, does not fit in
11 with the Hegsted and Keys equations.

12 It is, obviously, relatively inert
13 and is a saturated fat, and could have some
14 other effects on health. We have always had
15 some concerns about thrombosis, et cetera.

16 Obviously, this is a chocolate
17 issue, but it is also a meat issue. I think
18 it would be worthwhile to update that
19 information as well, but I think most of the
20 health issues relative to meats I think had
21 been the C-16 and lower saturated fats.

22 Does that help?

1 DR. SLAVIN: Yes. I guess the
2 list is kind of endless. That is the problem
3 with these lists, because other people would
4 say, how about soy? Why aren't they there?
5 You know, as soon as you start making a list
6 with cholesterol-lowering or cardiovascular
7 disease, it is a bit of a difficult list to
8 limit.

9 DR. PEARSON: Yes.

10 DR. SLAVIN: Then I wonder about,
11 with getting rid of *trans* fat, a lot of the
12 shorter-chain, coconut, you know, the short-
13 chain saturated fats, that they've got some
14 data. They don't do much for cholesterol
15 either, in that they are pretty neutral. So
16 how do they fit in? Because as *trans* goes,
17 people will eat sat.

18 DR. PEARSON: Okay. Naomi?

19 DR. FUKAGAWA: This is Naomi.

20 Coming from dairy country, there's
21 also fat in dairy products, and, you know,
22 thinking about the CLAs, for example, not the

1 trans, but the cis- form.

2 DR. PEARSON: Well, I think some
3 of these the question is the likelihood of
4 some of these having public health impact.
5 Because, obviously, there have been studies
6 using whole dairy products relative to lipid
7 endpoints. There may be true-or-false
8 assumptions relative to which fats, fatty
9 acids, within them that was carrying the
10 freight, but the effect was very clear. I
11 mean, obviously, eggs that use butter, dairy
12 butter.

13 So I think we know a little bit
14 about those from the classic literature. What
15 we would like to do is update some of these
16 newer issues.

17 But I think the question for both
18 of these questions would be some kind of a
19 handle about how really important would that
20 be on a population level.

21 DR. RIMM: But, actually, getting
22 back to the point that you brought up, is it

1 that maybe this should be the question where
2 we have the key foods that ended up being in
3 the Pyramid. I mean we could have milk, nuts,
4 fish, eggs, meat because, if we are talking
5 about whole foods and a food-based approach,
6 this could be the place where we actually
7 summarize individual foods that ended up being
8 in the last guideline.

9 I think it is a little dangerous.
10 It is a slippery slope, but those are the ones
11 that we are recommending.

12 DR. PEARSON: And I think a lot of
13 them have a serum lipid cardiovascular kind of
14 rationale for being there, even though there
15 are some other issues.

16 DR. SLAVIN: It is kind of what
17 Larry talked about before. Section 6 was more
18 of food groups, and is it better to make them
19 in a different category where you just go
20 after the foods themselves rather than their
21 nutrients or components?

22 DR. PEARSON: If you would like to

1 make this another section, I would be very
2 happy.

3 DR. PEREZ-ESCAMILLA: Yes. No, I
4 agree with Joanne that I think it would be
5 important for your subcommittee to come up
6 with some reasonable criteria to make
7 decisions as to which foods get listed,
8 because it does have very big implications for
9 different commodity groups, and so on.

10 DR. PEARSON: I think that is what
11 Eric was getting at was, why are they on there
12 and other foods are not? The list is endless.
13 This list started out as just nuts, I think,
14 and you can see the slippery slope right
15 before your eyes.

16 DR. RIMM: And we could take
17 chocolate off and add meat and beans.

18 DR. PEARSON: Yes.

19 DR. RIMM: And milk. Sorry.

20 DR. SLAVIN: I have milk and
21 beans. Those are mine.

22 DR. PEARSON: Okay. So the

1 evidence here for these specific foodstuffs
2 would be this PICO type of question and
3 looking at it across levels and really the
4 types of fats that these have, looking both at
5 lipid intermediary endpoints as well as hard
6 cardiovascular and metabolic endpoints.

7 So these are the basic questions:
8 average daily intake of nuts, fish, eggs, and
9 chocolate is related to reduced risk of heart
10 disease or cardiovascular disease.

11 Then, does the type of the nut and
12 the fatty acid composition affect the inverse
13 association for these diseases?

14 The next question, 14, as I had
15 mentioned before, we would be very interested
16 in moving over to Nutrient Adequacy or Energy
17 Balance. This has come up in several working
18 groups in various formats.

19 There were a number of special
20 diets under the rationale you can see there,
21 which were at least thought to have had a
22 lipid and fatty acid basis for their effects,

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1 the Mediterranean diet with perhaps a lot of
2 omega-3 fatty acids and some of the very low-
3 fat, high-carbohydrate diets, et cetera.

4 I think the nuance of this
5 question was our interest in the much-harder-
6 to-come-by long-term benefits in the
7 literature compared to the short-term
8 metabolic studies. But I think this, to my
9 view, I think moves successfully into some of
10 these other ones, and I think that is fine
11 with our group.

12 We can go on to Dr. Clemens, who
13 has a couple of questions on satiety?

14 Roger?

15 DR. CLEMENS: Thank you, Tom.

16 It is really interesting that the
17 satiety issue came up several times in our
18 roundtable discussions and by our wonderful
19 people who presented yesterday.

20 What is satiety? Did we all enjoy
21 our lunch? And do we feel satiated?

22 Interesting that humans have a way

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1 of suppressing the physiological signals. If
2 we had an answer to this question, then we
3 would probably be in the pharmaceutical world,
4 and, clearly, we're not.

5 But there's been an interesting
6 proposal just recently published, and I will
7 show that here next. As we look at fat, in
8 particular, we look at two centers, one at the
9 CNS level and one at the GI tract level.

10 Here we look at the hypothalamus
11 and brain stem. Each one of these is really
12 accessible through the absence of a
13 blood/brain barrier.

14 We also see here on the lefthand
15 side that we have more of the food intake,
16 promotion side, and the righthand side we see
17 more of the impact of food intake suppression.

18 So a question will be: well, what
19 are the circulating factors that give us those
20 signals? What are the time components
21 associated with the signaling, and what do we
22 do as humans do to modulate or to respond to

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1 these various signals that, obviously, have
2 been delineated?

3 This is a working model. This is
4 not an absolute. This has been suggested just
5 recently in the Annual Reviews of Physiology.

6 All of us know about the GI
7 satiety signals, long-established
8 relationships. Can we leverage some of these
9 relationships? We know that the
10 pharmaceutical world has attempted to take
11 this on to address the issue in obesity; yet,
12 has not been particularly successful.

13 We clearly see that as we look at
14 the caloric load and the response of various
15 components in the diet, including proteins,
16 the PYY, and so forth, components that
17 actually suppress, tend to suppress or
18 stimulate the vagus nerve, which, in turn,
19 suppress our appetite and perhaps into
20 satiety.

21 Again, we, as humans, have a
22 tendency to override these signals, and as we

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1 get to the end of the day, we actually take in
2 more calories than we possibly need.

3 We actually have another
4 wonderful, interesting model system that was
5 just recently published in Cell Metabolism.
6 This particular one addressed the fat link.

7 I did research many years ago to
8 look at various macronutrient components'
9 affect on satiety and food intake. At that
10 time, our results suggested that protein was
11 the major component modulating the satiety and
12 appetite suppression.

13 Interestingly enough, this
14 particular model system examines a fat model.
15 In this particular case, we are looking at
16 oleic acid 18-1. In this case, we look at a
17 diet supplying 18-1 and then a particular
18 transport to CD36.

19 In the various appropriate
20 metabolism, obviously, you see the
21 triglycerides, the phosphatidylcholine, and
22 transport, as you could imagine.

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1 The complexity of it is shown in
2 the lower part of this graphic in a variety of
3 enzymes and transporters. While this is a
4 hypothetical model, it would be intriguing to
5 explore, perhaps not in this round, but yet as
6 the clinical data emerge, the role that
7 specific fatty acids or classes of fatty acids
8 may have actually not only on lipid
9 absorption, but, more importantly perhaps, on
10 curbing obesity through modulation through
11 this kind of a process or related type of
12 processes.

13 At the end of the day, we would
14 like to examine these kinds of basic
15 questions. Basically, we say, what is the
16 role of these kinds of fatty acids, whether
17 saturated, monounsaturated, or
18 polyunsaturated, have on satiety? What is the
19 role if influence in terms of lifestyle and
20 how fast we eat, or a combination of foods
21 that actually have a role in, that influence
22 of satiety?

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1 Which, of course, leads us to the
2 second point: what are the physiological
3 signals, and will we listen to the
4 physiological signals that would actually
5 modulate our lifestyle and choice of foods?

6 Certainly, there's a great deal of
7 attention in the entire scan of fatty acids,
8 indicated by Eric and Tom. The question would
9 be: is there a combination of these fatty
10 acids, or is it a ratio of these fatty acids,
11 or do particular fatty acids within the food
12 systems that would contribute to satiation?

13 Obviously, the health benefits
14 have been acclaimed to a number of these fatty
15 acids, particularly in a food system. We have
16 to be careful in examining these fatty acids
17 in terms of food matrices. In that we know,
18 for instance, in a pediatric population, they
19 are not as efficient in converting EPA to DHA,
20 and obviously the whole bioaccumulation
21 process.

22 So, right now, we are looking at

1 not only precursors, but we also want to look
2 at the entire bioburden and conversion
3 efficiencies that say what is the appropriate
4 effect.

5 This goes back, then, to
6 ultimately a public health perspective, and do
7 each one of these fatty acids or sources or
8 dietary sources of these fatty acids actually
9 contribute benefits, or are there any
10 associated risks with the consumption or
11 overconsumption possibly of these kinds of
12 fatty acids?

13 If so, what are the behaviors in
14 terms of foods that influence the consumption
15 of these fats or fatty acids? Because, after
16 all, we are discussing foods. And at the end
17 of the day, can these fatty acids have a
18 significant impact on reducing the risk of
19 cardiovascular disease and coronary heart
20 disease?

21 DR. PEARSON: I think that
22 concludes the discussion of the questions to

1 date.

2 On the end or the four slides with
3 the questions, you will notice that questions
4 11 and 13 are already missing. This segues
5 into Roger's discussion of food safety. So we
6 have moved a couple off there, and then
7 obviously 14. So we are down to about 11
8 questions and maybe need to winnow down a
9 little bit more. But I think it is open for
10 discussion.

11 DR. SLAVIN: I just wanted to talk
12 about a little bit on satiety with
13 carbohydrates, proteins. I guess that would
14 be a topic that our subcommittee would like to
15 be involved in, the review, just because
16 there's a lot of data on carbohydrates, fiber,
17 and different carbohydrates actually --

18 DR. PEARSON: Yes.

19 DR. SLAVIN: -- and also protein.
20 There's a lot of new data on protein.

21 So I think that having the
22 complete macronutrient picture in that review

1 would be important.

2 DR. CLEMENS: We would support
3 that. Thank you, Joanne.

4 DR. PEARSON: Yes, indeed.

5 CHAIR VAN HORN: Do we want to
6 also consider at this point the question of
7 meat, as we discussed earlier, and its role in
8 this ongoing work?

9 DR. PEARSON: You know, these are
10 difficult questions.

11 If I could just switch to fish for
12 a little bit, I think there is obviously, just
13 to illustrate, there's very strong
14 epidemiologic data, obviously, for protective
15 effects of fish consumption.

16 The randomized trials have been
17 substantially less convincing. Fish has a lot
18 of other things in it as well, some
19 interesting amino acids, taurine, et cetera.

20 Obviously, there's also the other
21 dietary habits that go along with fish-eating,
22 et cetera, and there is certainly ample

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1 opportunity for all sorts of confounding, et
2 cetera. But it, again, is much more of an
3 issue than just omega-3 fatty acids, I think.

4 Similarly, with meat, is it the
5 palmitic and stearic acids as the only issue
6 or are there other issues? So I think this is
7 a bigger question than whether or not --
8 because, at least in some current fashion,
9 these are thought to be major fatty acid
10 issues.

11 Or should we, as the previous
12 Guidelines did, look at food groups? I think
13 that is the real question.

14 DR. SLAVIN: I think it really
15 comes into the protein and carbohydrate group,
16 too, as a high-quality protein source building
17 the diet issue.

18 DR. PEARSON: Yes.

19 DR. SLAVIN: And that every meat
20 is different, you know. Pork has a lot of
21 omega-3s in it relative, compared to other
22 meats.

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1 So I think each one of them -- and
2 they were, some of them, presented
3 yesterday -- has nutritional attributes that
4 it is hard to evaluate them all separately,
5 but I think they need to be somewhere because
6 fat is just one aspect. Iron, zinc, all those
7 things they bring; the Nutrient Adequacy
8 Committee also would be covering some of it.

9 DR. RIMM: Yes, I think you can
10 say that about any of the foods that are on
11 the Pyramid, I guess. Of course, that depends
12 on the type of meat you get and the type of
13 bean you eat, and the other types of dairy you
14 have.

15 I think it is an important thing
16 to address, though, both from heart disease as
17 well as, I think, the cancer standpoint
18 because there are issues about meat. It could
19 be the cooking method, the toxicants that you
20 get from cooking it, the long-term consumption
21 of it.

22 So I think it would be interesting

1 to address. I don't know if it is a
2 possibility to have one question that is just
3 within the Fat subcommittee that talks about
4 the specific foods that contain a reasonable
5 amount of fat, which are those that we are
6 recommending be consumed. I mean, it is true,
7 it is in the protein part of the Pyramid, but
8 we can address it in fat.

9 DR. CLEMENS: To address your
10 question, Eric and Joanne, maybe the
11 processing is either at home or commercially.
12 We know that those fats will change with
13 different processes, and will those have a
14 really significant impact? Could we advise
15 appropriately?

16 That may be something also the
17 Food Safety Group will want to address, a
18 commercial evaluation for looking at bacon and
19 how it is processed versus the fat that we get
20 in the backyard barbecue.

21 DR. PEARSON: I think this should
22 be somewhat of an executive decision about

1 where we want to put this in terms of
2 organizing the committees.

3 CHAIR VAN HORN: Well, I think, as
4 a group, we really need to address the whole
5 question of the food decisions and how best to
6 do that. We really can't create yet another
7 subgroup per se. We don't have anybody but
8 the people you're looking at.

9 So I think it is a question of,
10 once again, deciding, do we each take a look
11 within our subgroups at the foods that seem
12 most relevant and then come together on it?

13 I am always struck, when we get to
14 a discussion about saturated fat, of the fact
15 that there really is no biologic requirement
16 for saturated fat. And most people don't
17 really even know that. You can live very fine
18 without ever eating saturated fat.

19 But because of the nature of the
20 food supply and what we have available to us,
21 and the other benefits of eating meat or
22 dairy, or any other saturated-fat-containing

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1 foods, they become a part of our choices.

2 But I think, as we have been
3 discussing about the benefits of vegetable
4 protein and needing for people to be able to
5 weigh and balance those choices, to me, that
6 represents a whole other question of being
7 able to make nutrient-based decisions about
8 which foods you wish to incorporate into your
9 diet to meet not only your nutrient needs, but
10 also reduce your calories.

11 I think many people choose
12 vegetarianism because they think it is a way
13 to cut down on calories because it cuts down
14 on fat. That is a fine choice, but I think
15 people need to be able to understand how to
16 make that decision.

17 Did you want to jump in?

18 DR. NICKOLS-RICHARDSON: Yes, I
19 want to say something a little bit in a
20 different sort of route. Is this a place, and
21 would there be any benefit of asking a
22 question related to more of the qualitative

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1 kinds of things about enjoyment of the diet
2 and enjoyment -- Eric is shaking his head no.

3 But, you know, everything that is
4 listed here with fats is in terms of a
5 biomarker or some kind of biological outcome,
6 but is there a question that could be asked
7 related to just sheer enjoyment of food and
8 enjoyment of the diet in relation maybe to
9 fats? It might be better placed in another
10 area.

11 But, as we send the message about
12 lowering dietary fat intake, what has that
13 done in terms of people just simply saying,
14 well, I can't meet some of those guidelines,
15 so I'm simply just not going to try. I won't
16 comply as well with this particular area?

17 So I don't want us to lose that
18 piece of diet satisfaction, enjoyment with our
19 food and eating. I think that dietary fat
20 might be a place where a question of that
21 nature that is a softer question, and more
22 qualitative type of answer, would be

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1 important.

2 DR. RIMM: That is a tough one.
3 Actually, I think partly I don't know if we
4 are going to come up with the conclusion that
5 you should lower total fat in your diet. I
6 think we are talking about specific types of
7 fat. Because, if anything, there's less
8 evidence now than there was before that we
9 should be restricting fat in the diet. I
10 think it is just the types of fats that are
11 important.

12 I do know, historically, that when
13 the -- was it the 2000 Dietary Guidelines? --
14 when they started talking about, in the
15 Ethanol subcommittee they started talking
16 about how important it was as part of a
17 healthy diet, and it was a culture, it made
18 people feel good, that that part got slashed
19 and burned when it came down to the 2005
20 Dietary Guidelines because this was supposed
21 to be evidence-based and not necessarily based
22 on how it made us feel. Although I guess if

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1 you can prove that how it would make you feel
2 improves your health, then maybe you can argue
3 that.

4 DR. NICKOLS-RICHARDSON: But there
5 is a scientific method of asking those
6 questions.

7 DR. RIMM: Yes.

8 DR. NICKOLS-RICHARDSON: So there
9 is a scientific way of coming at those
10 conclusions. So I am not just sort of saying,
11 you know, ask 10 people on the street.

12 DR. RIMM: Yes. No, I don't know
13 if it has been linked specifically to
14 saturated fat or *trans* fat. It maybe has link
15 to carbohydrate or to --

16 DR. PEARSON: No, I think there's
17 nice literature on hedonics relative to fats.
18 I mean mouth feel and the whole melts-in-your-
19 mouth, not-in-your-hand kind of idea. There
20 is a literature on there.

21 I mean it is probably not as
22 formidable as some of the biochemical things,

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1 but it is more on the behavioral side, but
2 hedonics is obviously a -- we could actually
3 have some people come in and talk about that,
4 if that is thought to be important.

5 CHAIR VAN HORN: Again, I think we
6 should, if not today, before we leave, but
7 subsequent to our leaving, we do need to
8 identify who are the outside experts that we
9 would like to invite for the next meeting.

10 So, as we look at the various
11 questions, obviously, we can't invite
12 everybody to address every issue, but as we
13 prioritize within our subcommittees, if the
14 Fatty Acid Group has decided that the
15 literature is pretty airtight on some of the
16 issues that you are already raising, but the
17 things that are still kind of open for debate
18 are -- and you recognize that maybe some of
19 those things could be addressed, then that
20 would be emerging evidence perhaps that we
21 want to bring in. I think that is true in
22 every subcommittee that we would want to

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1 address.

2 Other thoughts about that or
3 anything related to the fats and fatty acids?

4 (No response.)

5 I think perhaps if we keep going
6 because we want to hear about fish, and maybe
7 we should just keep rolling, and I am going to
8 take the executive privilege of not stopping
9 for break. I think most of us feel like we
10 just got here. So, if you don't mind, we are
11 going to continue on and hear from Roger and
12 his group.

13 Thank you.

14 DR. CLEMENS: Thank you very much,
15 Linda.

16 I wish to extend our greatest
17 appreciation to Kellie O'Connell and say thank
18 you. She is definitely our energizer bunny.
19 She is just absolutely stellar, and the entire
20 staff and the NEL staff.

21 Joan, where are you? There you
22 are.

1 We make this happen between those
2 two folks. Thank you so much for making this
3 possible.

4 To pick up where food safety left
5 off in 2005, we are pleased to see that in the
6 last Dietary Guidelines that this topic,
7 approved safety and technology, actually
8 began.

9 A number of wonderful
10 recommendations were provided that addressed
11 personal food safety habits and also addressed
12 one of the issues that we will speak on today,
13 and Rafael in particular. That is, that
14 safety centers around food.

15 We will examine today, are there
16 any emerging technologies, are there any
17 changes in recommendations in terms of
18 personal safety for the general consumer?

19 We will not be addressing
20 something like this 56-page report that came
21 off the internet this morning on the peanut
22 butter. That clearly is beyond the purview of

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1 our charge.

2 Yet, be assured that those of us
3 involved with food safety, as Rafael and I
4 are, that, in fact, we are very cognizant of
5 the issues, both commercially and
6 technologically.

7 So having said that, I am going to
8 turn it over to Rafael to address one of your
9 favorite topics, that is, methylmercury in
10 fish.

11 DR. PEREZ-ESCAMILLA: One of my
12 favorite topics is fish, but, unfortunately,
13 I have to play the role of the bad guy and
14 talk about methylmercury in fish today.

15 So in the food safety section of
16 the 2005 Committee Report, there were three
17 questions that were included to go above and
18 beyond the key FightBAC![®]-contained messages.

19 As you can see, one of those three
20 questions is related to fish exposed to
21 methylmercury. Methylmercury is a heavy metal
22 toxin. The way methylmercury gets into the

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1 water can be explained by man-made conditions
2 and also by nature-caused conditions.

3 Among man-made conditions, mercury
4 is released from combustion of carbon-based
5 fossil fuels and also from the use of
6 charcoal-based heating systems, as an example.

7 In terms of natural sources of
8 mercury, volcano eruptions and leaching from
9 rocks rich in these metals are important
10 sources.

11 It is estimated that over half of
12 the mercury that ends up in the water comes
13 from man-made sources, and the other ones from
14 nature, of course.

15 The mercury in the water becomes
16 methylated by microorganisms, and as it moves
17 up the food chain, it gets bioaccumulated. It
18 is water-soluble, so it is present in the
19 muscle tissue in seafood. It is especially
20 concentrated in large, long-lived predatory
21 fish, and this will be the rationale for some
22 of the fish advisories that I will present in

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1 a moment.

2 There have been serious concerns
3 in terms of methylmercury exposure of moms
4 during pregnancy and the neurological damage
5 to the developing brain of the fetus, and
6 there is also some evidence that there may be
7 relationship between methylmercury exposure
8 and cardiovascular injury.

9 The 2005 Committee essentially
10 endorsed the federal and state advisory
11 recommendations. The federal advisory coming
12 from FDA and EPA targeted women of
13 reproductive age and young children as being
14 the most vulnerable, and essentially it was
15 based on recommending moms to limit the
16 consumption of shark, swordfish, king
17 mackerel, and tilefish, large predatory
18 animals -- fish, I'm sorry.

19 And it is important to mention
20 that none of these sources of fish rank among
21 the top 10 fish in terms of consumers' choices
22 in the country.

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1 The advisory recommended up to 12
2 ounces per week of fish or shellfish with low
3 mercury levels, and albacore or white tuna
4 should be limited to up to 6 ounces per week
5 because it has a higher concentration of
6 methylmercury than light tuna.

7 They also advised on feeding
8 smaller portions to children.

9 It is also emphasized in the
10 report, the need for consumers to follow state
11 and local advisories, many of them related to
12 freshwater fishing in different states and
13 subregions within states.

14 What is interesting is that, in
15 terms of the actual Dietary Guidelines for
16 Americans, 2005, fish and methylmercury was
17 not addressed under food safety, but it was
18 addressed under the fats chapter.

19 Essentially, it is consistent in terms of
20 explaining the advisories and the idea that
21 the people should follow the local advisories
22 as well.

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1 However, in these Dietary
2 Guidelines, the document released for the
3 public and end-users, it did not include any
4 key recommendation. There was none of their
5 recommendations, Guidelines, that directly
6 addressed fish consumption based on health
7 benefits in relationship to risk of
8 methylmercury exposure.

9 However, this issue we must, I
10 think, address in this Committee because there
11 is quite a bit of interest out there.
12 December 23rd of this past year, there was an
13 editorial in The New York Times entitled, "So
14 Is Fish Safe to Eat or Not?"

15 As I will explain in a moment, the
16 FDA has released a risk/benefit analysis just
17 a few weeks ago for comments from the public.
18 Even before I go to read that report, there
19 was already an article, an editorial, on it
20 which actually presents it as a controversy
21 involving FDA and EPA on the interpretation of
22 the findings. So I think we are going to have

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1 a little bit of fun with this.

2 What is the proposal from our
3 subcommittee for the 2010 Dietary Guidelines
4 Advisory Committee to concentrate on with
5 regard to methylmercury in fish?

6 Well, first of all, I think we are
7 lucky that there are two fairly-recently-
8 released, one of them a major report,
9 addressing this benefit/risk analysis
10 approach. That is a report entitled, "Seafood
11 Choices" from the Institute of Medicine that
12 was published in 2007.

13 It has, I think, a very, very
14 comprehensive review of the literature in
15 terms of benefits and in terms of risks as
16 well. And it is a very interesting report
17 because it presents, also, fish as part of the
18 food system and has a whole chapter on
19 consumer behavior related to the choice of
20 fish, and another chapter on actually how to
21 implement these recommendations that are
22 coming out from the Committee. So in that

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1 sense, it may also be a useful report for all
2 of us to see.

3 There's, as I mentioned, the very-
4 recently-released report from the FDA
5 entitled, "Quantitative Risk and Benefit
6 Assessment of Commercial Fish Consumption,"
7 and they conduct the analysis by looking at
8 benefits and risks associated with
9 neurological development, heart disease and
10 stroke, and use a number of assumptions and
11 sensitivity type of analysis to try to
12 understand what level of consumption is
13 reasonable to perhaps recommend.

14 Apparently, the level of
15 consumption that could end up being
16 recommended by reading this report may be
17 higher than what has been previously
18 recommended by FDA and EPA. I think that this
19 is where there is disagreement right now
20 between the two agencies on how to interpret
21 these findings.

22 This may be one question for which

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1 we may want to bring a representative from
2 each agency to present their interpretation of
3 the findings and what they recommend us to do
4 with their report.

5 They also did a lot of literature
6 review. It has very nice summaries of a good
7 number of studies in the appendix.

8 So I think that we are going to be
9 able to update very nicely the literature in
10 this area, perhaps without having to do a
11 whole NEL review.

12 In terms of the population that we
13 are interested in, they are pregnant women,
14 nursing or lactating women, two- to five-year-
15 old children, and in general, Americans over
16 two years of age, as there are emerging
17 questions related, for example, to exposure to
18 methylmercury and cognitive function among
19 adults. Not only in children, but does it
20 have an impact in the cognitive function of
21 adults?

22 And we want to extend the work,

1 and not reserve it only to methylmercury, but
2 perhaps to also include POPs, or persistent
3 organic pollutants, such as dioxins, dioxin-
4 like compounds, and PCBs.

5 There isn't, according to the IOM
6 report, as much data on the content of fish in
7 terms of POPs, nor on the risks associated
8 with POPs, but it seems that it is definitely
9 a task that is worth for us to consider as
10 well.

11 The questions we are trying to
12 answer are: what are the risks for different
13 levels and frequencies of fish consumption?
14 And from the Food Safety subcommittee point of
15 view, we would concentrate on the benefit/risk
16 analysis.

17 And do the risks differ by type
18 and source of fish and if so, how?
19 Unfortunately, the FDA risk analysis, the 2009
20 one, did not break down or consider the type
21 of fish in the analysis. So that is perhaps
22 going to be a limitation as to how far we can

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1 use the data for Guidelines to the public,
2 because it is very fish-specific, what we have
3 in place right now.

4 And the groups to be compared
5 higher and lower levels of fish consumption,
6 as much as we can get in terms of types of
7 fish consumed, and obviously the source of the
8 fish has become a major issue environmental-
9 wise, and also, by 2010, the prediction is
10 that over half of the fish consumed will be
11 farmed fish.

12 So a lot of these issues were
13 covered in much more detail for marine fish
14 than for freshwater farm fish, for example, in
15 the IOM report, even though they may also have
16 similar issues in relationship to chemical
17 contaminants.

18 And the outcomes we are interested
19 in are neurological toxicity, fetus, newborn,
20 and the child; cardiovascular disease, and if
21 there is enough data for other potential
22 health outcomes. All of that is not very

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1 clear now. Cancer and neurological damage
2 among adults would also be included in our
3 review.

4 DR. CLEMENS: In addition to the
5 wonderful presentation by Rafael of the
6 effective communication regarding the
7 risks/benefits issues associated with fish,
8 and one of the comments that Tom and Eric
9 brought up, there is more to fish than omega-3
10 fatty acids and protein, we want to look at
11 all those kinds of components.

12 Even parts of nutrient adequacy
13 would be very helpful here. And the
14 interplay, the ratios of those nutrients, may
15 have an impact in somewhat being cardio-
16 protective, as well as the components that we
17 see here as a potential toxicity.

18 Another very important area that
19 we have not elected to address is perchlorate
20 in PBAs, as presented yesterday. We feel
21 right now that it may be under the purview of
22 the EPA to address it instead of this

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1 illustrious group in terms of practice.

2 What we do want to address,
3 frankly, is this very important topic. This
4 topic was not covered per se in the last
5 report.

6 In an effort to bring this to
7 light, we actually called upon Dr. Steve
8 Taylor and his illustrious group there at the
9 University of Nebraska in Lincoln. Dr. Taylor
10 is internationally known for his expertise in
11 food, food science, and particularly, in food
12 allergy.

13 As a result, we actually had a
14 conference call with Dr. Taylor, and part of
15 the data that we share with you today comes
16 from that conference call.

17 Clearly, with labeling and
18 increased interest in food allergies, we need
19 to look at the data, and the data are clear at
20 this point in time, particularly if it affects
21 you personally, that nearly four percent of
22 the population, over 12 million people, are

1 affected by some form of food allergy. There
2 are many of them.

3 The basic eight that we now see on
4 the label in the United States encompass about
5 nine percent of the food allergies. That
6 doesn't mean that we have another 10 percent
7 that we should perhaps not judge or evaluate.

8 Clearly, as we look at the
9 continuum of health, we particularly want to
10 come to children. This may be something that
11 Chris may be able to help us with, in terms of
12 look at those kinds of numbers that, if you
13 have asthma, then you have an increased risk
14 of allergy -- or excuse me -- in food allergy,
15 you have an increased risk of asthma.

16 Well, we look at the complexity of
17 food allergy, and what behaviors can we do to
18 monitor or modulate the risk of IgE-mediated
19 food allergy reactions amongst food allergens?
20 So in this regard, some of the questions that
21 we are proposing are included right here:

22 What do we know, like we have

1 asked many of our questions around the table?
2 What do consumers know about food allergies?
3 Are they reading the labels for the products?
4 And all the components that may be allergens
5 in the food, are they actually declared?

6 If you read much of the letters,
7 warning letters, from the FDA, you will see
8 that in many cases those letters reflect the
9 presence of a food allergen that is not
10 declared on the food label. For those who
11 have food allergies, that is clearly a
12 significant risk.

13 Then to the second point, how much
14 or what significance is that risk? For some
15 individuals, it can be quite significant.

16 Yet we also want to look at best
17 practices in the schools, in your home, in
18 daycare centers, and camps. We now see, if
19 you look at a number of reports, a number of
20 school systems that actually have set aside
21 special areas for those children that may be
22 at risk for food allergy.

1 Well, what are we going to do?
2 What are consumers going to do with allergies?
3 What practices do they have in their home?
4 What should those best practices be relative
5 to in the home as well as when they go outside
6 of the home?

7 So when they visit restaurants,
8 for example, or quick service restaurants,
9 what should those practices include? And what
10 are education avenues for those who are in the
11 quick service restaurants or fine dining
12 restaurants, and food service? What do they
13 know in terms of potential food allergens?
14 There is an educational component in which we
15 might be able to participate.

16 But clearly, if you look at the
17 primary problem, there are a lot of behavioral
18 issues. If you are affected by this, this can
19 be quite serious.

20 We want to educate and modify
21 people's behavior so that we can have a
22 reduction in the presentation of food

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1 allergies.

2 The general population at large,
3 as indicated here, people of two years of age
4 and older, three million children are affected
5 by some form of food allergy or food
6 sensitivity. Can an education through the
7 Dietary Guidelines make a difference in what
8 practices are in the various school systems?

9 These are the kinds of exposures
10 that we would expect. At home you may be more
11 sensitive. Yet when you get outside the home,
12 and particularly as children get older and
13 start making their own decisions, there is
14 greater exposure and therefore they might have
15 a greater challenge to be addressing these
16 food allergens.

17 Are there issues associated with
18 food package materials? Are there issues
19 associated with including ingredients which we
20 know nothing about?

21 The basic eight are shown here,
22 but we want to be certain that we are not

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1 limited to these kinds of food allergens.

2 We wish to compare practices and
3 precautions to avoid exposing of populations
4 to allergic components within the food, and
5 particularly those who might light up when
6 they are consuming these kinds of products.

7 Are there other practices that
8 could be implemented, other than reading food
9 labels? In the home we can address separation
10 of foods. Is that occurring in food service
11 operations? Are we encouraging the washing
12 and separation of utensils and dishes, and so
13 forth, that is indicated here?

14 Clearly, we need to encourage
15 through these guidelines working with food
16 service personnel so we can reduce the risk of
17 food allergy responses, such as ingredient
18 listing perhaps on menus and allergen
19 declaration in restaurants.

20 These are the populations on which
21 we have data. Clearly, the greatest risk
22 occurs in children. It seems that, as

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1 children start making their own decisions and
2 leaving the home, that we see an increased
3 risk, and certainly light up of the children
4 who are 12-17 years of age.

5 We want to address what kinds of
6 studies are we reviewing for these types of
7 data. These that are showed here are the
8 types of controls that we wish to follow up.

9 The various outcomes here look at
10 different environments, and they impact those
11 environments in terms of food allergy exposure
12 and contamination within those exposures, and
13 the types of reactions that we might exhibit
14 following those types of exposures. This
15 gives you a list of classic exposure
16 opportunities.

17 Then we would examine the
18 morbidity and mortality, come up with some
19 recommendations.

20 We state again we spent time with
21 Dr. Taylor and looked at significant data. We
22 would be working with Joan and her team to

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1 evaluate what we have, and NEL to make
2 recommendations for the future.

3 Comments so far?

4 (No response.)

5 You like the topic.

6 Cheryl?

7 DR. ACHTERBERG: I just want to
8 say I think this is a tremendous breakthrough.
9 As somebody with a violent allergy to
10 shellfish, and having spent a lot of life just
11 eating white rice when I go out to certain
12 restaurants, for fear of what will happen, I
13 think this is important, and it is a huge
14 breakthrough.

15 Thank you.

16 DR. CLEMENS: Thank you, Cheryl,
17 for that very important support.

18 I can't overstate, to go back on
19 Cheryl, the severity; for some people, it
20 really is life-threatening. We want to try to
21 provide guidance on this very important topic.

22 Thank you.

1 Food technology, this is where we
2 could all come in. We know that we can do a
3 lot of separation in the home in terms of
4 addressing food allergies, but perhaps one of
5 the issues we have is microbial contamination.
6 We can clean, but how do we clean in the home?

7 The Food Code of 2005 basically
8 was translated and put into the last Dietary
9 Guidelines. Since that time, there have been
10 a number of technologies in terms of normal
11 utensil usage, and the cleaning devices and
12 reagents that can be used that are
13 environmentally-friendly that could reduce the
14 potential pathogen load that you might see in
15 the home. It is those kinds of technologies
16 and products and practices that we wish to
17 address in this particular report.

18 So we want to find out what types
19 of technologies can improve food safety in the
20 home while increasing and maintaining the
21 shelf life of the respective foods,
22 particularly fresh fruits and vegetables,

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1 which sometimes are some issues.

2 Some of the technologies we want
3 to consider evaluating are very smart
4 packaging and different sensors that will tell
5 you what the microbial load may or may not be,
6 and how long that a food may be stored in
7 certain kinds of environments.

8 We know that there are cutting
9 boards, color-coded cutting boards, that are
10 now available that will encourage separation
11 of food as well as they have been impregnated
12 with some type of antimicrobial. These are
13 very useful tools that could be readily used
14 in the home.

15 We want to be certain that these
16 foods are also not only accessible, but they
17 are affordable to the general consumer, so he
18 and she and they can actually include these as
19 part of the food safety program in their home.

20 Which ones are cost-effective?
21 Good hygiene is the ultimate practice in the
22 home. At the same time, we want to be sure

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1 that whatever practice we do, we ultimately
2 have a safer environment for eating in the
3 home. We want to reduce potential pathogen
4 loads. That means understanding the risks
5 that are associated with different storage
6 environments within the home practice.

7 And within the home practice,
8 which is really one of Rafael's great
9 passions, and I support him in this passion,
10 is, in fact, a number of population groups in
11 this country, in fact, are not cleaning
12 properly. We wish to reach out to those
13 population groups, have a clear, concise
14 message to help them along, to make good
15 decisions in the home, and those decisions in
16 the home look at not only cutting boards, but
17 continuous hygiene, cleaning of counter tops
18 with the right reagent, the right materials
19 that are cost-effective, easily affordable,
20 and accessible, so that they can, in fact,
21 have a safer home.

22 Particularly now that we are in

1 this economic challenge, we want to be sure
2 that the home preparers are prepared to, in
3 fact, make sure that their environment is much
4 safer.

5 Well, I mentioned just moments ago
6 that a number of technologies have been
7 improved to reduce microbial loads and the
8 points that Rafael brought up in terms of
9 methylmercury in fish. There may be other
10 components in the food system that we want to
11 address here as well, which could be
12 considered under food technology.

13 We wish to compare the various
14 technologies that might be available, and then
15 perhaps make some advisories on the technology
16 that could be available and accessible to the
17 various homes.

18 These kinds of data are really
19 limited, and our charge will be using NEL to
20 see what types of data are available within
21 the next year, so that we can make some
22 evidence-based recommendations.

1 These are obviously the practical
2 outcomes of our work, kind of in terms of
3 contamination in the home is the bottom line.
4 And best practices, this is where it comes
5 that we want to engage some people who
6 understand behavior and choices and practices
7 in the home, so we best address them directly.

8 This is our action plan. Perhaps
9 there is an emerging technology -- and I know
10 there are many emerging chip-based
11 technologies or sensor-based technologies that
12 will soon be available to the consumer. To
13 evaluate the effectiveness of these types of
14 technologies, again, we will work with the NEL
15 team to examine this and perhaps make a
16 recommendation.

17 Food safety. Food safety is
18 everyone's responsibility, whether in the home
19 or a commercial environment. We want to
20 examine the behavioral aspects in the home
21 that will address food safety.

22 These are some of the issues that

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1 Rafael -- and would you like to talk a little
2 bit about this?

3 DR. PEREZ-ESCAMILLA: Very
4 quickly. We are almost done here.

5 The 2005 Committee essentially
6 identified the four steps that are in front of
7 you as the behaviors that are most likely to
8 prevent food safety problems in the home. The
9 rationale for choosing these was that these
10 were the FightBAC!® USDA campaign four key
11 messages.

12 Our view is that they are
13 scientifically-sound. We are not going to
14 propose to change the messages from the
15 FightBAC!® campaign.

16 The Dietary Guidelines Advisory
17 Committee Report, the 2005, included what I
18 think are two of the most important boxes in
19 the food safety information regarding
20 consumers. One of them is actually a hand-
21 washing protocol. Another one is a protocol
22 for washing fresh fruits and vegetables.

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1 We believe that this deserves to
2 be taken a look at to see if there is any new
3 data supporting different protocols or if we
4 just need to reaffirm the protocols
5 recommended. Clearly, on a global basis, not
6 only in our country, these are two issues that
7 are top priorities in terms of primary
8 prevention.

9 The second question that was
10 addressed by the Committee that included items
11 besides FightBAC![®] -- I have already addressed
12 fish exposed to methylmercury -- were the
13 storage of foods issues and foods at high risk
14 of Listeria. Listeria was clearly a top
15 priority in the minds of the 2005 Committee.

16 The issue of food storage is very,
17 very important. Consumers have a lot of
18 interest in it.

19 I had a meeting with my
20 Cooperative Extension System Educator in
21 charge of food safety, asking her about the
22 main question she gets from consumers. This

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1 is one of the main questions. People call
2 for, "I have been storing this food for `X'
3 number of days. It doesn't smell bad. It
4 tastes a little bit. I mean it doesn't taste
5 bad. Should I consume it or not?"

6 This is an area where I think
7 consumers could benefit for very specific
8 information. We may have a big task ahead for
9 us, and we still have to decide how to address
10 it because these were the only two references
11 included in the report regarding this issue,
12 one from 1985 and one from 1999.

13 We suspect that, if we do a NEL
14 review since 1999, it is going to be quite a
15 bit of information we have to go through, but
16 there may be review articles, reports, that
17 may help us with this task.

18 But clearly, identifying storage
19 times and the documents that the USDA has
20 released for Cooperative Extensive Educators
21 on how to advise the public will be reviewed
22 to see if we can take advantage of them in the

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1 Committee report.

2 Listeriosis or Listeria was a
3 pathogen identified by the previous Committee
4 as being a very, very important one to
5 address. Foods that facilitate the growth of
6 Listeria and the fact that Listeria can grow
7 under cold temperatures, and so on, did make
8 it, I think, and perhaps still make it, a
9 pathogen of interest to be addressed.

10 However, the question is, are
11 there any emerging pathogens or pathogens that
12 have emerged related to antibiotic resistance,
13 or whatnot, that we should be concerned about?
14 We feel that we really need to conduct a NEL
15 review since 2004 to figure out if there is a
16 body of evidence that could help us expand the
17 advice beyond Listeria.

18 And the whole recommendation about
19 food stored for extended periods as being a
20 high-risk behavior is true, but the consumers
21 want to know what is an extended period, what
22 it is, and for different foods it is a

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1 different answer, and so on. So we will be
2 wrestling with that question as well.

3 So the questions that we propose
4 for consideration are: to what extent do
5 consumers follow proper food storage
6 preparation and handling techniques and
7 procedures, if possible, breaking it down by
8 race, ethnicity, gender, age, and region?

9 This will give us a good idea of
10 perhaps what are the needs in terms of home-
11 based surveillance. How much do we know?

12 We know very little about
13 outbreaks happening at homes. A lot of them
14 don't go -- they are underreported, not
15 reported at all. I think we know less about
16 what is actually happening inside the
17 households in terms of following the
18 Guidelines that we are providing to the
19 public.

20 So we will see how much data is
21 out there, and if it is derived mostly from
22 small-scale studies or if there are actually

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1 surveys that can help us, large-scale surveys,
2 that can help us with this. We don't know
3 that right now, but we will review the
4 literature.

5 What food storage, preparation,
6 and handling, and home canning techniques are
7 associated with failure of food safety
8 outcomes? Home canning, I believe, was not
9 included in 2005.

10 The Cooperative Extension and Food
11 Safety Educators spend a lot of time answering
12 questions from the public. Home canning is
13 still popular in the country. We thought it
14 would be interesting to consider this as a
15 question for our Committee.

16 I think that's it. No? We're
17 open for discussion, yes.

18 DR. ACHTERBERG: This is Cheryl.

19 I think what I would suggest you
20 might consider, too, with all the recent
21 storms, hurricanes, et cetera, is looking
22 specifically, when electricity goes out, the

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1 advice given to consumers about how long they
2 can keep that food or not, a major issue.

3 DR. CLEMENS: Larry?

4 DR. APPEL: Yes, you mentioned
5 that the 2005 Dietary Guidelines don't have a
6 fish recommendation. I think that --

7 DR. CLEMENS: Under safety.

8 DR. APPEL: On safety?

9 DR. CLEMENS: It was in the fatty
10 acids section.

11 DR. PEREZ-ESCAMILLA: It is under
12 fat, but it is not listed as a key
13 recommendation.

14 DR. APPEL: Okay.

15 DR. PEREZ-ESCAMILLA: It is in the
16 background, yes.

17 DR. CLEMENS: There are two small
18 paragraphs.

19 DR. APPEL: Yes, okay. I guess
20 maybe this is relevant to the other committee
21 then.

22 There actually was a

1 recommendation for two servings of fish per
2 week in the blue book, the thick one, and then
3 it got removed, I think in deliberations, from
4 the final.

5 So if there is a decision to or
6 deliberations to put it back in, then I think
7 it would be useful to find out why it was
8 taken out.

9 Maybe Kathryn --

10 MS. McMURRY: During the
11 government science review of the report and
12 the AHRQ evidence-based review that fed into
13 it, the consensus in the government agencies
14 was that the evidence was strongest for
15 secondary prevention. So it is still there,
16 but it was qualified to apply to those who
17 have already experienced a cardiac event. And
18 for the general population, it was
19 acknowledged that there was limited evidence
20 available, and fish as a protein source was
21 encouraged.

22 DR. RIMM: On a related topic, I

1 think you do have a challenge ahead of you
2 because within toxicology you have acute
3 versus chronic, and a lot of what you
4 described was acute, and the fish issue is a
5 chronic issue.

6 It almost worries me to have this
7 at the top of your list where you have risks
8 of fish consumption because I think this is
9 the problem. I mean it should be here because
10 what you are talking about is food safety, but
11 this was the problem when the EPA first issued
12 its warning on fish consumption in 2001, is
13 that it scared pregnant women off of fish
14 because they said, "I can't understand this"
15 or "I'm just going to reduce all fish
16 consumption."

17 So I think we either have to have
18 very close ties with the fatty acid chapter,
19 where we talk about the facts that there are
20 benefits of fish; otherwise, we are going to
21 run into the same problem where we recognize
22 that there is the potential for a small bit of

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1 harm from eating a lot of shark, when there is
2 such great benefit that will be lost if
3 everybody just reduces their fish consumption,
4 because on a chronic basis there is great
5 benefit to be gained.

6 So I don't know the best way to do
7 that, but I think we have to think carefully
8 about some crosstalk. Maybe it can be just
9 naming names and acknowledging the fish that
10 are maybe high in mercury that you want to
11 address directly, and you already have, and
12 then naming those that are most-commonly
13 consumed that are not high in mercury, so that
14 it is very clear to the average consumer that
15 having shrimp, salmon, whatever, something
16 that is only one or two years old that has a
17 relatively high amount of omega-3 is a good
18 option. So we don't scare everybody away from
19 fish.

20 DR. PEREZ-ESCAMILLA: Thank you.
21 Thank you, Eric. That is a very, very
22 important point.

1 A number of professional
2 organizations, the American Heart Association,
3 for example, have come up also with
4 recommendations.

5 DR. RIMM: Yes.

6 DR. PEREZ-ESCAMILLA: Because
7 there is no group that is recommending for
8 pregnant women to not eat fish, and that is
9 very important.

10 DR. RIMM: Yes. It is sometimes
11 interpreted that way, but you're right, yes.

12 DR. PEREZ-ESCAMILLA: Yes. No,
13 and I think that this is a classical example
14 as to why it is important to do consumer-based
15 research, to understand which is the best way
16 to present this information, because we
17 certainly don't want to scare women and
18 prevent their babies from benefitting from
19 fish.

20 That is the goal, but we need to
21 do the research to find out, or somebody needs
22 to do the research, or maybe someone has

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1 already done the research.

2 DR. RIMM: Some of it has been
3 done. There is a long history of this.

4 DR. PEREZ-ESCAMILLA: Yes.

5 DR. RIMM: I have been stuck in
6 the middle of it for 10 or 15 years, I think.
7 The EPA's first report then became a 2004
8 report, which was a joint report, which was,
9 I think, worded much better, and everybody
10 realized that the first one may have been too
11 much shock and not enough awe.

12 So I think they have done a better
13 job. I don't know all the details of their
14 sort of consumer-based research, but there are
15 a lot of people within EPA and FDA that have
16 struggled with this at the community level, at
17 the state level, and at the national level
18 because of the issues that we are discussing.

19 DR. PEREZ-ESCAMILLA: Yes. So I
20 guess that question is how best to communicate
21 this information, and I don't know what the
22 answer is, but it is an example of why I feel

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1 it is important that, once this gets
2 disseminated, that there is an evidence base
3 for the decision --

4 DR. RIMM: Yes.

5 DR. PEREZ-ESCAMILLA: -- the
6 decision made regarding the fish and
7 methylmercury in fish.

8 DR. CLEMENS: Indeed, we know that
9 while these bigger organizations are promoting
10 or actually accepting two servings, the
11 reality is that many healthcare professionals
12 say, "Don't eat fish." As a result, they are
13 losing the benefit status, and we want to have
14 a more effective communication to promote the
15 benefits.

16 That is why they have had the
17 proposal to take -- like through toxicology,
18 we will look at the acute, subchronic, and the
19 chronic exposure.

20 Excellent comments. Thank you,
21 Eric.

22 CHAIR VAN HORN: The other

1 question that I would raise is related to
2 aquaculture and the concerns that have been
3 expressed about fish farming. If this group
4 does, in fact, come on more strongly about
5 advocating the benefits of fish, and in fact,
6 America says, okay, we're going to all go out
7 there and eat more fish, you know, do we
8 really have sufficient supplies; do we really
9 need to consider fish farming; do we need to
10 really look more carefully at the efficacy and
11 safety?

12 Someone in our office was actually
13 called, I know, to sort of a think tank group
14 on this subject. I guess the issue -- and I
15 don't know enough about it, heaven knows --
16 but it had something to do with the way the
17 fish were fed --

18 DR. CLEMENS: Yes, that is
19 correct.

20 CHAIR VAN HORN: -- that there was
21 some sort of a toxic element included in the
22 feed of the fish.

1 So if, in fact, we are going to be
2 responsible about the kinds of recommendations
3 we make, it would seem to me, we, No. 1,
4 should make sure they are safe; if we are
5 advocating for more fish farming, that that be
6 consideration No. 1.

7 But you know, also, bringing in
8 the state-of-the-art because I'm not aware of
9 it. I don't know if you are, but perhaps
10 there are other, again, experts out there that
11 could help us.

12 DR. CLEMENS: That is an excellent
13 point, Linda, and we actually have some
14 wonderful colleagues who are in agriculture,
15 aquaculture, and they have examined, like the
16 one at the University of Maryland, have a
17 wonderful aquaculture environment in which
18 they are studying the farmed fish. So we want
19 to bring those in. Because on our target, we
20 want to look at farm versus wild, and the
21 benefits or attributes.

22 Thank you for bringing that up.

1 DR. SLAVIN: I just wanted to
2 mention, though, if more fish, less of
3 something else. I think every time we say,
4 "more of" in this group, we have to be
5 thinking about calories not going up. So
6 there's got to be a replacement.

7 DR. CLEMENS: Yes, appropriate
8 levels.

9 CHAIR VAN HORN: Comments among
10 the group?

11 (No response.)

12 Going all the way through this
13 whole set of discussions, it was all very
14 excellent really, lots of issues, lots of
15 questions, and certainly things that need to
16 be addressed more fully. I think, speaking
17 for myself, there are more questions than
18 answers about some of those issues.

19 So are we ready to take maybe a
20 10-minute break? Then we can discuss the
21 final section here on the scientific review
22 issues.

1 So let's take just a 10-minute
2 break and we'll get back.

3 (Whereupon, the foregoing matter
4 went off the record at 2:53 p.m. and resumed
5 at 3:09 p.m.)

6 CHAIR VAN HORN: I think because
7 of the time and the fact that everyone has
8 kind of been on overdrive all day today, I
9 think with all the work and time and attention
10 that we have paid to all these very important
11 questions, I think the only thing that our
12 Committee wants to do now is maybe confirm
13 that we do have some overarching issues that
14 we are going to want to take up.

15 We also, I think on the basis of
16 the feedback, each of the subcommittees,
17 hopefully, will now be able to go back to
18 their respective groups. I would say that
19 prioritization of the questions and the issues
20 that are most important and burning should
21 probably be reconsidered and reranked, in your
22 minds, as what are the things that really

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1 deserve top attention, recognizing, as we have
2 said every single session, that there is a
3 finite amount of time and energy that we have
4 to devote to some of these things. So I think
5 it is time now to go back and sort of review
6 on some of that.

7 I also think that, as we were just
8 discussing here, at our next meeting, which
9 will be the 29th and the 30th of May, in a
10 different -- April -- sorry, sorry, sorry.
11 It's April, where we will have a chance to go
12 forward with some of the recommendations,
13 having now launched these searches and using
14 the NEL research activity, and being able to
15 review the literature and come up with some
16 decisions about the evidence base for some of
17 these questions.

18 I believe that what we would like
19 to see, and what we would like to suggest, is
20 that each subcommittee determine what are
21 those issues that, if you do feel you need an
22 outside expert, is it someone, as in Larry's

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1 group, where we just invite that person to
2 come and participate on a conference call, in
3 order to help the subcommittee go forward, or
4 is it a topic that has such cross-cutting
5 input, that the entire Committee would benefit
6 from hearing from this individual, realizing,
7 of course, there's a finite amount of time and
8 resources that we have to bring in those
9 people for that next meeting.

10 So rather than trying to toss out
11 names or anything here, I think perhaps we
12 might want to visit just for a bit on what
13 would some of those topics be. We talked
14 about some of them. But if you were going to
15 rank order, let's say, the top three cross-
16 cutting topics, who might that expert be that
17 could address it in ways, again, that aren't
18 already published, but may be emerging,
19 questions of that nature?

20 That would help us in trying to
21 both invite that person and see if they can
22 come and attend, since it is not that far off,

1 and also help the various subcommittees decide
2 what's material that really has to be
3 addressed as a subcommittee as opposed to the
4 entire group.

5 Does that make sense to everyone?

6 Yes, go ahead.

7 DR. RIMM: Can you give us an idea
8 of the format for that? Is it typically a 20-
9 minute talk and then we get to fire questions
10 at them for a while?

11 CHAIR VAN HORN: I think we can
12 probably do it any way we want, but one of the
13 things I just confirmed with Rob and Carole
14 is, unlike this meeting where there was an
15 agenda that was pretty much established
16 because of the public input and the experts
17 that gave their presentations, the next
18 meeting is pretty much up to us as far as
19 deciding how we should proceed with the
20 agenda, et cetera.

21 Hopefully, between now and then,
22 we all have our work cut out for us in terms

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1 of going forward with some of these questions.
2 At that meeting, I would imagine we will be
3 having another progress report to determine
4 what we have discovered in this time period.
5 But since that is the next time that we will
6 be together collectively, then if we have,
7 again, a speaker that we want to encourage to
8 attend and present, I think the time that we
9 have to devote to that and still get through
10 all these reports would be something on that
11 order. I think that is what they had, 20
12 minutes or so.

13 DR. RIMM: I think the question
14 that came up when Mim was here on food
15 environment would touch just about every
16 subcommittee.

17 CHAIR VAN HORN: Yes.

18 DR. RIMM: So I don't know if that
19 is Mary Story or someone from the USDA.

20 CHAIR VAN HORN: Mary Story.

21 DR. RIMM: Oh, Mary Story. Sorry.

22 CHAIR VAN HORN: I think we did

1 talk about Mary, yes.

2 Tom?

3 DR. PEARSON: I just want to know
4 what the technical capability is we have.
5 Something we have been doing, I think very
6 effectively, with the NHLBI guidelines is
7 webinars, which allows you both to have a
8 back-and-forth for people who can be there
9 live, but then -- we all have very busy
10 schedules here, and the scheduling of these
11 people is a nightmare. So to really have an
12 office-based webinar with the back-and-forth,
13 and then have it web-archived --

14 CHAIR VAN HORN: Excellent idea.

15 DR. PEARSON: So that those people
16 who want to be -- you know, we will lose the
17 active inclusion, but they still will get the
18 educational content later.

19 We've actually had incredibly busy
20 people.

21 CHAIR VAN HORN: Sure. Right. I
22 am all for that.

1 Is that possible?

2 MS. DAVIS: The only issue I know
3 for that is whether we would have to have --
4 we have a problem with having 13, and it's not
5 a public meeting. That's the only issue.

6 DR. PEARSON: I'm sorry?
7 Thirteen?

8 CHAIR VAN HORN: Why can't they
9 be --

10 MS. DAVIS: Well, if you have them
11 invited here, the public is in on that
12 discussion. But if you have them on a
13 webinar -- when we had the webinars for
14 learning NEL and all, that was really an
15 instructional thing, and you all were not on
16 the line at the same time.

17 CHAIR VAN HORN: Why couldn't --

18 DR. PEARSON: We could all be
19 here, and they would be on the screen.

20 MS. DAVIS: Oh, on the webinar?
21 Okay.

22 CHAIR VAN HORN: We would be here,

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1 but the expert would not have to physically
2 attend.

3 MS. DAVIS: Oh, okay.

4 CHAIR VAN HORN: They could just
5 be brought in electronically.

6 MS. DAVIS: Okay.

7 CHAIR VAN HORN: Yes, Tom?

8 DR. PEARSON: Well, I think, in
9 that, these face-to-face meetings have been
10 very packed. Like for some of our issues, we
11 have some relatively circumscribed issues. I
12 wonder if we could just have a webinar in our
13 own offices as well, if that could be set up.

14 Well, it could be still archived.
15 I mean it has the same interaction as
16 everything else.

17 I guess I am concerned that we
18 have really a large number of speakers that we
19 want to do. Some of the issues are big issues
20 that we probably would want to have someone
21 live and interactive. Some are relatively
22 circumscribed, like the n-3/n-6 ratios.

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1 CHAIR VAN HORN: Exactly.

2 DR. PEARSON: And I'm not sure
3 that we really have the time resources for the
4 whole group to use this. We can still web-
5 archive them. We can make it open to the
6 public.

7 CHAIR VAN HORN: Right. Everyone
8 agrees. I think we're all in agreement with
9 that, Tom, but I think that your subcommittee
10 is best suited to deal with the questions of
11 which ones do we need on our own webinar and
12 which ones do we want to have more broadly
13 suggested as one of the priorities for the
14 entire Committee.

15 So I think the answer to both
16 questions is yes. It is just that we are
17 trying to take advantage of the physical
18 meeting that we have in terms of bringing the
19 key people that everybody should hear. I love
20 the idea of not making them physically come
21 here as much as just having access to them
22 electronically. If that is possible, that is

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1 great.

2 Cheryl?

3 DR. ACHTERBERG: I would like to
4 take a step back for a minute, after the two
5 days of meetings here, thinking of cross-
6 cutting issues.

7 My sense is there are still
8 numerous questions. We are not quite settled
9 as to which subcommittee is really locking in
10 on certain areas. Some subcommittees have
11 much larger scope, it seems, more questions
12 than others.

13 So I think something that would be
14 very useful in the short term here is to just
15 get a list, each subcommittee and all the
16 questions under them, and we could begin to
17 look at really and truly where should the home
18 be for some of these questions. Because I
19 don't have a sense yet that we are fully
20 settled.

21 CHAIR VAN HORN: Right. That's
22 how I think -- I don't know, maybe I started

1 too soon and not everyone was fully engaged.
2 But the first thing that I think our
3 subcommittees need to do now, as a result of
4 this meeting, is to go back and take a look at
5 the issues that you think you are responsible
6 for and/or that you think maybe should not be
7 part of your Committee's work because of just
8 too many issues, too many topics. We have to
9 be selective and prioritize and rank order the
10 things that we need to do.

11 So while I hear you, I don't think
12 necessarily that in this setting that we can
13 all just kind of hammer out which topic goes
14 where as well as going back to our respective
15 subcommittees, and if we see holes or gaps
16 that we have already agreed need to be
17 addressed, like implementation, for example,
18 issues, the evidence basis behind
19 implementation, things of that sort, then
20 perhaps on our next scientific review call the
21 Chairs of each of these subcommittees could
22 come with that list ready to discuss. That

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1 way, it would save -- I mean it would be a
2 better use of our time, I think.

3 DR. ACHTERBERG: I agree. I guess
4 what I am trying to say -- maybe I'm the only
5 visual person in the room, but it would help
6 me to see it and to see this Committee has
7 this many, and this Committee has that many,
8 and put it into a larger context, rather than
9 each subcommittee looking only at its own
10 subcommittee. I would like to see the big
11 picture.

12 CHAIR VAN HORN: But you have to
13 start by -- maybe I'm just not articulating
14 this properly. Yes, we agree with you. The
15 list, though, is up to you. Your subcommittee
16 should make the list, and our subcommittee
17 should make the list, and you should make the
18 list, and then we will have it all together
19 and compare the lists and see where there's
20 overlap and where there's gaps.

21 But I don't think that can be done
22 very effectively here and now. I think the

1 subcommittees have gotten a lot of input and
2 feedback. So now it is a chance to go back
3 and look at those lists, rank order,
4 prioritize, and see where you either think
5 there's more than you can handle or there's a
6 gap and that we need to fill it.

7 That would be my suggestion, but
8 if you have other ideas or better ways to
9 organize, we can do that.

10 Larry?

11 DR. APPEL: No. I think that is a
12 great idea, but I think I would put a really
13 tight timeline on this, like within -- I don't
14 know about one week -- maybe by the next time.
15 That might be too -- because there is some
16 deliberations among the group.

17 CHAIR VAN HORN: Yes. Right.

18 DR. APPEL: But boy, I think
19 within one month, we should have --

20 CHAIR VAN HORN: Right.

21 DR. APPEL: -- the research
22 questions that we think we are going to do,

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1 and make sure that we can look at them, and
2 make sure that there are no gaps.

3 CHAIR VAN HORN: Right. I would
4 encourage, you know, as we are heading home
5 and we're locked in at the 38,000-foot
6 capacity, and you have to think about
7 something, perhaps one of the best things we
8 could do is go through the list that we have
9 reviewed while we have been here and at least
10 in our own minds for each of the
11 subcommittees, identify what are the key
12 things that we all agree are important.

13 Then on the time of the next
14 subcommittee call, that list could at least,
15 by the Chairs maybe, could at least be
16 identified.

17 "This is the draft of what I'm
18 thinking are the things that are on our plate,
19 and here's the list that either aren't on our
20 plate or we want to offload or we don't think
21 we will be able to address," that kind of
22 discussion.

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1 So that at the time in two weeks,
2 I guess it is, or three, of the next
3 Scientific Review Committee call, which is
4 when all the subcommittee Chairs are
5 invited -- it's February 11th? Okay, February
6 11th. That we would be able to make those
7 comparisons.

8 Okay? Is that doable, do you
9 think?

10 Yes? Okay.

11 But I do think, given how busy
12 these people are that we are likely to be
13 wanting to include for the cross-cutting
14 topics, the sooner you identify who those
15 people might be, and we come up with a short
16 list of those invitations, it would seem to me
17 to get on their calendar as soon as possible.

18 If they can make it physically, I
19 am sure they would be welcome, but we
20 certainly could look at this electronic option
21 as a way to take a very busy person and say,
22 "We only need 20 minutes of your time between

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1 here and here." You know, that might be more
2 palatable.

3 Okay? Would that be all right?

4 Other things that we want to raise
5 that either came up today or -- Larry?

6 DR. APPEL: Yes. This came up a
7 few times, and I'm not sure if we have agreed
8 on a policy on this.

9 But it came up that there have
10 been really quite comprehensive evidence-based
11 reviews done by other bodies. We don't need
12 to necessarily reinvent the wheel on some of
13 these.

14 I heard for fish -- actually, not
15 for -- for omega-3, omega-6, there are AHRQ
16 reports, you know, and then there's the
17 cancer, diet and cancer.

18 So is there agreement that we can
19 use those as sort of a starting point, and
20 then, as long as they look like, you know, it
21 is done in an unbiased fashion, in a
22 comprehensive way, that we then maybe

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1 supplement that as necessary?

2 CHAIR VAN HORN: Yes, I think
3 there is no reason that we would ignore that
4 information. In fact, just the reverse; I
5 think we should embrace the things that have
6 already been done.

7 And I am going to do this to her
8 again. Poor Joan. Every time we sort of drop
9 in on you.

10 I am wondering if there are any
11 parting words or further instructions or
12 suggestions that you would want to make to the
13 group, but as you are thinking about that,
14 the issue that Larry is raising I think is
15 very important for the group as a whole.

16 I guess we would like to know what
17 would be the best way to do this. Should the
18 subcommittees be giving information as far as
19 what are some of these established reviews
20 that we all recognize as high-quality reports
21 that are very valuable and have done a lot of
22 this work? What direction is that

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1 communication? How should we go about that,
2 do you think?

3 Can you talk from there? I'm
4 sorry. Or come on up here.

5 DR. APPEL: Presumably, at some
6 point, the papers, individual papers, will
7 need to be abstracted into the NEL database
8 anyway.

9 CHAIR VAN HORN: Anyway, yes.

10 DR. APPEL: So maybe while we can
11 take the latest review on fish, and we can
12 pull things from that, eventually someone is
13 going to have to pull those individual papers,
14 which is too bad.

15 CHAIR VAN HORN: Right. Exactly.

16 And the ADA Evidence Analysis
17 Library has encompassed a lot of that.

18 MS. LYON: In terms of existing
19 systematic reviews that have been completed by
20 AHRQ and its entities, we can just pick up, we
21 should be able to just pick up and build upon
22 that foundation with the newest literature.

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1 So if it was done in 2006, we could look at
2 their search terms and build from there.

3 In terms of some of the others
4 that are independent organizations,
5 associations, you would need to look at the
6 quality of the work that was done, and we
7 could assist you in looking at how transparent
8 is the systematic review in terms of
9 identifying the literature that was
10 considered, on a case-by-case, report-by-
11 report basis.

12 Some of those you have shared with
13 your staff that are supporting your
14 subcommittees already. Others, if you are
15 aware of them, you can filter the titles to
16 us, and we can help you acquire them.

17 Another group of systemic reviews
18 that comes to mind is the Cochrane reviews,
19 which we have talked about, and you have a
20 list of the ones that appear to be most
21 relevant to the Dietary Guidelines. We can
22 obtain the complete systemic review for you to

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1 look at.

2 The one caveat that we talked
3 about last time is we need to be sure and look
4 at those reviews and determine where the
5 studies, published studies -- or in some cases
6 Cochrane has the randomized controlled trial
7 database, and they do occasionally for some
8 studies use unpublished research. So that
9 would be an issue that you need to consider on
10 a case-by-case basis.

11 CHAIR VAN HORN: That is very
12 helpful.

13 Also, again, the Evidence Analysis
14 Library, we have access to those reviews, or
15 I guess you are working with that whole --

16 MS. LYON: In terms of all of the
17 work that ADA has done, some of you mentioned
18 studies that have been done in the past few
19 years, you can use those reports and we can
20 build on those foundations. If your question
21 is slightly different, we do have a mechanism,
22 because they have collaborated with us in

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1 building our library, to if the papers have
2 already been abstracted, we can import the
3 evidence worksheet as a PDF that is clearly
4 identified for our stakeholders out there that
5 it was ADA that did that evidence analysis of
6 that particular paper. It would show up that
7 way once our system is turned on for the
8 stakeholders. But we do have that, which
9 would save a lot in terms of our abstracters
10 doing the work.

11 CHAIR VAN HORN: I guess that is
12 work -- again, not reinventing wheels -- that
13 has already had many hours of other experts'
14 work in terms of bringing it to light. That's
15 great.

16 The other question, just to go
17 back and revisit what we were talking about
18 earlier again: on the basis of the
19 outstanding presentations that we heard
20 yesterday from Trish, Alanna, and Sue, what
21 are the chances that we would have the
22 opportunity to look at additional data related

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1 specifically to obesity? Is there any chance
2 that we can get more information that is
3 stratified somehow in terms of obese, higher
4 versus lower BMI, or something?

5 Not to put you on the spot, but
6 just wondering, is that something we will
7 really realistically have a chance to see or
8 do we really need to proceed without it, but
9 as part of our report we make it clear that a
10 recommendation is that, in the future, that
11 those kinds of analyses be conducted?

12 DR. POST: Yes. I can definitely
13 answer for USDA.

14 We will try to get you that data.
15 Probably in the next week or so, we can get
16 it, further drill down, and describe exactly
17 what the data needs are, and we will work with
18 our USDA partners.

19 I suppose Sarah or Kathryn can add
20 the HHS view.

21 CAPT. LINDE-FEUCHT: Yes, we just
22 need to recognize that there are notable

1 pressing priorities, including supporting the
2 vitamin D intake data for this panel and the
3 IOM panel.

4 So we will need to just talk with
5 the leadership of NCHS as well as ARS on their
6 resources and availability.

7 CHAIR VAN HORN: Nobody is trying
8 to make it impossible, but I think to not ask
9 and have it be available in ways that would be
10 very valuable to the next iteration would be
11 a lost opportunity. I think we don't want to
12 do that.

13 Cheryl, do you have something
14 else?

15 DR. ACHTERBERG: I just was going
16 to suggest we need to revisit in the future
17 that cross-cutting issue that pertains to the
18 implementation of the Dietary Guidelines. We
19 may want to have a speaker, a general speaker.

20 But I think we probably need to do
21 some initial legwork and interaction with the
22 Library first, before we generate what those

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1 needs might be, but reflecting on consumer
2 understanding and use and utility of the
3 Guidelines, of the food groups, of the
4 Pyramid, to help us determine what course we
5 want to take in the future.

6 But I think we have to work on
7 finding the right person to invite.

8 CHAIR VAN HORN: Yes, I would
9 agree, and I think Tom has some knowledge and
10 expertise in that area as well, right, Tom?

11 DR. PEARSON: And we have a couple
12 of our current lectures on this, some very
13 good ones. I think they were a little bit
14 more clinical than we were going for. So we
15 would really need someone more in the public
16 health sector.

17 But the first one was very broad
18 and generic, and from a really quite well-
19 known expert in Canada. It is already
20 available. So we could make it available.

21 CHAIR VAN HORN: Sure, and that is
22 another very interesting opportunity, if there

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1 is something that is available, is a teaching
2 opportunity for the group or for subcommittees
3 to do on their own, at their convenience. You
4 know, that would be wonderful. We should
5 definitely take advantage of that, too.

6 Well, before the rest of our
7 subcommittee walks off, I think I am going to
8 just say thank you all very much for very hard
9 work over these last few days, and thank you
10 all to the staff and everyone else that made
11 this possible.

12 Those of you in the audience,
13 thanks for sticking it out on a Friday
14 afternoon at this late hour.

15 We appreciate your cooperation and
16 we look forward to seeing you again in a
17 couple of months.

18 Thank you.

19 (Whereupon, at 3:32 p.m., the
20 Committee was adjourned.)
21
22

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