2020 DIETARY GUIDELINES ADVISORY COMMITTEE

PUBLIC MEETING

FRIDAY
JANUARY 24, 2020

The Dietary Guidelines Advisory Committee met in the Agricultural Research Service, Children’s Nutrition Research Center, 1100 Bates Street, Houston, Texas, at 9:00 a.m., Barbara Schneeman, Chair, presiding. The meeting allowed for public viewing, both in-person and by webcast.

MEMBERS PRESENT
DR. BARBARA SCHNEEMAN, PhD, Chair
DR. RONALD KLEINMAN, MD, Vice Chair
DR. JAMY ARD, MD, Member
DR. REGAN BAILEY, PhD, MPH, RD, Member
DR. LYDIA BAZZANO, MD, PhD, Member
DR. CAROL BOUSHEY, PhD, MPH, RD, Member
DR. TERESA DAVIS, PhD, Member
DR. KATHRYN DEWEY, PhD, Member
DR. SHARON DONOVAN, PhD, RD, Member
DR. STEVEN HEYMSFIELD, MD, Member
DR. HEATHER LEIDY, PhD, Member
DR. RICHARD MATTES, PhD, MPH, RD, Member
DR. ELIZABETH MAYER-DAVIS, PhD, RD, Member
DR. TIMOTHY NAIMI, MD, MPH, Member
DR. RACHEL NOVOTNY, PhD, RDN, LD, Member
DR. JOAN SABATÉ, MD, DrPH, Member
DR. LINDA SNITSELAAR, PhD, RD, Member
DR. JAMIE STANG, PhD, MPH, RD, Member
DR. ELSIE TAVERAS, MD, MPH, Member
PUBLIC COMMENTERS:
RAYMOND DeVIRGILLIS
BECKY GARRISON
BILL YOUNG
KARIMA KENDALL
BERIT DOCKTER
DONALD LAYMAN
SUSAN BACKUS
MAIA JACK
ALLIE GRAHAM
SARAH REINHARDT
JOY DUBOST
JESSI SILVERMAN
SARAH OHLHORST
CHRIS JONES
JONATHAN CLINTHORNE
CHRISTOPHER PALMER
PEPIN TUMA
LINDA CARNEY
LANA FRANTZEN
MICHAEL DODDS
NANCY ERIKSEN
BROOKE GOLDNER
MARTICA HEANER
TONY MARTINEZ
TAYLOR WALLACE
BANDANA CHAWLA
MUNISH CHAWLA
AMY EIGES
DARREN SCHMIDT
TYLER HAZARD
TOM BRENNNA
ERIN JANUS
MARGARET JARDINE
DIANE WELLAND
MARCIA de OLIVEIRA OTTO
CARY FRYE
MINH NGUYEN
GUY JOHNSON
JENNIFER McGUIRE
LARRY DIAMOND
TED EYTAN
DEBRA MILLER
ANTHONY GUSTIN
MICHELLE MULLER
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MS. HAVEN: Good morning. Welcome of day two of the Dietary Guidelines Advisory Committee meeting, live from Houston, Texas. My name is Jackie Haven. I’m the deputy administrator for USDA’s Center for Nutrition Policy and Promotion, and it’s my pleasure to introduce the Deputy Under Secretary for USDA’s Food, Nutrition and Consumer Services, Brandon Lipps.

It’s my pleasure to introduce him, and just for background, FNCS, Food, Nutrition and Consumer Services, works in hunger and to improve the health of the U.S. as it administers federal domestic nutrition assistance programs and links scientific research and nutrition needs of consumers, through science-based dietary guidance, nutrition policy coordination, and nutrition education.

Mr. Lipps?

MR. LIPPS: Good morning.

AUDIENCE: Good morning.
DEPUTY UNDER SECRETARY LIPPS: That was good. Jackie, thanks for the kind introduction. Welcome everyone to the fourth meeting of the 2020 to 2025 Dietary Guidelines Scientific Advisory Committee.

I’m here on behalf of USDA, specifically, Food, Nutrition and Consumer Services, and my colleague, Dr. Scott Hutchins from ARS, and our partners at the Department of Health and Human Services.

It is good to be back in my home state. People regularly say to me, are you going to get to see your family while you’re home? I am in my home state, but I am 532 miles from home.

So those of you from smaller states, you don’t understand, but I’m not going to see my family while I’m here. Given the second opportunity for the public to provide comments to the Committee, it was very important to Secretary Purdue that we get out of the beltway of Washington, D.C.

This is the first time in decades that the public has had an opportunity to comment on the
Dietary Guidelines outside of the work that we do in the beltway in D.C. and the important decisions that are informed by the work of this Committee for the American public every day. We’re grateful to the folks here at the Children’s National Research Center for allowing us to hold this important meeting here. A little background on where we are in the important public-private partnership that has made today possible.

USDA’s Agricultural Research Service and the Baylor College of Medicine have had a long-shared interest in public health issues. I saw on your way in -- hopefully you all saw this, but I brought a little prop so that we can remember what the important work of the Children’s National Research Center is about, the children, and they have this wonderful little pin that you set on your desk and wiggle.

It’s a good distraction from my remarks this morning, so I brought it. This partnership between government and the private sector is another example of how combined intellectual power
increases our power to address and potentially solve important nutritional challenges.

Thank you again to Children's National Medical Center, Dr. Bier and his colleagues at the Baylor University College of Medicine, for hosting us today and for being a willing partner and allowing the Committee to again hear from the American public.

Can the webcast hear this microphone okay? Okay. Good.

We're also happy to see professionals and students from the Texas Medical Center and the greater Houston area registered for the meeting today.

Thank you to each of you for joining us. To the medical students here today, I hope that you are impressed both by the time and effort that this Committee has put forward to help inform the significant government policy and the importance of your participation in the formation of government policy as your career progresses.

Last night I had the opportunity to
visit with a student who traveled here today to
watch the important work of this Committee. We’ll
need more people to get involved in the public
policymaking process earlier in their careers to
ensure that we have people willing to dedicate the
time that these wonderful individuals have as they
progress in their careers.

To the Committee -- I say this every
time we’re together -- you all do all of the hard
work; I follow you around and say, thank you, and
I’m here to do that again today.

Thank you for continuing to dedicate
your scientific expertise and time to the important
phase of reviewing the current body of evidence,
to answer the questions that we have asked of you.

As we saw yesterday, you had your hands
full reviewing the evidence. Your work to conduct
this rigorous, robust, and independent scientific
review is critical to informing the work of USDA
and HHS as we prepare for the next edition of the
Dietary Guidelines.

I also want to thank the Committee for
including time to hear directly from members of the public this afternoon. Past Dietary Guidelines have traditionally heard in-person, oral comments only once at the beginning of their scientific process.

This is the first time that the public will have an additional opportunity to provide comments in person to the Dietary Guidelines Advisory Committee.

I want to make sure that the public understands that this is a volunteer Committee of experts who are very busy in their professional lives with very important work and have volunteered their time to come help, and they all overwhelmingly and happily agreed to have a second in-person session to hear directly from the public.

They have a difficult job with a lot of evidence to review. They are spending a significant amount of time making sure that they're getting that right and that they are taking the proper steps necessary to inform this process.

So with that, let's give the Committee
a round of applause for their dedication and hard work.

(Applause.)

DEPUTY UNDER SECRETARY LIPPS: To the folks here in Houston and those joining us by webcast, thank you for your participation in our multi-year process to develop the Guidelines. As you continue to follow the Committee’s deliberations today, I think you’ll see firsthand that, as we noted, this is no small undertaking.

Again, I hope you’ll have an appreciation for how much the Committee is putting into its work to review the science to address our topics and questions.

For those not able to provide oral public comments here today, just a reminder. There is an ongoing open period for public comments to the Committee that started in March of last year and will close when the Committee submits its scientific report in May of this year to USDA and HHS.

So don’t be shy. There’s time for you
to submit written comments. We review each and
every one of those and provide a summary of them
to the Committee as they continue their work, and
your input and participation is important to this
process.

Again, I cannot thank the Committee
enough for their work on this very important
process and for their willingness to travel to
Houston to meet today. We are excited to be here
in Houston with you all.

Before I turn the meeting over to begin
their important work, I want to take a moment to
pause and thank my colleagues at USDA and our
colleagues at the Department of Health and Human
Services for their tireless work in support of this
Committee.

Every time I have a chance to interact
with the Committee, the first thing they say to me
is hello. The second thing they say is, I want to
tell you how wonderful the staff at CNPP and ODPHP
are in support of what we have to do in the big task
that we have.
I know that. I get the wonderful opportunity to work with these individuals on a daily basis. But I know the work that they’re putting in in support of the Committee, and I appreciate your recognition for that.

If you are staff in support of this process, would you stand and let us give you a round of applause, please? Jackie?

(Applause.)

DEPUTY UNDER SECRETARY LIPPS: With that, we will get on with the work of day two, and I will now turn it over to the Chair of the 2020 Dietary Guidelines Advisory Committee, Dr. Barbara Schneeman, to get day two started.

Thank you.

(Applause.)

CHAIR SCHNEEMAN: Great. Thank you so much for those comments, and again, on behalf of the Committee, we also extend our appreciation to the Children’s Nutrition Research Center, the ARS Center here, for hosting this meeting, and we’ll echo the wonderful staff support and how much we
appreciate the staff support for the work that is being done.

So I’m going to just go through a few slides to get us started with today’s meeting. So again, we want to just describe the status and provide updates on the work of the Committee up to this point, and we had draft conclusions for approximately 30 questions that are being presented during this two-day meeting, including the NESR systematic reviews and data analysis.

And these draft conclusions have been drafted by the subcommittee and then are being brought to the full Committee for discussion at the public meeting. Those systematic review conclusions will be posted online after going through peer review, and again, I remind you that they are considered draft until the Committee submits its report to the Secretaries.

And I thought it would be worthwhile to just also comment that I think, as we are looking at what was presented yesterday and what we’ll be seeing today, we’re primarily focused on summaries
of the evidence that the subcommittees have been working on.

And I think in some of the reports yesterday, you began to see a little bit of a hint of the detail that the subcommittees are working at in terms of how closely they look at the nature of the studies that come forward, the study design, the interpretation, the confounders.

I think in the Beverage and Added Sugar subcommittee report, you were beginning to see some of that detail that the committees actually look at it.

So while we’re focused on the summaries here, the evidence portfolios that are available to the Committee are very detailed, and all of that information eventually becomes part of the public record, as we keep moving through the process.

So yesterday, we had the subcommittee reports from the Birth to 24 Months, Pregnancy and Lactation, Dietary Fats and Seafood, Beverages and Added Sugar, Data Analysis and Food Pattern Modeling, and I think, a very useful Committee
discussion about not only each of those reports, but then how the Committee is beginning to see the relationship between these different areas of work.

And today, after these opening remarks, we’ll be hearing from the subcommittee on Dietary Patterns, and the Frequency of Eating subcommittee. And again, each of those will be followed by some Committee discussion.

And we also then are looking forward to the public comments, and again, let me just note that the comments have been useful to the Departments, HHS and USDA, and useful to the Committee in its work.

Many of you who have been following the process know that the website gives the status of our work, and that’s a new part of the website to not only just tell you about the Dietary Guidelines, but to track the work that the Committee is actually doing, plus it provides a lot of information on the process, the ways that the Committee is in fact evaluating the information.
The Departments do continue to update the information on that website, not only sort of the protocols and where we are, but also updating the frequently asked questions section. So that way, they can clarify the approach that the Committee -- for example, I know that there have been some updates to provide more information on our process for evaluating evidence, the data analysis, the systematic reviews, and the food pattern modeling, just to make sure that the way the Committee is working through is clear to the public, as we move forward.

So I encourage you to either be on the listserv for the Dietary Guidelines as a way to get notices as updates happen, but also just check that website and particularly look at that FAQ section, if you have some particular questions in your own mind about the approaches that we’re using. You can find some more information.

So a note on our timing today. Again, our afternoon session will begin at 1:00 p.m. Central Time, and we really try to hold clear to
that time because of the webcast.

Our breaks during the morning and afternoon sessions are not set for a specific time, but will be taken as they fit within our discussion. And our public comments will begin no later than 2:00 p.m. Central Time, but they may begin earlier if we’re ready to start that process. So hopefully if you’re giving a public comment, you’ll be here before two, just in case.

So again, this is the website for the DietaryGuidelines.gov, and as Eve did, Dr. Stoody did yesterday, we’ve highlighted the place where you can view the protocols, with that reminder that, for the protocols presented, it’s most useful to us if you have any comments you might provide by February 7.

But I would also note, given where we are in the process, where the March meeting is really the last decision-making meeting for the Committee, the last public meeting where we’ll be getting subcommittee reports, feel free to get comments to us if you have comments about our
conclusion statements or other aspects of what the Committee is working on by that February 7 date, to be most useful in our decision-making process.

But as noted by Mr. Lipps and others, the comment period is open until the Committee concludes its work. So with that, I think we will start with our agenda for the subcommittees.

I want to check with the Committee members if you have any questions or comments at this point? Jamy, please?

MEMBER ARD: Jamy Ard. So just as a point of process, would it be okay for us to interrupt presentations with questions today? Is that okay for discussion? Or I don’t know if it’s more efficient to let --

CHAIR SCHNEEMAN: Yes. It’s --

MEMBER ARD: -- people go through the entire presentation and then do what we have done, but I --

CHAIR SCHNEEMAN: I think we -- I’ll let each subcommittee chair sort of address that at the beginning, if they’re comfortable with
having that approach. So we have the two subcommittees, so we’ll just them say whether they’re comfortable with that.

(Pause for conference.)

CHAIR SCHNEEMAN: Right, it might be useful. Well, let me just check before we jump into -- anybody else, question or comment? Okay. Oh, okay, so both are fine with that. So -- okay. So -- all right.

(Pause for conference.)

MEMBER BOUSHEY: Good morning again. Because I think you said good morning, too. And so my name is Carol Boushey, and you can see on this list, they’re members of the Dietary Patterns subcommittee.

And I think this is the largest committee in numbers and maybe has to do with -- we do have a lot of work to review, because this area of dietary patterns has really exploded since the last Dietary Guidelines Advisory Committee.

So the NESR staff, they’ve been screening articles, preparing evidence
portfolios, and they’ve been screening -- screened approximately 113,000 articles from the electronic search results for questions dietary patterns and sarcopenia, all-cause mortality, and a combined search for the questions related to growth, size and body composition, type 2 diabetes, and cardiovascular disease.

In addition, the NESR staff has extracted data and assessed risk of bias for more than 190 articles and additional extraction is underway. Today the subcommittee will present the evidence and draft conclusion for the dietary patterns and all-cause mortality.

The subcommittee is also refining and prioritizing its remaining work for the questions related to dietary patterns and sarcopenia, cancer, neurocognitive health, and bone health, which will be discussed in more detail at the end of this presentation.

So our key definitions -- and so you’ve seen this before. Many people have seen this before. But the key definitions that we’re using
for dietary patterns are the quantities, proportions, variety or combination of different foods, drinks and nutrients, when available, in diets and the frequency with which they are habitually consumed.

This key definition came from -- oh, apparently, we didn’t put that in this time. Okay.

All information provided by studies about diet -- it came from an international statement.

So this wasn’t created just for this, and so it is internationally recognized as the definition for dietary patterns.

All information provided by studies about dietary patterns tested or examined, including both foods and beverages, macro- and micro- nutrients will be extracted from included articles.

And that macro- and micro- nutrients, that was added as a result of comments from individuals outside of the Dietary Guidelines Committee. The comments were received; we added in that component within the dietary patterns.
Based on conversations at the last committee meeting and misconceptions among the public and media, the SC refined the intervention exposure criteria for the intervention exposure to clarify how the subcommittee will consider dietary patterns, as well as diets based on macronutrient distribution and how they may or may not relate to each other.

For the first time, the subcommittee is considering diets based on macronutrient distribution where at least one macronutrient -- that is either carbohydrate, fat and/or protein -- is outside the acceptable macronutrient distribution range, or its also known AMDR, set by the National Academies of Science.

For example, any study in which carbohydrate intake is above or below the AMDR, greater than 65 percent of energy or below 45 percent of energy that also meets the inclusion/exclusion criteria provided in the protocol will be examined to answer the questions.
This approach allows the committee to systematically review the overall scientific landscape of dietary patterns, including patterns that are both within and outside the AMDR, along with different diet types.

So the question that will be reviewed today, we’ll be presenting the findings from the systematic review question related to dietary patterns consumed and all-cause mortality. The approach to answer this question is a NESR systematic review.

You’ve seen quite a few analytic frameworks, and the analytic framework provides a foundation for the systematic review and helps to inform the approach for this question. The subcommittee defines all-cause mortality as the total number of deaths from all causes during a specific time period.

The exposure of interest is the consumption of and/or adherence to a dietary pattern. The comparators are consumption of and/or adherence to a different dietary pattern and
different levels of consumption and/or adherence
to the dietary pattern.

The population of interest for the
exposure and outcome include children through
older adults who are healthy and/or at risk for
chronic disease. For this question, the
subcommittee decided that infants and toddlers
from birth to 24 months were out of the scope.

The key confounders are listed on this
slide, and within the body of evidence the
subcommittee reviewed, the majority of studies
accounted for these factors. This slide
illustrates the literature search and screening
results for articles examining the dietary
patterns and all-cause mortality.

The results of the electronic database
searches, after removal of duplicates, were
screened independently by two NESR analysts using
a stepwise process by reviewing titles, abstracts,
and full text to determine which articles met the
inclusion criteria.

For this review, 11,547 articles titles
were searched, 1,693 articles were abstract-screened, and 554 articles were screened at the full text level. A manual search was done to find articles that were not identified when searching the electronic databases.

All manually identified articles are also screened to determine whether they met the criteria for inclusion. For this review, no articles were identified during the manual search.

The review resulted in 152 included articles. The 152 articles in this review are all prospective cohort study designs. An aside there: we're kind of glad about that. We hope that no one ever does a randomized trial that the endpoint is death.

So in some ways, this is something to be very grateful for. They examined the relationship between dietary patterns and all-cause mortality. The studies used multiple approaches to assess dietary patterns.

105 articles used only index or score analysis to examine the relationship between
dietary patterns or diets based on macronutrient distribution and all-cause mortality.

Eighteen articles examined the relationship between dietary patterns with factor and cluster analysis and/or diets based on macronutrient distribution; 27 articles examined the relationship between diets based on macronutrient distributions.

Of the remaining 15 articles, six articles used multiple methods, including both index analysis and factor analysis, or factor analysis and reduced rate regression, or just reduced rate regression was used for comparison.

Of the 27 articles that evaluated macronutrient distribution, 15 articles also used another approach to examine dietary patterns. Despite the variety of different methods applied to examine or derive dietary patterns, there was remarkable consistency in the majority of the studies finding statistically significant relationships between dietary patterns consumed and all-cause mortality.
Although the dietary patterns were characterized by different combinations of foods or beverages, due to the variety of methods used, protective dietary patterns emerged with the following themes: patterns emphasizing higher consumption of vegetables, legumes, fruits, nuts, whole grain, fish, lean meat or poultry, and unsaturated fats relative to saturated fats, either as a ratio of MUFA to saturated fat, or MUFA -- PUFA to saturated fat, or olive oil specifically.

They were generally associated with decreased risk of all-cause mortality. Notably there was consistency in particular with the inclusion of fish and/or seafood. Of the dietary patterns that included animal products, protective associations were generally observed with relatively lower consumption of red and processed meat or meat and meat products.

Some of the dietary patterns also included alcoholic beverages in moderation within specific thresholds. The inclusion of white meat
to red meat ratio, type and amount of dairy products, and refined carbohydrates, sweets, as elements of these patterns was less consistent across the evidence.

Among the dietary patterns that included higher consumption of white meat relative to red or processed meat, low-fat dairy relative to high-fat dairy, and lower relative to higher refined carbohydrates and sweets tended to show reduced risk of all-cause mortality.

Despite the variability between approaches used to examine dietary patterns, higher adherence to dietary patterns with common labels, such as Mediterranean, Dietary Guidelines-related, and also Dietary Guidelines such as healthy eating index, DASH scores, or plant-based guides were generally protective against all-cause mortality risk.

This highlights that high-quality dietary patterns comprised of nutrient-dense foods, regardless of the label, were associated with decreased all-cause mortality risk. And the
next one will have a little -- where is that? Oh it’s later.

Although all included studies were prospective cohort studies, the majority of articles reported adjustment for most key confounders, as I had mentioned earlier, with the exception to race/ethnicity.

Due to lack of reporting, it is difficult to determine the impact that race/ethnicity specifically may have in the relationship between dietary patterns and all-cause mortality.

The largest segment of evidence in this systematic review used the index or score analysis to assess dietary patterns. Within this segment of evidence, nearly 80 different indices or scores were used to assess dietary patterns, including 30 Mediterranean indices.

Now, to make that clear, it doesn’t mean that the Mediterranean diet was used 30 times; it was 30 different variations of the Mediterranean diet, with the Mediterranean score by Trichopolou
as being the most frequently used.

There were seven healthy eating indexes that were used or the Dietary Guidelines for Americans indexes. Only one DASH score, so DASH was the same across the board, no matter what study that used DASH.

Sixteen country specific indices, such as the Dutch healthy diet index, and 24 other indices or scales, such as the recommended food score. Across all indices or scores, the following items or components are generally, but not exclusively, considered.

So this is an extensive list here, that I’ll give you a few minutes to look through, or take an image. And it’s important to know these were not exclusive, so we can’t say that every dietary pattern had one of these in there.

This is just a summary of the most common food sources that made up the components of the dietary patterns. Macronutrient distributions with proportions of energy falling outside of the AMDR for at least one macronutrient
were examined in this body of evidence, but results were not consistent.

Notice we have switched to summary of evidence synthesis. Among these studies, proportions of carbohydrate reported were both below and above the AMDR. Proportions of fat reported were both below and above the AMDR.

No studies examined macronutrient distribution in which protein fell outside of the AMDR.

Comparison of the macronutrient distributions with or without the context of the foods, food groups comprising the dietary patterns showed inconsistent findings due to several limitations.

The gradient between the macronutrient proportions compared between distributions was small: a range of 41 percent to 41.7 percent.

Most methods used to estimate macronutrient intake differed between studies.

Most proportions reported were only marginally outside of the AMDR, due to the variance
with which studies defined and applied limits to macronutrient categories. When viewing these null results, the committee reflected, looking at macronutrient distribution without diet quality is maybe a moot activity. That was just a reflection of ours.

So the strong evidence suggests that certain dietary patterns in adults and older adults are associated with decrease risk of all-cause mortality.

These dietary patterns were characterized by intake of vegetables, legumes, fruits, nuts, whole grains, fish, lean meat or poultry, and unsaturated fats related to saturated fats.

Of the dietary patterns that included animal products, protective associations were generally observed with relatively lower consumption of red and processed meat or meat and meat products.

Some of these dietary patterns also included alcoholic beverages in moderation or
within specific thresholds. The inclusion of white meat, red meat ratio, type and amount of dairy products, and refined carbohydrates, sweets, as elements of these patterns was less consistent across the evidence.

However, the dietary patterns that included higher consumption of white meat relative to red or processed meat, low-fat dairy relative to high-fat dairy, and lower relative to higher refined carbohydrates and sweets tended to show reduced risk of all-cause mortality.

Macronutrient distributions with proportions of energy falling outside of the AMDR were examined in this body of evidence, but results were inconsistent. And insufficient evidence was available to determine the relationship between dietary patterns and all-cause mortality in younger populations, and that’s ages less than 35 years.

Coming next -- and I should mention on that last slide, you have been used to seeing all these different grades; the evidence on this was
so clear.

Out of all the papers that we reviewed outside of the macronutrient distribution, there were really only 10 papers that didn’t have significant results of protection with regard to dietary patterns, high-quality dietary patterns.

So now where we’re going is we’re refining and prioritizing the remaining work. The subcommittee is in the process of refining and prioritizing its remaining work. This includes looking at the intermediate and endpoint outcomes and refining what the subcommittee will have time to accomplish.

For example, the subcommittee has decided to only look at the endpoint outcome of sarcopenia and severe sarcopenia, and excluding articles that only examine intermediate outcomes.

For the question related to cancer, neurocognitive health, and bone health, the subcommittee is reviewing the work of the 2015 Dietary Guidelines Advisory Committee and may refine outcomes to align with these existing
reviews or carry forward existing work.

The other next steps are to complete the data extraction and risk of bias assessment of dietary patterns and sarcopenia. The NESR staff is also in the process of screening the scientific literature for questions related to dietary patterns and growth, size and body composition, dietary patterns in type 2 diabetes, and dietary patterns in cardiovascular disease.

We will also develop a conceptual framework to facilitate evidence synthesis based on dietary patterns and their components, which may include foods and beverages, food groups, and macronutrient distribution in the context of diet quality.

Thank you for listening to the summary of our work to date in the Dietary Patterns subcommittee. Here we have listed again the members, which were on the opening slide, but also the support staff, because we wouldn’t be able to do any of this work without the great support staff that we have from the USDA and the Department of
Health and Human Services.

So no one interrupted me, so why don’t you do that now?

(Applause.)

MEMBER BOUSHEY: Rick. But let’s go with Rick first, because he’s usually first.

MEMBER MATTES: You commented on the consistency of the findings and noted that these are 100 percent prospective cohort studies that often have large sample sizes. Can you comment on the effect size of the trials?

They may all be significant, but to what degree are they meaningful? If you have big sample sizes, you can find small differences statistically significant. To what degree do you -- does the evidence indicate --

MEMBER BOUSHEY: Well, you know, actually not all of them were completely large, Rick. That’s what’s interesting.

Does anyone have a -- kind of an outline of what some of the ranges of samples sizes were? And some of the ones that didn’t find the
significant results were smaller ones, but there really were some as small as 200.

MEMBER MATTES: Okay.

MEMBER BOUSHEY: Yeah.

MEMBER MATTES: Nevertheless --

MEMBER BOUSHEY: Yeah.

MEMBER MATTES: -- can you comment on effect size, not just significance?

MEMBER BOUSHEY: I don’t know that I can comment on it. I’d have to actually think about that a bit, but that’s -- does anyone else on the committee have an idea of what the effect size might be? Joan?

MEMBER SABATÉ: Joan Sabaté. The effect size did vary, and sometimes it’s just a decrease in the risk of 10 percent, but sometimes went up to 25 percent decrease. So this is the effect size that I do remember.

Maybe there is a table that staff can show on the screen, but I -- the effect size was sometimes not very big, but you know, that’s quite considerable.
MEMBER BOUSHEY: That's good. Thank you.

MEMBER MAYER-DAVIS: So I'm recalling ratios that were around .85 to maybe .95, something like that, but it did vary, and some of that was a function of duration of follow-up, you know, which is another issue, that, you know, varied quite a bit across all of this literature. And sample size did vary quite a bit. I've actually never seen a set of data with this degree of consistency. It was quite remarkable.

MEMBER BOUSHEY: Yeah.

MEMBER SABATÉ: Joan Sabaté again. Not only the effect size, but also some of these indices -- I mean, there were different categories. So there was kind of a dose response effect that was quite visible, you know, in this body of literature.

MEMBER BOUSHEY: Yeah. I really cannot emphasize enough this whole idea that there is no one magic bullet, but when you have consistent, high-quality -- a high-quality diet it
can be achieved using multiple foods, and as long as it fits within these tight guidelines of what we outlined -- you know, low in certain fats, low in sugar, and all of are low in -- some -- controlled sodium -- it's quite remarkable.

MEMBER NOVOTNY: Thanks. That was very interesting. It makes me reflect on the work of the whole Committee, particularly those of us that are looking at foods, food groups, seafood, added sugars, beverages, and really, broadly at our methods.

And it seems clear that we're moving in this direction, and a lot of our methodological challenges have to do with the reality of focusing on a food in the context of a very complex diet.

And therefore it makes me -- if we could start all over again or start again or have longer, the idea of basically pulling out those foods within a dietary pattern or looking at the dietary pattern with an emphasis on those that are high in, say, added sugars or those that are high in certain
beverages or even overall beverages, those that are high seafood, some way of basically looking at that list of foods in the scoring and, again, defining diets according to our interests.

I think its -- so I guess the short, real question is whether any of that is still possible to contribute to the other committees. I know that we’re trying to tie up our work, but if not, I think as a committee something to think about in our recommendations is how to go forward with this kind of review of literature in that communication.

MEMBER BOUSHEY: You know, I actually really -- I like that comment that you made, Rachel, but I also actually like that we have these other -- you know, that we’re looking at it in different ways to give real affirmation.

I really like that, but your comment about that what the foods are. Actually, Liz and Laural have been working on this, and they’ve created a - right now, it’s in an Excel spreadsheet, and we’re trying to figure
out -- it's massive -- so we're trying to figure out how we can condense it down to -- the best that we've got was that one slide that you saw with all the foods listed; that fit on the slide, so that worked well.

But it is -- it's extensive. Do you want to shake your head? Yeah. And so I -- so the neat thing is you've given them affirmation for the amount of work that it took them to do that.

And so if you want to work with us as to how we're going to make it something that can be shared, that would be fantastic. I think it's -- you hit it spot-on.

CHAIR SCHNEEMAN: So Tim I'm going to add you and I'm going to add myself. So -- Heather.

MEMBER LEIDY: Heather. This is more just a clarification, a methodology question. At the last meeting, you brought up the analytical framework, but I think it's a little more teased out now.

And so my question is related to
whether -- and I don’t think this is the case, but I’m going to ask anyway. So there are studies were just varying macronutrients, and so some of the public comments in the discussions were about, you know, ketogenic diets or low-carb diets.

And so when you look at those studies from a manuscript perspective, a lot of them are prescribed from varying macronutrients, not food first. And so my question is that I would imagine that a lot of those studies were excluded based on the definition of the dietary patterns and your analytical framework.

And so just to clarify that, because it seems like a lot of the dietary patterns were -- the studies were selected, and then macronutrient composition was then kind of described and compared in the subsequent analyses, and so a lot of the studies -- maybe not for all-cause mortality, but I think as we get into the other outcomes that we’d have more randomized controlled trials, most of the studies -- maybe not the most, but a good number of them would actually be macronutrient
composition first, but because they are generally not always describing the foods in those diets, just to clarify, they would actually be excluded from these analyses?

Is that correct? Because they’re not foods, they’re generally macronutrient-specific comparisons? And that’s not in your analytic framework.

MEMBER BOUSHEY: Do you want to speak to that?

MEMBER BAZZANO: We did specify that even if they didn’t describe the foods, but if they had a macronutrient intake that was outside of the AMDR for any of the micronutrients, carbohydrate, fat or protein, we included them, even if they didn’t have the food description, but they had a nutrition description like what the components were.

For instance, what kinds of fats, what kinds of fiber, et cetera. If they had any kind of a description like that, they were included.

MEMBER LEIDY: Okay. So then just to
clarify in terms of the definition, or maybe I missed it, it seemed like the dietary pattern definition was really looking at foods.

MEMBER BOUSHEY: Yes.

MEMBER LEIDY: But that would be different than --

MEMBER BOUSHEY: But that’s for dietary patterns. The macronutrient distribution is a completely different concept.

MEMBER LEIDY: Okay.

MEMBER BOUSHEY: Yeah. It’s in addition to. It’s not -- the dietary -- when we look at the macronutrients, we’re just looking at the macronutrients.

MEMBER LEIDY: Okay.

MEMBER BOUSHEY: Yeah.

MEMBER LEIDY: So it’s basically a separate -- it’s a separate question from the dietary patterns, then.

MEMBER BOUSHEY: It is.

MEMBER LEIDY: Okay.

MEMBER BOUSHEY: It is. I
mean, -- yeah, because they’re not the same.

MEMBER BAZZANO: And then the main

issue here is that it’s all-cause mortality.

MEMBER LEIDY: Right. I --

MEMBER BAZZANO: I mean, that’s our

outcome for this one. There will be randomized

controlled trials in other --

MEMBER LEIDY: I was just more looking

forward when -- when the next analytic framework

we see and the other outcomes. I thought if it was

the same, it’s going to miss those diet

comparisons, just based on the definitions of what

you have in your analytic framework.

MEMBER BOUSHEY: Right. And for the

macronutrients, that’s a whole -- that was that

different definition on that second page.

CHAIR SCHNEEMAN: Can I -- I know we

have a comment from staff, but keep in mind that

in the analytic framework under the inclusion and

exclusion criteria, if there’s a particular diet,

but it’s really a treatment diet -- and that’s the

whole point of the study -- that would not
neither necessarily get included as well.

So that’s another factor to keep in mind.

MS. ENGLISH: This is Laural English.

So just to clarify, I think, the points, the comments that were just mentioned are accurate, but we kept the analytic framework with just that more simplified version, that -- really to speak to the overall package of the diet.

And so the intent was to cover the dietary pattern, as Dr. Boushey had shown in the definition, particularly if you notice in the definition, there’s -- defined by the foods and drinks as well as nutrients when available.

And so it was the case where there was a paper or an included article that looked at the dietary pattern but also reported enough information and the macronutrient distribution in which, one, fell out of the AMDR.

However, we also included articles that were just based on the macronutrient distribution, because in the criteria, because in the criteria
it does specify that the foods or food groups do not need to be required for inclusion based on the diet, or where the diet is based on macronutrient distribution.

So the framework is a little more simplified, but the inclusion and exclusion criteria gives a little more detail to speak to that.

CHAIR SCHNEEMAN: Tim?

MEMBER NAIMI: Yeah. I was just wondering. I -- Tim Naimi, Boston University. You may be getting to this later, but for the studies of all-cause mortality, I was interested in how does the distribution of cause of death break down? Where is the reduction in mortality? Is there any general comments you can provide on that?

MEMBER BOUSHEY: Yeah. I don’t think we did that. That’s an interesting question. We did not. It was just all-cause. We certainly would probably have it from many of the studies. So perhaps that would be something of interest to do. It just varied across the range.
Good question.

MEMBER TAVERAS: Carol, I was wondering if -- I know you said this is going to be covered in the next meeting, but could you talk a little bit about the decisions that you’re weighing for reprioritizing the cancer and neurocognitive health and bone health questions?

Is there room or time to weigh on maybe some of those decisions about using existing reviews or what some of those endpoint outcomes are?

MEMBER BOUSHEY: We are going to use some. You know, I don’t have the list here, but here’s -- just to -- remember when we had our first meeting, and we were all so excited and stuff?

So what happened, well, we thought we would get this done in a week. Right? And so when -- remember I had kind of open forum, because there was a list of what cancers we were going to look at.

And recall that we said, well, let’s have some more. And so -- we added in liver
cancer, I believe, and then pancreatic cancer.
Isn’t that -- weren’t -- those were the two we
added in.

And so as we see how much work all this
is, we’re thinking of maybe recommending that the
next group do liver and endometrial cancer, and by
that time, there’s going to be really a lot of data
for them to use.

And then the other one -- in fact, I
should probably -- let me punt this over to you all,
because you know which ones are going to be coming
out, but they were all the ones we added when we
had our wonderful first meeting.

We were just so -- thinking we could get
through this in a day. So do you want to
add -- what were the others?

MS. ENGLISH: So the other cancers
specifically or the other --

MEMBER BOUSHEY: Good question. Did I
get them all with those two?

MS. ENGLISH: I think so. Yeah.

There was childhood leukemia, liver and
endometrial.

MEMBER BOUSHEY: Oh, yeah. Those were all added. And then what in the -- there was another set that we also eliminated, some that -- we also -- so I thought we eliminated some others.

MS. ENGLISH: I think those were the new cancers added --

MEMBER BOUSHEY: Okay.

MS. ENGLISH: -- so the existing reviews for the other four breast, lung, prostate and colorectal cancer. So those were the four other --

MEMBER BOUSHEY: Yeah.

Did -- hearing that list, did you have some that you think we should definitely try to address?

MEMBER TAVERAS: I was wondering where you think you might carry forward in existing reviews?

MEMBER BOUSHEY: Oh, the -- let me look at the notes here again as to which one. So you have them memorized better than me. Which ones will we carry forward with existing reviews?
MS. ENGLISH: For the bone health question, there's an existing review as well as the neuro, so with bone health, it's pretty much just a very similar framework, instead of outcomes that was in the existing review.

For neuro, there are several additional outcomes. The existing review covered more of the realm of neuropsychological illness or depression, and Alzheimer's disease and cognitive impairment type outcomes, and so those are -- those were covered in the existing reviews.

Additional outcomes were anxiety, ADHD and autism spectrum, and then more of the childhood outcomes with developmental domains, and those were not exclusively covered in the existing review.

MEMBER TAVERAS: And will those then not be reviewed? I'm particularly interested in the neurocognitive outcomes --

MEMBER BOUSHEY: No.

MEMBER TAVERAS: -- than if --

MEMBER BOUSHEY: No. We'll update
them.

MEMBER TAVERAS: Those are --

MEMBER BOUSHEY: And this is -- what we’re doing is, we’re not going to go from scratch, like what we’ve just done. We’ll update those.

MEMBER TAVERAS: From -- in the last five years?

MEMBER BOUSHEY: Yeah. And I believe someone did that yesterday. They spoke to that from B-24. Oh, yeah, because they had all that work from -- done earlier. That will -- yes. So that isn’t going to be lost.

CHAIR SCHNEEMAN: Actually, I want to take a turn, too. So I would be interested in the comments -- and I know the subcommittee has been talking about this, that just sort of -- one of the dilemmas with looking at the macronutrients in isolation, where it’s not considering diet quality that -- you know, do you wind up with some of the inconsistency that you really have to factor in diet quality once you start dealing with the macronutrients?
So I’d be interested in some discussion about that.

MEMBER BOUSHEY: Yeah. It’s so much fun. Do you want to -- it is --

MEMBER MAYER-DAVIS: I was going to refer to Jamy, because we -- our committee has given this a great deal of thought. It also relates to Rachel, Dr. Novotny’s comment about integration, really, across subcommittees.

So -- but Jamy really initiated some of this conversation, so let me have you comment on hierarchy.

MEMBER ARD: Okay. Jamy Ard. So I think the way we really sort of looked at the scope of the data for all-cause mortality really starts at a few different levels, and I think it does lead to a fairly consistent narrative and the conclusion that you saw, that the dietary pattern is really driving the overall effect, and the dietary pattern -- the consistency of that effect or the strength of that effect, the effect size, is likely related to the food group consumption and the
adherence to the dietary pattern.

So you can have a DASH dietary pattern that you say you’re following, but there’s levels of adherence, and if you are closer to an ideal, as studied in the original DASH trials dietary pattern, then you see the strongest effect.

If you start to dilute that in terms of changes in the food groups and quality of the foods that are part of that pattern -- so you may still be technically, you know, consuming fruits and vegetables and whole grains and low-fat dairy and so forth, but if the quality of that starts to decrease, you see a decreased effect.

So there are trends, and we didn’t report on that, but there are fairly consistent trends even within a dietary pattern. As you go from higher adherence to lower adherence, you see decrease in effect sizes in terms of protectiveness.

And then -- so you also then look at it from the macronutrient standpoint, and so that’s how we got to this idea of -- well, let’s look at
the macronutrients outside of the AMDR, because
there’s a lot of public interest in this idea of
if I am eating fewer carbohydrates or if I am eating
higher fat content, is that beneficial, is that not
beneficial?

And so this literature gave us an
opportunity to say, what can we see in that regard?
And the fairly consistent thing -- even though the
overall data are inconsistent, the fairly
consistent thing was that, within the context of
a given dietary pattern, you saw there’s really not
much effect of the independent macronutrient
distribution.

Right? It always rolls up to the
dietary pattern that you are considering. And so
once you start to think about -- okay. We’ve
looked at it from the overall dietary pattern, and
we see a fairly consistent response across all of
this literature.

We’ve got, even within that literature,
some different food group analyses, and so not
everything was about dietary patterns. Some of
those were, you know, diet patterns that were high
in fats or sugar-sweetened beverages or different,
you know, clusters of food groups that people
looked as a -- and named as a dietary pattern.

And you saw, again, fairly consistent
results, that higher-quality foods tended to lead
to more consistent protective effects. And then
you -- we also looked at it from a macronutrient
standpoint.

And in every instance, you had to come
back to the conclusion that the effects are being
driven by the dietary pattern, so it creates this
sense of a hierarchy, right, where we could say at
the top level, in the context of energy overall,
energy intake overall, we have dietary pattern, and
so you know, how you consume your calories and the
combinations of foods that you put together
overall, that is what matters most.

Then within that, it’s the quality of
the foods that make up the dietary pattern. And
then finally it’s the macronutrients that are
contributing from the foods that you’re consuming.
And those do have some -- I’m not saying that those don’t have some biological effects. They do. But from a perspective of all-cause mortality, it seems to all be driven by this idea of a dietary pattern, and quality is the thing that, you know, sort of links all of these together.

Right? So high-quality intake at the pattern level, high-quality food choices at the food group level, and even the quality of the macronutrients, high-quality fat intake, for example, or quality protein, and where those protein sources are coming from.

Those things do matter in terms of the, you know, sort of, underlying consistency across that hierarchy. And so I think in that way, it does provide a fairly unifying theme, narrative, to say, maybe at some level we’ve been too fascinated with macronutrients, and that’s not gotten us anywhere, really, and we should continue the narrative that the other committees have started, where we’re starting to make this pivot to.

Well, let’s actually really try to get
people to look over here and think in terms of their
overall pattern of consumption. And that may be
more beneficial; it seems to be more powerful, and
certainly it seems to be more consistent.

The evidence is very, very clear. I
mean, the magnitude -- as Carol said, the magnitude
of consistency across hundreds of studies, across
hundreds of countries and different populations
and subgroups, men and women.

That is fairly clear. So I think
that’s one way to potentially conceptualize this,
and Carol alluded to the idea of -- if we can come
up with something that helps us visually --

MEMBER BOUSHEY: Well, we know we
should really share that we have the volunteer for
that. Dr. Heymsfield has volunteered to make our
visual on that, and that is one of our big tasks.

But we have Dr. Sabaté. Yeah.

MEMBER SABATÉ: To say it in a slightly
different way, I mean, for a long time, we have
focused on macronutrients, and especially the
amount of macronutrients, and the amount of
macronutrients translates into the proportions as far as percentage of proteins versus fats versus carbohydrates.

And as we look at these, I mean, we realized that it's the type of macronutrients and particularly the source that comes from foods, and so although the macronutrients may be having the same name, I mean, all come originally from foods.

And so it's the type of macronutrients and the source of the macronutrients that may be the influence. But when we take these outside the context of the food patterns and the foods then, in our analysis we could find much more consistency of the results.

But we put into the context of dietary patterns and the foods, that is the type and the source, then that starts making sense.

CHAIR SCHNEEMAN: Lydia?

MEMBER BAZZANO: Okay. I would also just like to make the point, the same point that Joan here has made. But I mean, if you think about a plate that has salmon and non-starchy vegetables
on it, that is -- with olive oil, that's Mediterranean.

That's also low carbohydrate or -- so -- it's not the dietary -- it's the dietary pattern overall and includes what it comes from much more so than the specific differences in macronutrients.

And I will say that we didn't have a lot of macronutrient differences. None of these were low-carbohydrate diets. They were all just barely below the AMDR or barely above, depending on which macronutrient it was, so I don't think you take this and look at it specifically for those purposes, because it wasn't -- this information wasn't meant to be --

MEMBER BOUSHEY: Right.

MEMBER BAZZANO: -- looked at for those purposes. The study wasn't designed for those sorts of things.

MEMBER BOUSHEY: Yeah.

MEMBER NOVOTNY: Just to kind of comment. I was thinking about the lack of evidence
in childhood for all-cause mortality, and I assume it's lack of data, and of course, you hope children aren't dying early and so on.

But that would be an interesting set of data to have. I'm also thinking about having excluded the B-24, and where there might be data, and thinking of EMRs and potentially at least infant feeding data, and data that might be available, if nothing else, for future recommendations.

MEMBER BOUSHEY: Yeah. And it might come up in our other questions.

MEMBER NOVOTNY: Yeah. And then totally different -- you know this a topic of mine, but this starchy vegetable thing, I -- you know, I think here in the U.S. we usually think about potatoes, and you know, I'm sure many people can find value in potatoes.

Certainly in the region I work there is a variety of nutrient-rich, starchy vegetables. So just to -- it is a problem in our analyses, so I think we need to create a category for and
actually look at the role of starchy vegetables, because they also are not high calorie, depending on how they're cooked.

So I just think that they deserve more attention in our patterns.

MEMBER MATTES: Well, I want to follow -- I think Jamy's description of the data is very, very important. You know, we, I think, mostly recognize that even small changes in body weight have disproportionate health benefits, and the dose response kind of findings that you have here raise the same question.

If the population even makes small changes in the direction of these dietary patterns, can we expect disproportionately large health benefits? To the degree that you can quantify sort of the magnitude of change necessary to realize benefit, I think that would be a very powerful message.

MEMBER BOUSHEY: Well, Rick, this will be interesting, because as we've all said, you know, we will hopefully get some randomized trials
in the next topics that aren’t, you know, all-cause mortality.

And you know, I think that that’s going to be one of, you know, the type of diets that we’ll be looking at. We’ll be looking at dietary patterns. And so that will really help with answering that. That’s a good point.

CHAIR SCHNEEMAN: I also wanted to come back on -- I think it was in the Pregnancy and Lactation subcommittee report yesterday. We had some discussion of food patterns, and as I recall, it sort of resonates very well with what we’re hearing from the Dietary Patterns group, and it would be interesting to hear some comments.

MEMBER DONOVAN: For that, we were depending on the existing systematic review, and so Jamie was on that text, so maybe -- would you like to address that?

MEMBER STANG: Sure. So when -- Jamie Stang -- when we did the pregnancy collaborative before this Committee met to do those reviews -- and they’re published -- one of the
things that we came down to is looking at dietary
patterns, again, echoing that it came down to
specific foods, because we had like the new Nordic
diet, and the DASH diet and five kinds of
Mediterranean diets, and -- but when you looked at
them all, there were some very consistent
components.

In each of the diets that had a positive
effect, you could pull out, with a very good degree
of consistency across the studies, that it was
fruits, it was vegetables, it was nuts and seeds.

And so that’s why we felt very strongly
in our conclusion statements, that rather than
naming the diets or talking about the healthy diet,
that we put in those food components, because
that’s how people eat.

Right? They select fish and nuts and
seeds. They don’t select a Mediterranean diet
when they’re in their kitchens or in their grocery
store. So it seemed to be so consistent and so
blatant that it just felt like it needed to be
specified and those conclusion statements.
And I think, again, that’s the -- you know, that is what we want to be able to tell people is, you can call it what you want, but it is -- these are the things that make up those diets that seem to have the health benefits.

CHAIR SCHNEEMAN: Other comments or discussions. Oh, Jamy, please.

MEMBER ARD: I think -- Jamy Ard -- so I think one other thing that this points to is the idea that certain things are bad or not bad or good or so forth or -- I mean, that’s something we’ve got to sort of grapple with.

Right? So I mean, as I think about, like, Lydia’s comment around, you know, a plate with lean protein or fish and vegetables being characterized as low carbohydrate in that particular meal and instance and being also consistent with Mediterranean style of eating, I think one of the things that’s confusing for people, though, is, well, a lot of these dietary patterns include -- actually include and give you more points for consuming higher amounts of
vegetables that -- or I mean, fruit or whole grains or those types of things.

So I think we've got to be careful in terms of helping people understand the nutritional value of these foods and not get confused by the idea of, well, if it has any carbohydrate, it's bad.

Right? I think that's where we need to sort of come up with a way to help people understand this idea of quality of intake, because again even within any of the patterns, when the quality was poor, the effect was either null or reduced, and that was definitely consistent.

So all carbohydrates are not equal. All protein is not equal. All fat is not equal. All foods are not equal. All dietary patterns are not equal. Right?

And so we've got to help people understand the nutritional value of foods and how we put those together to get the maximum impact based on the evidence we have.

I think if we don't say something to
that, then we’re going to miss an opportunity to
really help people do the things that we’re talking
about in terms of nutrients of public health
concern yesterday, where if we say, well, we want
people to be able to eat diets that are overall
healthier but we’re afraid of eating a piece of
fruit, then that’s a problem.

I think that’s a problem.

MEMBER BAZZANO: I just want to second
what Jamy said, and that it’s the lack of nuance
I think gets us into trouble because it is the foods
that are high quality that we need to be focusing
on.

CHAIR SCHNEEMAN: I would suggest we
take a break right now, and then we can come back
at 10:30 hear the next subcommittee. Is that
agreeable to everyone? Okay. So we’ll be back
here at 10:30, then.

(A short recess was taken.)

CHAIR SCHNEEMAN: Okay, if we could
reconvene, please? Yeah. So we have one more
subcommittee report to go through before the --
before we take the break at lunch. And I will just note that whatever time we’re done, we will have to take a break, because they do need to set up the room to facilitate the public comments.

So want to -- yeah.

VICE CHAIR KLEINMAN: Our next speaker is Dr. Steve Heymsfield, and he’s going to present the summary findings of the committee that looked at frequency of eating. Steve?

MEMBER HEYMSFIELD: Thank you, Ron. First, let me begin by thanking my committee members, Carol, Heather and Rick, who have really contributed a lot to this report. And also, we have finished our review.

We’re complete. So this is going to be a rather long presentation, but that’s it. We’re done. Yeah.

(General laughter.)

(Off-mic comments.)

MEMBER HEYMSFIELD: No, no. I know that. We do have that.

Anyway, this is a new topic for the
Dietary Guidelines -- frequency of eating, and I thought I might begin just by a very brief summary of this topic, because it’s also new to me.

And if we think about eating behavior, which is the major topic of the Dietary Guidelines, there are three parts it -- to eating behavior.

One is the quantity of food people eat. The second is the quality of the food they eat, and that’s the major deliberations that we’ve heard so far, and that’s been the topic of the Dietary Guidelines for quite some time. But there’s a third part to it, and that’s the frequency and timing of eating -- frequency and timing of eating -- and that, together with the other two, quality and quantity, determine eating behavior.

And the frequency of eating is a very under-studied part of this area. But there’s major physiology, increasingly understood physiology that relates to the frequency of eating, the number of times you have an ingestive event per day, even including water.

So, it’s a very important and
interesting topic, and this is a new question for
the Dietary Guidelines. And because of that,
we’ve had very intensive discussions about what we
mean by frequency of eating.

So just a little brief background.

Normally "we eat three meals a day." That’s kind
of a fantasy, but we eat three meals a day, and we
can divide those into breakfast, lunch and dinner.

And that actually sums up very clearly
number three, is the frequency of eating, but also
breakfast, lunch and dinner is the timing of
eating, so the frequency and timing are related to
each other.

And as you’ll see, as we move forward
with our deliberations, we uncouple timing from
frequency, and I’ll explain that a little more
later. And the other thing we’ve struggled with
is, what is frequency of eating? How do you define
it?

And it boils down to what’s called an
ingestive event, or an eating occasion, and we
spent a lot of time thinking about what we mean by
eating occasions, and that comes up to the search strategies we did as well, what we include as an eating occasion.

And the tools for measuring eating occasion -- they’re really two main tools, there might be others, but the three-day diet diary is one, and the other is a food frequency.

And as we plowed into those, we discovered there were issues related to how you measure frequency of eating. And lastly, there are two types of studies, observational and interventional, and each one of those we’ve been able to separate out and have different criteria for.

Well, the search strategy then on frequency of eating, 41,000 articles have been screened, and there were six initial questions for this committee, and we’ve answered one of them in the previous meeting, in meeting three, of the relationship between frequency of eating and mortality. And we’ll look at the remaining five today. And I’ll briefly review again the
mortality question.

The original question was: What is the relationship between frequency of eating, such just meals per day, snacking, fasting and so on, and each stage of life, various life outcomes?

And as I mentioned, the timing of eating occasions is important topic, increasingly important. We really focused our work, particularly as we moved on -- on the number of eating occasions, we uncouple those two, because it turned out to be very difficult to find studies that had both the number of eating occasions and the timing of those occasions.

The analytical framework and inclusion/exclusion criteria were updated at meeting three after our discussions here, again, focusing on the number of eating occasions and not the timing of eating occasions.

And also, at meeting three, we clarified the minimum size of study groups and power analyses criteria required for intervention studies. And we also noted that the requirement
for data collection on two separate occasions was removed for observational studies but remained for intervention studies.

And this issue comes up a lot about observational studies. You quantify the frequency of eating at the beginning of an observational study, and 20 years later, you’re looking at their outcome, but you don’t have a second time point.

So, many of the observational studies have only a single time point for quantifying frequency of eating. And we also noted that three 24-hour periods was retained as an attempt to capture customary frequency of eating.

In other words, weekdays, weekends. If you have just a single 24-hour period, you don’t really get a good sampling of what people are doing.

Now, the key definition, then, for frequency of eating is defined as an ingestive event, as I mentioned, an eating occasion, and that include preload meals or snacks, and also beverages, energy or non-energy yielding beverages
or food. That’s our key definition.

And for our inclusion and exclusion criteria, of course, the number of daily eating occasions and the inclusion criteria are studies that only examine frequency of intake of a single food, beverage, or category of food or beverage.

And as I mentioned, there are two types of studies. We looked at observational and intervention studies, and observational studies, we used data collection for eating frequency that encompasses a minimum of three 24-hour periods, and that could be with three 24-hour dietary recalls reporting an ingestive event, or one eating frequency questionnaire documenting eating frequency for the past month.

Those are our criteria. And the intervention studies were a little different, of course, those are typically going to have two time points, the beginning and the end of the study. And for these studies, then, we would have each eating occasion that encompasses a minimum of three 24-hour periods, or questionnaire that covers at
least three days addressing eating frequency; for example, again, the 24-hour recalls or the eating frequency.

And we also -- for intervention studies, we wanted to make sure they were powered adequately. So, we decided that 15 participants were required for studies using within-subject analyses, or 30 participants for studies using between-subject analyses, or a power calculation was needed.

And the numbers of 15 and 30, did some back-of-the envelope calculations to try and figure out the minimum number of people needed for a reasonable study that would give statistical significance.

The first question we were asked of the six was the relationship between frequency of eating and all-cause mortality. This was presented at meeting three. This was the analytical framework.

The endpoint, then, is all-cause mortality, as it relates to frequency of eating.
This one was easy. There were no studies that we could find, so no evidence is available to determine the relationship between the frequency of eating and all-cause mortality, and therefore, there's no grade assignable.

Now, the remaining five questions, then, is what we'll review today. Gestational weight gain, pregnancy, postpartum weight loss, growth, size, body composition, risk of overweight and obesity, cardiovascular disease, and type 2 diabetes.

We screened -- I'm going to have a hard time reading -- over 51,000 papers, and at the end of the day, that came down to 10 after rigorous screening of those. And on the bottom, you'll see they're divided up into the topics.

The most studies were growth, size, body composition. There were six papers for that. Cardiovascular disease and diabetes have two. Postpartum weight loss had one, and there were none for gestational weight gain.

So, the first topic, then, is
relationship between frequency of eating during pregnancy and gestational weight gain. The endpoint here is weight gain across the period of pregnancy, and this is the analytical framework.

Eating frequency was the intervention or exposure, and there were no studies that we came up with between January 2000 and September 2019. So like mortality, there’s no evidence available to draw a conclusion about the relationship between frequency of eating during pregnancy and gestational weight gain.

The next question is what is the relationship between frequency of eating during lactation and postpartum weight loss? The endpoint here is change in weight from baseline to a later time point during the postpartum period.

And here we did find one study. It took place in Sweden. Four-day weighed food records were used at baseline and follow-up to measure eating occasions per day. Change in frequency -- of eating frequency between baseline and follow-up was assessed.
The study outcome was reported as a change in postpartum weight loss. And all of the women in the study were overweight or obese. Ninety-five percent were exclusively breastfeeding. Five percent were partially breastfeeding, and parity was one.

In this one prospective cohort study, they did not find a significant association between eating frequency and a change in postpartum weight loss after a 12-week follow-up period.

So, we conclude then that there’s insufficient evidence available to determine the relationship between the frequency of eating during lactation and postpartum weight loss.

The next question is, what is the relationship between the frequency of eating and growth, size, body composition and risk of overweight and obesity. And the most papers we had available that met our criteria were in this category.

There were six papers available, and it covered a broad spectrum of endpoints; for example,
body mass index, weight, weight for age, and other endpoints like healthy weight, overweight, obesity and so on.

So, there's quite a few endpoints available for this study. There were six that I mentioned. One was a randomized control trial. Five were prospective cohort studies. Five took place in the U.S.; there was one study that was reported from Greece.

And the number of eating occasions in the comparison groups differed across the studies. For example, some studies looked at two versus three meals. Others looked at one versus 10, and so on. So, the number of eating occasions differed across the studies.

Three of the studies used a three-day food record, and three studies used a food frequency questionnaire with an added question to assess the number of daily eating occasions, because, as I understand it, the FFQ normally does not have a question about eating occasions.

And the studies that we included that
had food frequency questionnaire as the tool also
had an added question about daily eating occasions.

And many study outcomes were reported:
BMI, change in BMI, body fat, change in waist
circumference and so on.

There were five studies in adults.
Three of them reported a positive association
between frequency of eating and growth, size and
body composition. Two studies did not find a
significant association between frequency of
eating and growth, size and body composition.

And if you’re like me, you’re probably
thinking, what does a positive association mean?
Well, okay. So positive association means that
more meals translate to bigger body size and
composition. Okay. So that’s what that means.

A negative association would be more
meals is less size and body composition, and so on.
And we use the words interchangeably, inverse,
negative and so on here. We try to be consistent.

So, in one study in children reported an
inverse association between frequency of eating and
growth, size and body composition after a 10-year follow-up study. So, these are mixed kind of reviews on this topic.

And so, these studies were inconsistent in how they defined and examined frequency of eating, the outcomes they examined in the reports, and the reported results. They have several additional critical limitations.

Which you’ll see again in some of the other questions, there was a high risk of bias, and also a high or unknown attrition rate in these studies, trying to track how many subjects were entered in the beginning of the study, how many were at the end, and the reasons that they were taken out over time.

So, the conclusion statement here for the largest of our samples, six in this question, was that there’s insufficient evidence available to determine the relationship between the frequency of eating and the growth, size and body composition, and the risk of overweight and obesity.

The next question is: What is the
relationship between the frequency of eating and cardiovascular disease? And in this analytical framework, the endpoint is cardiovascular disease of all types, stroke, venous thrombosis, and so on.

We also included intermediate outcomes here, lipid levels, blood pressure and so on. Those are intermediate outcomes.

And we found two studies in adults that met the inclusion criteria. Both studies were prospective cohort studies. One took place in the U.S. and one in Greece.

The number of eating occasions, again, differed across the comparison groups. One study used a three-day food record and one study used a food frequency questionnaire, with again the added question to assess number of daily eating occasions at baseline.

And the study outcomes that were reported were coronary heart disease, hypertension, systolic blood pressure, and diastolic blood pressure.

Now, one study reported an inverse
association in adults between eating frequency in baseline and systolic and diastolic blood pressure and risk of hypertension after five years’ follow-up. This is an intermediate outcome, of course.

And one study reported no association in adults between eating frequency at baseline and coronary heart disease after a six-year follow-up, and obviously, the net result of that was kind of an ambiguous outcome.

The studies were inconsistent in how they defined and examined frequency of eating. The outcomes they examined, and in the reports -- the results they reported. And again, the same types of limitations. There’s a high risk of bias. The attrition rates were unknown in these studies.

So, we concluded then that there’s insufficient evidence available to determine the relationship between the frequency of eating and cardiovascular disease.

The next question is: What is the relationship between the frequency of eating and
type 2 diabetes? Very important question. And
the outcome -- endpoint outcome here was type 2
diabetes, and we had two studies here to review that
met the inclusion criteria.

Both were prospective cohort studies.
Both took place in the U.S. Both used a food
frequency questionnaire with an added question to
assess the number of daily eating occasions. And
the outcome was risk of developing type 2 diabetes.

One study reported, in men -- in this
study, they found that men who reported one to two
eating occasions per day had a higher risk of
developing type 2 diabetes compared to men who
reported three eating occasions a day, not a very
big gradient in the number of eating occasions per
day, but they did find that. But when they did a
trend analysis, they didn’t find any trend overall
between the number of eating occasions. They
picked out that one significant finding of one to
two versus three eating occasions per day.

And the second study was actually in
women, and they did not find an association between
eating frequency and risk of developing type 2 diabetes.

Again, you see the same limitations here. The studies were inconsistent in how they defined and examined frequency of eating in their results. They also again had a high risk of bias. Weak study designs were present to answer this question, and the attrition rates were unknown.

Therefore, we concluded that there is insufficient evidence available to determine relationship between frequency of eating during lactation -- lactation? -- and type 2 diabetes.

Hmm. Okay.

I did not do that one. I proofread these too. Okay. Well, you get the picture.

So, you can see that there are a number of limitations across these studies. One is the inconsistent and insufficient findings to draw conclusions about the relationship between frequency of eating and health outcomes.

And that by no means doesn't mean this isn't an important question. It means that the
studies that have been done to date really are
inadequate to meet what we consider a very high bar
for examining frequency of eating, ingestive
events, eating occasions, and so on.

And for example, things like water
ingestion, water consumption, are very rarely
mentioned in these studies, something that should
be done in the future.

There are very inconsistent measures of
frequency of eating. For example, some studies
included snacks, others didn’t. Some defined
inter-meal internals differently and so on. So
very inconsistent. Eating frequency was only
assessed at baseline in prospective cohort studies.

The comparisons -- again, the number of
eating events were inconsistent across studies.
Both energy-yielding and non-energy-yielding
beverages were inconsistently accounted for, as I
mentioned, and the attrition rates were very
commonly unknown or undefined in the studies.

And the study populations did not
represent the race, ethnic, or socioeconomic
diversity of the U.S. population. And research recommendations, there will be many coming out of it, and we’ve thought a lot about what things we can do to contribute to future research, but of course, there’s a need for more controlled trials.

There’s a need to develop a consistent definition of an ingestive event that includes eating and drinking, and methods to quantify them. We need to encourage documentation of frequency of water consumption.

There needs to be a number of ingestive events across 24 hours, at least three days of ingestive event data on at least two discrete eating occasions to allow assessment of estimate reliability; that’s very rarely done.

Report information on food insecurity to allow isolation of voluntary versus involuntary ingestive events, important consideration. And finally, the need to report key confounders and other factors need important consideration.

So, the next step then will be systematic reviews will be peer-reviewed. We’ll
collaborate with the Data Analysis and Food Pattern Modeling working group for the data analysis question answering what is the relationship between the frequency of eating and achieving nutrient and food group recommendations?

My understanding from Regan’s presentation yesterday is that we’re going to get even deeper into that. Right? There’s more information about frequency of eating that will generate -- might be among the most interesting parts of our report.

We’ll use the frequency -- use the findings of the completed systematic reviews and data analyses to draft the scientific report of the Dietary Guidelines Committee. And finally, I want to thank everybody on my committee once again, and the NESR staff.

Thanks very much.

(Applause.)

VICE CHAIR KLEINMAN: Thanks, Steve.

Questions? We’ll start with Regan.

MEMBER BAILEY: In a rare turn of
events, I have a question for Rick.

What -- is there research looking at the
reliability and validity of self-reported number of
eating occasions and what you would call an
ingestive event?

MEMBER MATTES: Yeah. That's -- we
had substantial discussions about that. No.
That's one of the issues. Frequency of eating just
has not been in the foremost of people's thinking
about eating patterns and so on, and so there's a
paucity of data, as you've seen, and very little
effort has gone into how to measure it. So no, we
don't have good evidence on that.

MEMBER BAILEY: But I think that might
be changing for the next committee's work with
intermittent fasting and things like that that more
research is going on in that area.

MEMBER MATTES: Right. And that was
frustrating for us. Heather pointed this out to us
many, many times. There's a fair literature on
intermittent fasting and breakfast-skipping and so
on, and you would think that we should have
incorporated that into our analysis.

The problem is those studies don’t
report the total number of eating events in a day,
which we decided was the unit of time that we would
focus on. So, you don’t know what compensation
there may be.

Yeah, they skip breakfast, but maybe
they had three more snacks in the evening to offset
that. Without the totality of the evidence in a
relevant period of time, you just can’t draw
conclusions.

MEMBER NOVOTNY: I wondered whether in
the -- I know this wasn’t directly your question
but, whether in the body of evidence you looked at
whether there was a relationship between the
frequency of eating and energy intake.

MEMBER HEYMSFIELD: We didn’t, did we,
Rick? I’m trying to think. We didn’t, but that
should be something available.

MEMBER LEIDY: Yeah and -- this is
Heather. It was more just because it was out of the
scope of our question. Intake would be an
intermediate -- or a mediator of sorts. And so just another comment to Rick's point too.

A lot of the studies with skipping meals, whether it's breakfast, or even snacking throughout the day or intermittent fasting, they do publish energy intake in macronutrient content and food choice and food selection, more energy content, but they just don't do the eating occasions.

And so our -- we were trying to be true the questions that we were being asked, and so it was looking at eating frequency, we looked at our end outcomes and they didn't include energy intake.

We did use that as a covariant in the model, but not -- we didn't specifically use that as an endpoint, because that was not one of the -- that wasn't part of our questions. But it's a really, really good point, and we do have intake data on that.

It was just the fact that the majority of studies that we thought would be included were just not, because they didn't report eating
frequency. It was -- they generally had a concept, a topic around the eating frequency, but their -- it was just looking at energy or macronutrient composition.

MEMBER MATTES: Can I just follow up on that? So not based on the papers that we reviewed, but just sort of a familiarity with the literature in this area, it’s one of the more interesting and frustrating issues, because there is a sense that increased eating frequency is associated with increased energy intake, NHANES data shows that, and so on, but the translation of that to body weight is not consistent at all.

And so, resolving that inconsistency is a very important question, and we just don’t have the data to do it.

VICE CHAIR KLEINMAN: One study in childhood actually showed an inverse relationship, which was a little hard to figure out.

MEMBER LEIDY: Just another point, too, you know, and Steve had said this. We linked -- initially we linked to timing and
frequency, because they are obviously related, but then to answer our question, we removed the timing and focused on frequency.

There probably is more research -- we didn’t review it -- on timing, but in order to assess timing, you really need to also look at 24-hour frequency. So, they go hand in hand. So, I think it’s -- our research recommendations will be highlighting that point, that timing, I think, is important and gets to some of these other questions, but our charge was really looking at eating frequency.

MEMBER DEWEY: Yeah. Thanks very much. I have three questions. So, one of them -- I know that you had these criteria for the number of times that dietary intake frequency was assessed, and there was -- that was also for the randomized controlled trials.

So, my question is, were there any randomized controlled trials excluded because they didn’t have enough dietary assessment days according to your criteria?
I brought this up at the last meeting, so I’m a bit concerned, because a randomized trial, when you’re assessing that aspect, it’s really a measure of adherence. And so, it’s a little different than for the observational study, so I’d just like to know if any were excluded for that reason?

And then there was one randomized trial for the growth, size and body composition outcomes, that I’d like to know a little bit more about that one, the size, the target group and what they found, just because that’s a stronger design than others.

And lastly, there was a slide for the diabetes outcome, where I think you said there was no dose response, but the bullet said that there was, so I was a bit confused. Maybe it was a typo.

MEMBER HEYMSFIELD: Starting with the last one is probably the easiest one, I think what they did is, they had -- they used an analysis of variants, and found, you know, no trend across the studies, but when they went in and compared individual comparisons, like two versus three meals
a day, they got statistical significance.

Isn’t that it, more or less, Rick?

That’s what they did.

MEMBER DEWEY: Well, the second bullet in
the slide says, in the same study, there was also
a significant dose response with --

MEMBER HEYMSFIELD: Yeah.

MEMBER DEWEY: -- increased eating
occasions and risk of type 2 diabetes.

MEMBER MATTES: Oh, that might be an
error.

MEMBER HEYMSFIELD: I think that was
not -- again, I don’t think that’s right, from what
I recall.

MEMBER MATTES: Yeah. I think there
was a significant P for trend --

MEMBER HEYMSFIELD: Yeah.

MEMBER MATTES: -- but there -- a
non-significant P for trend, but in a separate -- it
wasn’t like in and over and then they went back and
did a post-hoc to see where a difference may have
occurred.
In a separate analysis, they just happened to notice that -- the distinction between eating once or twice versus three times --

MEMBER HEYMSFIELD: Right. Yeah.

MEMBER MATTES: -- was significant, and you know, I don’t want to accuse them of P-hacking or whatever, but --

MEMBER HEYMSFIELD: Yeah.

MEMBER MATTES: -- there are many, many pair-wise comparisons one could do in that data set, and it just happened to be one, and it isn’t necessarily the most logical one that one would have a priori examined.

MEMBER LEIDY: And, Steve, I can answer the question. One of the ones as far as randomized control trials, and whether they were excluded based on two separate occasions.

And I can defer back to the NESR folks, but I’m pretty sure that that wasn’t the case, that when they were -- the studies that were excluded were primarily the -- I don’t want to say primary.

Some of them were because of the lack of
three-day assessments and not the pre-/post-but as
you know, when these papers get reviewed, it’s when
there’s one limitation that kind of -- that
explanation kind of stops there.

But if I remember -- I don’t know where
our folks are that can comment on that. I
think -- if I remember in our discussion that there
weren’t any that were excluded just based on dietary
intake, like the three-day collections. Is that
true?

DR. OBBAGY: That is -- there were some
that were excluded because they did not capture
three 24-hour periods in their assessment. I think
there were some that were also excluded because they
didn’t assess baseline eating frequency when they
enrolled subjects in the study.

They often had the follow-up assessment
of adherents, but they didn’t capture their
baseline eating frequency at the point of
enrollment in the trial, or they didn’t report
baseline eating frequency.

MEMBER DEWEY: But again, I’m not
focused on the observational studies right now. I just want to know, of the randomized controlled trials, were any excluded because of these issues?

DR. OBBAGY: Yes. That was in reference to the randomized control trials.

MEMBER DEWEY: Okay. So, for me at least, it would be helpful to have a little more information on those, because they are a much stronger study design, and I'd just like to see, you know, what they were about.

And then, the other question was that one randomized controlled trial that you did mention. Can you tell us any more about that one?

MEMBER HEYMSFIELD: I have some information about that one. It was a very small study. I think they called it a pilot study.

DR. OBBAGY: Yeah. Correct. There were 45 subjects analyzed in two groups where they compared a three-meal group -- so three meals per day -- versus a grazing group, which was instructed to graze by eating 100 calories every two to three hours.
That was sort of the general gist, men and women, but small sample size overall, and the results that Steve described on the slide. This one may be worth noting, that they did not adjust or control energy intake in this trial.

So, the three-meal group did have statistically significant lower energy intake than the grazing group. So that supports Rick’s point earlier about energy intake with increasing -- with increased eating frequency.

MEMBER DEWEY: But that’s sort of the point, isn’t it, that that’s an intermediate variable that -- I wouldn’t call it a confounder, and I think it’s an important observation if that was the case.

DR. OBBAWD: Correct.

MEMBER DEWEY: Thanks.

MEMBER TAVERAS: And I think similarly, is it right that there was just one study in children? Is there more information about that one? Because the inverse association is somewhat paradoxical.
Is there any more information about sample size, what age the children were, where the exposure was assessed?

MEMBER BAILEY: This is kind of similar to that. It might be related to physical activity, so the more frequently you exercise, you eat more frequently, you -- I mean, is that captured in any of this literature?

MEMBER MATTES: No.

DR. OBBAGY: Elsie, to answer your question, the data from that analysis were from the NHLBI Growth and Health Study -- so it was nine- to 10-year-old females only, so it was a pretty limited population in terms of just girls and just at nine to 10 years of age.

And there were about 2,000 subjects in the analysis. And they adjusted for physical activity.

MEMBER MATTES: And if I can just follow up on your point, the questions about the association between eating frequency and body weight change or energy intake truly are two-tail
tests.

You can make very reasoned hypotheses in either direction, so neither one should sort of stand out as unexpected, but we don’t have the data to say which is more valid.

MEMBER LEIDY: Just another clarification point. If I remember correctly, that the intake data was also different at baseline before they even started the intervention with the three versus grazing. Is that correct? So it wasn’t that, over time when the pre-post-assessments were different at intake, at least in some of these studies, they actually didn’t adjust for intake at baseline, and they were, in fact, different at baseline.

If not this study, I know that there were a few others that we reviewed where that was the case. So that wasn’t adjusting for the differences at baseline to begin with, which was a confounding factor.

MEMBER TAVERAS: Heather, does that mean that the exposure was measured at one time and
not longitudinally or change in the --

MEMBER LEIDY: Well, it depends on which study. In the kids' study, they did measure it at baseline and then post-study. I just can't remember. There were a few studies that I'm getting mixed up on with baseline, though -- that their intake data at baseline was different, but that wasn't adjusted for as a covariant in the model.

And so, it raises a question, because they were starting -- they had different intakes at baseline before they had the intervention.

MEMBER TAVERAS: So how consistent the pattern was --

MEMBER LEIDY: Right. Followed.

VICE CHAIR KLEINMAN: And it also raises the question about how reliably you're capturing their eating frequency when you have a 10-year study and you measure it twice. So I think it's challenging outcome with a lot of challenging methodologic aspects to this study itself. Is that fair?
MEMBER MATTES: Yeah. I think it’s fair to say, and the evidence on trends in eating frequency are very strong and clear. We’ve increased, in adults, probably one and a half ingestive events a day as a population, which is remarkable, and one eating event a day in kids. So, if you don’t track that over time, you’ve missed a great deal of information.

MEMBER NOVOTNY: Just as a clarification -- I may have missed it -- so the -- was water considered an ingestive behavior then?

MEMBER HEYMSFIELD: Yes.

MEMBER NOVOTNY: So we -- so that may also be something that’s changed in how we’ve measured this across time?

MEMBER MATTES: Yeah. It is an ingestive event, in our opinion, but it was not a criteria by which we excluded a study, because we recognized people just have not been recording that.

There would have been no studies to
review if we had used that as a criteria. We think it’s important going forward, but we didn’t impose that as a standard here.

VICE CHAIR KLEINMAN: Any more comments?

MEMBER HEYMSFIELD: I think we’re getting more data from cell phones. People take pictures and they can record time and what they ate and so on, and so there have been several very prominent papers on eating frequency in relationship to cell phone use and so on in small populations, but there will be more data on this subject.

MEMBER BOUSHEY: Yeah, I think that really is an excellent point, because what’s going -- with mobile-based methods, we will be able to get more information on this very topic, and it’s going to be one of the best uses of being able to have these images, and it was because of this Committee going back and looking at all of our images that we have.

And I can’t reveal anything, because
it’s all not finished up, but it’s been pretty interesting.

VICE CHAIR KLEINMAN: All right.

Jamy?

MEMBER ARD: So -- Jamy. One other question on the results related to the five studies in adults where three studies were positive or had a positive association. I think you mentioned that there were challenges because they used a variety of different measures or outcomes related to growth, size and body composition.

Were any of those, you know -- did any of them have any similar outcomes across those three studies? Or are we talking about, you know, differences in, you know, sub-cu fat versus, you know, weights or BMI or --

MEMBER HEYMSFIELD: I want to say they were mainly BMI, as I recall; I think they were primarily BMI.

VICE CHAIR KLEINMAN: All right. So what’s next?

CHAIR SCHNEEMAN: So what’s next is
more general Committee discussion again, and we do
have time before the lunch break. So you know,
again, we heard quite a few of our subcommittees
yesterday, the additional two today.

So I'd just like to take whatever time
we have to go round, and I'm going to strategically
start with Jamie. So again, any observation
relative to the subcommittees you've been hearing
from, but also as you think about it in the larger
context, it's just helpful for our overall
discussion.

MEMBER STANG: Yeah. I haven't had
much time to think about this, but I think what keeps
coming to my mind is, how consistently each of the
committees are saying that there's some very
specific limitations, particularly around
assessment of diet, and I think that, as we think
about this individually as committees, then
thinking about what that is that is cutting across
all of these committees, then those should be our
real big priority recommendations for moving
forward.
CHAIR SCHNEEMAN: Elsie?

MEMBER TAVERAS: Nothing to add.

MEMBER MATTES: I think some of the most telling analyses are coming from the Food Modeling and the Food Pattern groups, and the message seems to be that there is something about the totality of the diet that is meaningful and a target for making recommendations that could indeed have some impact.

And that being true, I just want to kind of repeat myself from yesterday, that we don’t eat nutrients. We eat foods, but we choose foods based primarily on palatability. In the U.S., we have the luxury of spending less than 10 percent of our discretionary income on food.

As a result, we can just pick foods we like. We’re not forced to eat foods that aren’t necessarily palatable but it’s the way to get sustenance. And so I think it’s very important, going forward, for us to put food choice into the recommendations we’re making and the determinants of that.

Some of it is public health and access
to food and so on, but a fair amount of it is also
the issue of palatability, familiarity, and so on,
and we should be mindful of that.

CHAIR SCHNEEMAN: Somebody else?

MEMBER SABATÉ: Regarding the last
presentation, it's interesting to see the results
regarding the frequency of eating, but
unfortunately, since that was not your primary
question, and I think that it's more of interest to
the general public, that is, the timing of eating,
and intermittent fasting was not considered.

So I'm afraid that maybe the general
public will get no guidance from this Committee, and
this point I think this is an important issue,
because it's becoming very widespread, not only in
the popular media, but in many segments of the
population.

That's one aspect that we really,
certainly have to include the next Dietary
Guidelines on that.

The other issue is clear, based on
presentations yesterday, that the average American
diet is -- needs much for improvement.

That it is across age segments, that
it’s not any particular age. It’s for both
genders, and I would say that it’s pretty much also
across ethnic or social groups. So the task that
this Committee has to do is to put things quite
clear, I mean, for the general public.

We all know that the information is not
enough to change, but at least presenting it in a
very clear way. And in judging a reflection after
the presentation of the Dietary Patterns towards
the conclusions, I notice -- and that is not the
intention probably, but that was the situation -- is
that the foods that we conclude that build a good
dietary pattern or healthy dietary patterns such as
fruits, vegetables, legumes, very little consumed
by the American public, nuts, so on and forth, are
mentioned only once; I’m saying on the slide.

However, meat that we say has to be
drastically reduced, is mentioned eight times. I
know that in the context of high versus low, and lean
and all this, but I mean, just from the
psychological impact, anyone reading these recommendations, if a word is repeated eight times, and other words is only repeated once.

I mean, the psychological message is that one food is more important than the other one. So we have to aware of the way that we deliver the message, even though everything written, I subscribe and I agree and I think it’s appropriate.

I mean, just the psychological impact -- I mean, how we deliver the message, I mean, may have tremendous effects. So we have to be careful in the way that we phrase our recommendations.

MEMBER LEIDY: Just a comment, for clarification from the Eating Frequency subcommittee. We did in fact include studies -- well, we set out to include studies that had meal skipping or intermittent fasting.

They didn’t meet our criteria. So it wasn’t that they were excluded because they were intermittent fasting or meal frequency, but if they didn’t include 24-hour eating -- documentation of
eating frequency over a 24-hour period, they were excluded.

Just a point of consideration. It was part of our -- what we set out to do, but there were no studies that adequately documented eating frequency across the day. It’s just a point with that.

And then, you know, just some other things that came to mind. Kind of going onto what Rick had said, you know, we think of it in terms of dietary patterns, and then it’s really about recommending the foods, but then I think, for us, it’s then -- you know, people are eating foods, but then there’s very specific times that they’re eating them, and so it’s, you know, how much should they eat them at one eating occasion and what time?

So I think that’s why -- just going back to eating frequency, I think that it is an extremely important topic, along with timing. The data right now just isn’t -- we’re not able to put that in.

And I think in some regard it comes full circle. Right? You know, back in the day, you
know, there were examples of what a day should look like in terms of meals and snacks and what the foods are within that.

I think we’ve gotten away from that and we’ve focused about dietary patterns, which are important, but then I think, from the general public standpoint, it’s really -- well, here are the foods that are the most helpful.

We’re recommending them. But then that next piece is, well, how you get them into the timing and the frequency? How do you make that more optimal? And we’re -- I think from what we’ve gathered so far, we’re not at that point yet, but I think that’s really a good future recommendation.

And then another part, that our Eating Frequency subcommittee always joked about, is -- there’s a lot of data that we’re -- that we think is out there from an eating frequency standpoint, but the articles that are published didn’t report them.

So anybody that has -- generally, anybody that has three days or -- three days of
eating, whether it’s a food record or recalls, they have the eating occasions, but when you look at the publications, that wasn’t their point of examination, and so it was really about energy and macronutrient composition and so forth.

And so we said there might be a lot of retrospective analysis coming out from something like this. But there is a lot of data, I think, that’s there. It’s just not published in that manner.

So even just recommending the thought of thinking in terms of eating frequency, I think, can be really helpful.

MEMBER ARD: Jamy Ard. So a couple of thoughts related to this morning, and maybe some integration from conversations yesterday. So I think it’s a big deal that we actually have all-cause mortality as an outcome, and we’ve got a really nice body of literature related to that.

That is the ultimate outcome. Right? And I think, you know, being able to speak to that in a way that, you know, has a strong level of
evidence behind it with regard to the grave is
something of an anchor point potentially.

And then, you know, building on that, if
we think of the diet pattern concept as being an
organizing theme that then, you know, goes from
that, right, it’s related to a very strong outcome.
Positive effects, consistently in with -- and from
Rick’s earlier question about this idea of being
able to quantity the dose response relationship,
and being able to give, you know, a sense of a public
health type of impact, in the same way, you know,
using blood pressure by 2 millimeters of mercury
across the population as these, you know, projected
large impacts on cardiovascular disease events.

You know, if we were able to, you know,
incorporate some type of assessment that says, you
know, we shift the population intake in this way,
and towards a healthier pattern, again whatever
it’s called, then that has the potential to have
these types of public health impacts on
chronic -- nutrition-related chronic disease and
longevity. I think that’s pretty important to be
able to try to get to.

MEMBER DAVIS: I think that it’s important to note that, over the course of the discussion today and yesterday, that there has been very limited or insufficient evidence to answer many of the questions that have been posed to us, and which we’ve been asked to address.

So it’s very limited evidence, and so this gives us an opportunity to provide the scientific evidence for the questions that have been posed and then to talk about the research needs that the scientific community can address.

Where do we need to go in the next few years to answer some of these questions so that there will be the scientific information available for the next Dietary Guidelines Advisory Committee?

MEMBER HEYMSFIELD: Actually, I had a very similar comment, and I’ve been thinking, of course, about frequency of eating, and I’m a clinical investigator. And these are questions you could answer in your sleep if you did a randomized, you know, experimental study.
And why haven't they been done? And think about that a little bit more. Who would fund something like that? The USDA should put some money towards doing these kinds of studies because, you know, you think about really what gets funded in science, basic science, molecular mechanisms and so on.

Very hard to get funding for doing a study like that. So we depend on these huge observational studies that have fuzzy data in them, very hard to come to conclusions, but one good really careful randomized trial like this, you could answer a big question.

And there must be some other studies out there, people thinking about this a lot, with time-restricted eating and so on. There is some -- a lot of data coming out like that. But I think that we can encourage really good, careful studies coming out of this type of work. That's my thought.

MEMBER SNETSELAAR: I also agree that we need to find new places for funding, especially
for clinical trials. I think too -- and this is
echoing back to what Jamy said, but I was thinking
about this too before he actually mentioned it, the
idea of coming up with, you know, what I might call
some sound bites from our research, that would talk
about the public health impact of things that we’re
finding, I think, is incredibly important and
something you should think about.

MEMBER MAYER-DAVIS: So -- yeah. Beth
Mayer-Davis here. So I have a couple of thoughts
about what we will sort of do with our notion of
dietary patterns and the hierarchy of patterns,
foods, nutrients.

And there’s a couple of things I would
think, you know, for our Committee’s consideration,
as we continue to look at the literature, to look
at the studies, but with an idea to the dietary
pattern, the ways of eating, for the study, which
may not be the focus, but to be able to say, well,
what does it mean that this was a study conducted
in Italy, this was a study conducted in a small
community in rural America, you know, whatever it
might be, so that we sort of keep in our mind, you
know, what some of those implications might be,
which is, you know, not something that can be done
with, you know, scientific rigor, but I think it
would at least help us with our thinking.

But we need to get to more scientific
rigor with regard to this notion of patterns, and
there’s a couple of ways to do that, one of those
being advancing statistical methods to deal with
the hierarchy of nutrients, foods, and dietary
patterns.

So there have been, then, of a small
number of efforts towards this using methods like
structural equation modeling and so forth, and it’s
very challenging. I mean, I will say that my
research group has tackled some of this with some
really smart biostatisticians, which I am not a
biostatistician.

And you know, there are some real
challenges with that, but I do think that that’s an
area of research, you know, that, you know, really
would be very important, I think, at this juncture.
One thing that we can do, you know, possibly in the future for the next Dietary Guidelines, because there’s only so much time in the day for Regan’s committee to work, you know, would be to think about, you know, in various subpopulations, particularly subpopulations at especially high risk for certain diseases like type 2 diabetes or certain populations where food access is a problem, so groups with lower socioeconomic status markers, to do some modeling in those groups to understand, well, what would be the foods of those that are actually consumed in those particularly vulnerable populations that are contributing to healthy or less healthy overall dietary patterns, so that you can start to think about some of this work would be translated relative to public health impact and effect.

Another kind of practical thing is to think about food labels. We had some discussion at the break, thinking about really the utility or potentially lack thereof for a nutrient-based food label, and could that be complemented by
or -- getting really far out there -- replaced by
labels that are food-based to help people in making
decisions about food choices that aren't grams of
carbohydrate, number of calories and so forth,
which in some individuals, that's important
information, you know, but just to at least
complement that, you know, with maybe a much more
food-based approach, you know, thinking about
wanting to, you know, provide assistance in guiding
people with choices towards a healthier pattern.

You know, because you see some -- you
know, if you look at labels of some of these bars,
you know, and people are maybe are choosing all this
as a higher number of grams of protein, and this is
replacing my lunch, so I'm going to go for that, when
really the second ingredient is cane sugar, you
know, so I mean -- and common on these labels. I
confess I've looked at some of the labels too.

But I do think that, you know, the whole
purpose of this Committee is about Dietary
Guidelines for Americans and how can we provide, you
know, rigorous, science-based evidence, you know,
towards providing guidelines about what people
could eat and how, you know, federal food policies
can facilitate improved choices for people.

So those are just some of my thoughts
about how to, you know, get to this notion of dietary
patterns, both from a scientific perspective and
also from a perspective of implementation
eventually.

MEMBER BOUSHEY: I’ve really
appreciated these ideas that everyone has come up
with here, and it’s an enjoyable conversation to
listen to. I think I’ve gone over some of these
yesterday, but it just sort of screams out.

Our food supply is changing constantly
at the moment, and the Beverages group really
pointed that out, and I believe that we have to
somehow try to start a system of documenting exactly
what makes now a beverage, since we have more
beverages now that are beyond soda.

It’s an interesting phenomena. It’s
rather complex, but somehow, if we could get it
started, I think it will help moving into the
future, because I don’t see they’re going away.

And then with frequency of eating, I do believe we have a responsibility to put in some guidelines to make sure that they -- you know, there’s some type of -- what would make the best approach to doing frequency of eating?

And I do think that these mobile-based methods that we just talked about a little bit ago, you know, they can capture the frequency of eating and they also will give you a time stamp, you know, and so we weren’t able to get that time stamp, but that’s the beauty of these mobile-based methods, if you’re doing frequency of eating, all that can indeed be recaptured.

No, I think that’s my last one.

MEMBER DEWEY: Kay Dewey. Thanks very much. I wanted to comment a little bit on the point made, Rick, about that, as a whole, Americans don’t spend a large portion of their income on food, but there are people for whom it is a serious issue, and I think for the healthy diets that you have looked at in the Dietary Patterns subgroup, we really need
to look at the cost of those diets and the
affordability for those that are low-income.

Some of the key foods like seafood are
expensive. For nuts other than peanuts, they tend
to be a bit expensive. Fruits and vegetables,
especially fresh versions. So I think it would be
a nice next step to work on the costing issue.

Some research groups are doing that, and
I think it’s a responsibility we have to address the
inequity in access to healthy diets in the U.S.

And then in terms of the dietary pattern
research as a whole, I’m thinking that it’s a little
circular, because many of the studies have said
here’s a healthy diet based on what we knew 10 years
ago, so we’re going to score you on that basis.

And then we’ll say, is that score
related to healthy outcomes? But that’s a score
based on previous research, and now we might know
more and we might score it differently.

So it’s a little hard for me to grasp
exactly how this sort of, rolling ball moves
forward, and one example of that is the saturated
fat part of the equation.

I think there’s more research that is sort of distinguishing different types of saturated fat. They’re not all the same, and there’s some interesting work on dairy fat from either milk or cheese or yogurt.

And is it good or is it bad? Or you know, how does it actually affect your body? And then my favorite example is chocolate, which has saturated fat, but I will maintain is a healthy food, apart from the sugar.

And I’m just joking, obviously, but I think --

VICE CHAIR KLEINMAN: I’m not.

MEMBER DEWEY: -- I think we do need some research on different types of saturated fat in order to really home in on our question. And lastly, in terms of frequency of eating, one thing I didn’t hear mentioned is the issue of the macronutrient distribution within each eating episode.

So I know that, for example, for
pregnant women, one piece of advice is to have each eating episode have a balance between fat, carbohydrate and protein, that we don’t all carbohydrate, especially for things like gestational diabetes.

But I haven’t heard that mentioned yet, and I think it’s something probably the next DGAC would be able to look at, but I would like to hear other people’s thoughts about that.

MEMBER DONOVAN: Sharon Donovan. I guess I was thinking about, you know, the life course sort of approach that we’re taking, and I really am supportive of that. And Jamie’s gone now, but her comment that, you know, our teenagers, our teenage girls who are showing very poor dietary patterns and intakes are our future mothers.

And we have good biological plausibility that health really begins in the womb with epigenetics. As part of this Committee, we’re not talking at all about microbiome, and that’s an area that’s clearly emerging.
By the next version, I think hopefully we’ll have a better understanding of how diet -- because that’s really at the nexus between dietary intake and so many of our health outcomes. And so I guess, there’s kind of two comments.

One, as we take our life course approach, I really do want us to think about, you know, starting at the very beginning, which involves that gestating mother and her diet and her pre-conceptual health, you know.

There’s a lot of data on that in terms of obesity -- maternal obesity status and risk of childhood obesity. So -- and I think our message, as a government, should be that, you know, health begins in the beginning, and that the healthier that we could have our population and the better consistent messages we can get, you know, ultimately -- it may be a while before it pays dividends, but we will -- we’ll see that.

But I also want to make a comment about, as we brought in B-24, in particular, and pregnancy and lactation, two things. These are unique needs,
and so if we say that infants need a special kind
of diet, it's because their needs, per kilogram body
weight or at a specific life stage or women during
pregnancy, are going to be different.

So if we, you know, talk about different
foods differently in these age groups, then there's
a biological reason for that. So we need to
integrate, but we also need to understand these
unique needs, and we heard, for example, in the
elderly that maybe they're not getting enough
protein.

So you know, working that in, and so you
know, that's kind of where I'm thinking as we start
to integrate these new areas, how to integrate, but
also to maintain those unique needs, and how those
then can feed into public health recommendations,
and you know, programs to support -- and your
comment about, you know -- and mine yesterday about
food insecurity and thinking about the example of
a nice plate of salmon on it.

It's, like, well, how many -- a
lot -- that's a very expensive food for very many
people, you know. So I think it’s our responsibility to not just come up with the ideal diet if it’s, first of all, not palatable for many people, but we can train little kids to like foods too. Right? One of the systematic reviews involves even exposure in utero to flavors.

So you know, really, I want us to think broadly. And I also want to say that, you know, for our committees in particular, there’s a lot of insufficient evidence for the specific questions that we asked, but there’s still a lot of other government recommendations and a lot of other information out there about feeding children, and those will certainly be, you know, worked into our discussion.

So we’ll, you know, represent the systematic reviews that we did, but we’ll be working within the context of the broader knowledge in these areas.

MEMBER BAILEY: I’ll echo a lot of that. One thing I’ve been curious about is how we engage people to make different food choices. So
consistently, across time, we’ve identified fruits, vegetables, whole grains, legumes -- for you, John -- as foods to encourage, but looking at the adherence to those, Americans aren’t eating that way.

And so do we need to be working with behavior specialists or other types of scientists to help engage the public, especially given the severity of the chronic diseases that we talked about yesterday?

We really have to figure out some strategies to get people to change.

MEMBER NAIMI: Tim Naimi, Boston University. I think it’s been a really nice couple of days of meetings. I think the information we heard today from the Dietary Patterns provides a really nice, possibly a nice kind of a unifying theme, this idea about the pattern of the consumption, you know, which is really about the quality of the food and more nutrient-dense foods is kind of -- trumps, you know, specific nutrients or specific foods, in terms of its importance.
And I think the good thing is that in this area we do have, you know, relatively solid data, not perfect, we could use some more randomized trials. But -- and it’s a kind of -- that thing about improving the pattern sort of works well across, you know, a number of different -- using a life course approach, it works well.

When you focus on disparities, because again, a lot of these problems relate to improving overall -- the overall pattern of the diet quality, works well across all of those. And again, it works well in terms of addressing nutrients of concern, fats and salt and sodium and added sugars.

So I think it’s kind of a nice unifying theme in an area about which there’s pretty good, kind of, scientific agreement.

In terms of, you know, other things, though -- in terms of helping the public, you know, the idea of making things very concrete for people or really -- if this is kind of our approach or a unifying theme, how we kind of put flesh on the bone for people in terms of thinking about changes that
they could make.

But then in terms of, you know, actually making changes, you know, as we know, unfortunately, that knowledge is only a small part of the equation, and you know, the saying that every system is perfectly designed to get the results that it gets.

The U.S. Dietary Pattern is -- you know, is a perfect result of a system that, you know, is based on the prices of various foods, the physical availability of various foods, and all of these factors.

And so whatever we contribute in terms of a knowledge base also needs to inform how policies change. Because I don’t think that -- telling the public is not enough to make a meaningful impact.

MEMBER NOVOTNY: Rachel Novtony. I appreciate the Committee’s comments. The one maybe additional area I’m thinking about is, you know, as we look towards food patterning and -- or challenges of how individually to do both the
breaking down and the putting back together and thinking about the methods for that, both for recommendations for research, as well as the important -- for communication to the public.

So back to -- are we thinking of an expanded definition of food groups, now calling them maybe food components, and how do we name those and group them, and be sufficiently expansive and inclusive but not overwhelming, and find words that, you know, are inclusive for different groups? Something about what that looks like.

And similarly, I guess in that vein, thinking about the term nutrient-dense, you know, how do we really convey that? Is there like an index we could develop, again, both for research and for communication.

How does someone in a store identify a nutrient-dense food, or -- so just some of the -- both practical -- the reality is, I think, they have research implications, too, the more we can develop these things and even develop some commonalities and methodology so that we have a body
of evidence to look at as we go forward. That’s what I’m thinking about.

VICE CHAIR KLEINMAN: So I really appreciate the framework concept that we’ve been passing around the table around dietary patterns, and I guess would come back to looking at how these patterns change over the life course and perhaps some conversation about priorities of different stages of the life course.

So we’ve been talking about all-cause mortality, and obviously, I’m pretty interested in that, although it may be too late. But if we look at it during pregnancy, for example, and lactation, we’re really out to support mothers’ health, and we’re out to support growth and optimal growth and development in the baby.

If you look at it in the baby, we’re trying to support optimal growth and development, and that may actually be the first priority, at least for most parents it is.

And that may coincide -- we may be able to do that at the same time that we promote long-term
health, but we should at least acknowledge that. And there are natural periods of transition across life stage: total dependence, independence, entering school, leaving the home, entering the workforce and so on.

And so if we could find a way to kind of perhaps refine the conversation about dietary patterns so that it appears that we considered it as a continuous process that has somewhat different priorities, although the approach may be the same, and I think that is a way of relating what we're talking about to the consumer, either the parent, the child, or the adult consumer.

So I think we're moving closer and closer to an integrated approach, and I really like the way this is moving.

CHAIR SCHNEEMAN: I would agree that -- I think these comments are very useful, and I just hope I can figure out my notes when it's all said and done, because I've been trying to capture. And I really appreciate the Committee being focused on their own work, but at this point,
thinking about that work in relationship to what all
of the subcommittees are doing, because at the end
of the day, that’s where I think our report can have
its greatest impact, and not just each individual
scientific evaluation, but how does it come
together as a whole?

So I think we’re ready to take our lunch
break at this point. And we will start the public
comments at one o’clock when we come back, so I think
that’s -- that would fit well with the schedule,
since we had the opportunity for discussion right
now.

So those of you who will be giving -- I
know they’re going to rearrange the room, and there
will be a good process where we can go through, and
by starting a little bit early, I know we had some
people on the waiting list, but we might be able to
include some of those.

I’m looking back at Eve, and she’s
nodding her head. Okay. So we will be back and
starting at one o’clock. Thank you.

(A lunch recess was taken.)
MS. DE JESUS: Good afternoon. Okay.

I hope everyone had a good lunch? I’m Janet de Jesus and, I’m the nutrition advisor at the Office of Disease Prevention and Health Promotion with HHS, and I’m going to introduce our public comment session for this afternoon.

First, I just want to thank everyone that came to give public comments. We really appreciate your interest and input on the Dietary Guidelines scientific process. We take it very seriously.

We review all the online comments, and we’re really happy to have you here in person to give your comments. So individuals that have registered to provide public comments will be able to speak for three minutes.

We have 45 people on the list, and if time permits, those on the waitlist will be able to participate also. We have it divided among either side of the room. So we’ll start with number one and then alternate to the other side of the room for
number two.

We have staff available that will help usher the next speaker to the microphone, and then we have a couple waiting to speak. So we have staff here that will be timing you, and you’ll be able to see the timer, and when it gets to the three minutes, please promptly conclude your comments.

We’d appreciate that. And the moderator here will call the next speaker. So please be prepared when your number is called. There’s no opportunity for question and answer with the Committee today, as usual.

So once you’re finished, feel free to either return to your seat, sit in another place, or if you’d like to exit the auditorium, please do in the rear of the auditorium. And on a final note, this meeting is being recorded, so it will be available after on DietaryGuidelines.gov.

So with that, I’ll now conclude and turn it over to our moderator for the comment session.

Thank you.

MS. BROWN: Thanks, Janet. We’ll
begin with commenter number one, please.

MR. DEVIRGILLIS: Raymond DeVirgillis
on behalf of Infant Nutrition Council of America.
The Infant Nutrition Council of America represents
companies that research, develop, and market
formulated nutrition products of infants, children
and adults.

We produce over 95 percent of the infant
formula consumed in the U.S. We take our
responsibility of providing optimal nutrition to
infants very seriously. We support the American
Academy of Pediatrics' position that breast milk is
the preferred infant feeding option.

We also agree with the AAP and other
leading nutrition health and regulatory bodies that
infant formula that has been submitted to, reviewed
by, cleared by, and registered with the FDA is the
only safe, nutritious and recommended alternative
for infants who are not exclusively breastfed.

In 2019, INCA conducted an infant
feeding survey of over 1,200 mothers, fathers, and
other caregivers of infants under 12 months of age,
seeking insights into their beliefs, current practices, and sources of information about infant feeding.

The survey findings underscore how important the recommendations for the B-24 population will be in the upcoming DGAs. This is a critical opportunity to provide accurate information to remove any stigma associated with infant feeding decisions.

Based on the survey findings, it is evident that parents and caregivers understand the benefits of breastfeeding and most often introduced formula feeding due to health reasons. Additionally, the following messages are imperative to communicate the final Guidelines.

Number one, in order to avoid the use of homemade infant formula as well as formulas from non-reputable sources, the DGAs must ensure that parents and caregivers understand that the only alternative to breast milk is infant formula that has been submitted to, reviewed by, cleared by, and registered with the FDA.
Number two, the 2020 DGAs must communicate the importance of parents and caregivers discussing their feeding options with their health care provider.

Number three, the DGAs should support access to evidence-based information about breast milk and infant formula feeding in order to allow families to make the best choice for their baby.

Number four, for infants who are exclusively breastfed, the DGAs should recommend Vitamin D supplements to avoid risks related to growth and development.

And number five, the DGAs should address current nutrient gaps in the diets of older infants and toddlers, and recognize the role of complementary feeding products such as follow-on formulas and oral nutrition supplements that can help to close those gaps.

Finally, these DGAs must not stifle infant formula innovation, as infant formula companies are leaders in infant nutrition research and their collective research has led to
significant improvements in the health of formula-fed babies.

We hope the DGAC, USDA and HHS will consider the findings of 2019 infant feeding survey. While the 2020 Guidelines must be based on the highest quality of science, they must also lead to practical recommendations that support safe and nutritious infant feeding options.

Thank you for the opportunity to provide these comments as well as our evidence-based written comments.

MS. BROWN: Thank you.

Commenter number two?

MS. GARRISON: Good afternoon. My name is Becky Garrison, here on behalf of the American Pulse Association. Thank you to the Committee for your work to inform the next Dietary Guidelines.

First, I remind the Committee about the opportunity to end decades-long confusion and inaccuracy over legumes, the beans and peas, in parentheses, terminology used in the previous
Legumes are a broad group of plants including soybeans, peanuts, fresh beans and peas, whereas pulses are the narrow subset of legumes that refer to the dry, nutritionally-dense, edible seeds and beans, peas, lentils and chickpeas.

Pulses is the most specific and accurate term that should be used in the Dietary Guidelines to capture the food group that currently includes kidney, pinto, white, lima, and black beans, split peas, chickpeas, and lentils. We ask the Committee to utilize the correct pulse terminology in its report.

Secondly, pulses offer up to nine grams of protein per serving, and are a good source of zinc and B vitamins plus multiple underconsumed nutrients like magnesium, choline, iron and folate.

They are also excellent sources of potassium and dietary fiber, which are two nutrients of public health concern. We ask the Committee to highlight pulses’ many nutritional benefits in its report.
Moreover, multiple meta-analyses have found a relationship between pulse consumption and positive health benefits. These studies have linked pulses to a decreased risk for heart and cardiovascular disease and reductions in cardiometabolic risk factors like blood pressure and cholesterol.

Pulses are also associated with decreased incidence of obesity and risk for certain cancers. Importantly, these studies suggest a dose response relationship between pulse intake and related health benefits, meaning positive health outcomes are seen within an intake around three cups per week, or about one-half cup of cooked pulses per day.

In line with this, the 2005 Guidelines recommended three cups per week for the general U.S. dietary pattern. Unfortunately, since then, the past two Guidelines have only recommended one and a half cups per week for the general U.S. dietary pattern.

No scientific justification was given
for this decrease in recommended servings. Based on available evidence, we ask the Committee to recommend at least three cups of pulses per week for all dietary patterns.

In closing, we ask the Committee to replace the confusing legumes with beans and peas, in parenthesis, terminology to pulses or pulses and soybeans. We also ask the Committee to recognize the category’s unique nutrition benefits and to increase the recommendation for pulses to three cups per week for all dietary patterns.

Thank you again for your work and the opportunity to comment.

MS. BROWN: Thank you.

Commenter number three?

MR. YOUNG: Good afternoon. I am Bill Young, representing the Beer Institute, a national trade association representing large and small domestic brewers, beer importers, packaging manufacturers, agricultural producers and other suppliers of goods and services to the beer industry.
Our members produce and import more than 85 percent of the beer consumed in the United States. We believe the Dietary Guidelines are an important and useful source of information for legal-drinking-age consumers who weight the well-known risks and benefits of alcohol beverage consumption in the broader context of a healthy diet.

Accurate and applicable moderate drinking guidance is critical in this regard. We would like to raise four points.

First, we urge continuation of the clear advice and examples provided in the 2015 U.S. Dietary Guidelines. It’s stated that if alcohol is consumed, it should be in moderation, up to one alcohol drink equivalent for women and up to two per day for men. One alcohol drink equivalent contains 14 grams, .6 fluid ounces, of pure alcohol.

2015 was the first time the Dietary Guidelines emphasized variability in drinks and introduced them to the term, drink equivalent, which we believes helps better track how much
alcohol they consume and sends an important message
that not all drinks are the same.

Second, we encourage the 2020 U.S.
Dietary Guidelines to again promote the vast
variability of alcohol beverages, including the
different in types, sizes and alcohol content of
beverages in the market.

The consuming public needs practical
and pragmatic information to make informed
decisions about the alcohol beverages they consume.

Third, we encourage the guidelines to
advise people to avoid consuming alcohol on an empty
stomach -- food slows the absorption rate of alcohol
beverages -- and to stay hydrated with water or
other non-alcohol beverages with consuming alcohol
beverages.

Four, the Beer Institute believes the
Dietary Guidelines should advise that there are
some people should not drink alcohol beverages at
all.

Those who are under 21, women who are
pregnant or have a medical or family history of
concern should be cautioned against drinking. Any person who has a concern about consuming alcohol should consult with their health care provider for guidance.

The Beer Institute members remain steadfast in their commitment to promote responsible consumption and reduce harmful use. Members work diligently to prevent sales to minors and reduce drunk driving, and are in the process of implementing the voluntary disclosure initiative to provide consumers with information about calories, carbs, protein, fat, alcohol content and freshness dating on packaging labels, and a full list of ingredients on labels or websites.

This work adds to our responsible marketing codes, and decades of member company programming, encouraging consumers to drink responsibly.

We hope these comments will inform the work of this Committee and the staffs at HHS and USDA, and we look forward to your expert report.

MS. BROWN: Thank you. We’ll now have
DR. KENDALL: Karima Kendall, Calorie Control Council. The Calorie Control Council is an international association representing manufacturers of low- or no-calorie sweeteners, food and beverages, as well as manufacturers and supplies of low-calorie ingredients, including dietary fiber and sweetener.

CCC has provided feedback previously on DGAs, including noting the importance of communicating information on diet, physical activity, and weight control in achieving and maintaining a healthy lifestyle.

When making recommendations, it is important that the Committee consider the evidence regarding the utility of low-calorie ingredients, including low-calorie sweeteners and dietary fibers in managing weight and achieving a healthy, balanced diet, by way of reducing added sugar and calories from the diet.

CCC agrees with the recommendation previously made that the DGAs should better reflect
language used in scientific literature related to LNCS.

As noted by Committee member, Dr. Richard Mattes, the terms high-intensity sweetener and artificial sweeteners are not technically correct. Therefore, CCC supports the proposal to standardize the term low- or no-calorie sweeteners, and LNCS, when referring to these ingredients.

As noted in previous DGAs in Committee meetings, dietary fiber continues to be a nutrient of concern. This fiber gap presents an opportunity for the Committee to make stronger recommendations about the importance of a high-fiber diet in improving the health of Americans.

The CCC is pleased with the progress of the FDA in updating its definition of dietary fiber and determining those ingredients that meet this definition. However, significant advancements in food technology allow for fiber enrichment of a variety of foods, including those that are inherently low in fiber.

Future Guidelines should note the
expansion of fiber-rich options and their important role in helping increase total fiber intake with minimal impact on calories. As with other nutrients of concern, simply meeting daily food group recommendations does not guarantee adequate intake.

We support recommendations to consume more fiber from a variety of sources, including fiber-enriched products, using nutrition fact label and ingredient lists as a guide. We also encourage the evaluation of extrinsic and intrinsic dietary fibers by the same standards as both play a role in dietary patterns.

In the evaluation we should consider the role of both fibers in the diet and how they help to close the fiber gap. Lastly, emerging research indicates that prebiotic fibers alters the gut microbiome and offers additional means to enhance calcium absorption.

Future recommendations should review dietary patterns that are broader than consuming cereals, grains, fruits, vegetables, and fit into
dietary patterns. We thank you for your consideration of these comments, and please recognize that low- and no-calorie sweeteners and fibers help in the management of certain conditions and are critical to the dietary patterns.

Thank you.

MS. BROWN: Thank you. Now, commenter number five?

MS. DOCKTER: My name is Berit Dockter, and I represent the Healthcare Nutrition Council. Thank you for the opportunity to provide comment today. HNC is an association representing manufacturers of enteral nutrition formulas and oral nutrition supplements, parenteral nutrition formulas, supplies and equipment.

We are committed to improving health by advancing policies that address and raise awareness to nutrition and its impact on patient outcomes and health care costs.

Today, I will highlight a few points HNC would like the Dietary Guidelines Advisory Committee to consider when determining
recommendations for the Dietary Guidelines for Americans.

In step with the timing of the World Health Organization Decade of Healthy Aging starting in 2020, we know we cannot have healthy aging without good nutrition. HNC supports the USDA and HHS approach to differentiate between life stages in the Dietary Guidelines, and that older adults, age 65 and older, remain a separate life stage, as identified.

We are concerned about the prevalence of malnutrition, especially among older adults, and would like you to consider setting specific Dietary Guidelines for this population in order to address their needs.

As an example, to support our position, studies have shown the protein requirements based on the existing recommended dietary allowance defined the same for ages 19 to over 70 years may not be sufficient to meet the needs of older adults, especially those recovering from hospitalization, illness, surgery, falls and fractures, who may
require a higher protein intake.

In order to address these nutritional needs, oral nutrition supplements are often recommended or prescribed by a physician or registered dietitian. In some cases, people rely on oral nutrition supplements as their sole source of nutrition.

The World Health Organization has published a strong recommendation that oral nutrition supplements with dietary advice should be recommended to older people affected by undernutrition.

Oral nutrition supplements are used in a range of ages and issues, which may include failure to thrive in children, or addressing sarcopenic obesity in adults. For children ages one year of age and older with differentiated health and nutritional needs, these products play an important role in complementing the diet of a specific population and can support growth and development.

Considering all these elements, the
Healthcare Nutrition Council would like to recommend the adoption of specific nutritional recommendations for older adults, including optimization of protein intake, and that the Committee considers the role of oral nutrition supplements as a practical way to complement the diet of individuals of any age who are unable to meet their nutritional needs through regular foods alone.

Thank you for reviewing our comments submitted to the docket.

MS. BROWN: Thank you. Now, commenter six?

DR. LAYMAN: I’m Don Layman, professor at University of Illinois. I’d like to speak about the importance of flexibility in Dietary Guidelines and food choices, especially related to protein.

The dietary reference intakes provide science-based ranges for safe and adequate nutrient intakes. The 2015 Advisory Committee recognized the need for flexibility in diet choices.

They provided three examples of healthy
diets, including vegetarian diet, Mediterranean
diet, and the U.S. omnivore diet. These diets
provide individuals with both food and protein
choices.

Currently, there’s a narrative for more
plant-based diets, but all these diet models reduce
food choices and reduce the quantity, quality and
bioavailability of protein. The net impact of
these combined changes on our health is unknown.

We can create theoretical diets that
appear adequate, but the extrapolation that aging
and sedentary Americans or lower-income adults can
implement healthy plant-based diets remains
speculative at best.

There are three key facts about protein
that impact diet choices. The first, a daily
protein requirement is an absolute amount based on
lean body mass. Current Dietary Guidelines
misrepresent protein as a percentage of energy
intake.

Protein is the only essential
macronutrient that needs to be defined as grams per
kilogram body weight. Therefore, protein needs are inversely related to calories. For example, older and sedentary adults with reduced energy needs still require at least the same amount of protein, meaning the protein must be a much higher percentage of total calories, perhaps at the upper bound of the AMDR.

The other two related factors are age and physical activity. Beginning in our 30s, the efficiency of protein utilization to maintain muscle health begins to decline, producing well characterized, age-related loss of muscle mass, strength, and metabolic health.

This age-related loss of functional mobility and metabolic health can be mitigated by correct choices about dietary protein and resistance exercise. The worst-case scenario is an older, sedentary adult consuming a low-protein diet based on Dietary Guidelines expressing protein as a percentage of calories.

I urge the Committee to continue with the initiative of the 2015 Committee to recognize
there are multiple ways to create healthy diets and to more fully integrate current knowledge about protein and the full range of the AMDRs into the 2020 Guidelines.

Thank you.

MS. BROWN: Thank you.

Now commenter number seven.

MS. BACKUS: Good afternoon. I am Susan Backus, representing the Foundation for Meat and Poultry Research and Education, a nonprofit organization which studies ways the meat and poultry industry can produce better, safer products and operate more efficiently.

The Foundation is managed by the North American Meat Institute and is a contractor to the Beef Checkoff. Meat and poultry products play an important role in healthy, balanced dietary patterns.

One of the primary benefits of including meat and poultry in the diet is that consumers can more easily fulfill their nutrient requirements. However, the perceived lack of health benefits and
potential adverse health outcomes are at the center of many scientific studies.

Among the issues further clouding the debate are confusion, misinformation and a misunderstanding of how meat is processed. To help demystify processed meats, the Foundation prepared a white paper detailing common processed meat products and ingredients, as well as nutrition benefits and public health implications.

All foods require preparation and processing to varying levels, and meat may simply be the primary ingredient in a product, just as flour is the base ingredient in a host of cereal, bakery, and pasta products.

Meat preparation for consumption generally includes cutting meat into smaller sizes and adding non-meat ingredients in cooking. Generally, the main ingredients used in preparing many processed meats are water, salt, nitrate, phosphates, sugars, and fat, all of which are recognized as safe by the Food and Drug Administration.
Many ingredients serve multiple purposes. They can be used for flavor, functionality, enhanced nutrition profile, and microbial safety. Several processing techniques can be used when preparing these products.

Processed meat and poultry products can be smoked, dried, cured, cooked and marinated, among other processes, which can add flavor, texture or can act as a preservation to extend a product’s shelf life.

Common processed meat and poultry products are deli meats like roast beef, turkey and ham or products like bacon, sausages and salami. Each product can be prepared with different ingredients and product formulations.

Nutrient needs vary widely due to each individual’s disease status, age, preference, and there are processed meat and poultry products available to meet everyone’s individual nutrient and lifestyle needs.

In fact, there’s a product center on MeatandPoultryNutrition.org, which is a guide to
help consumers and health professionals find prepared meat products fitting particular nutrition profiles, like low fat and reduced sodium, among other regulated claims.

Meat and poultry products, including processed meats, provide consumers with a convenient, direct and balance dietary source of all essential amino acids. Processing extends the shelf life to an otherwise perishable food, reduces waste with the use of all cuts of meat, and provides consumers with convenience, flavor and cultural identity.

A greater understanding of the science of how processed meats are prepared and the safety of the component ingredients will help demonstrate their role in a healthy, balanced dietary pattern.

The Foundation will submit the white paper for your consideration in February. Thank you.

MS. BROWN: Thank you. We’ll now have commenter number eight.

DR. JACK: Good afternoon. I am Dr.
Maia Jack, vice president of science and regulatory affairs at the American Beverage Association, ABA, the trade association representing the non-alcoholic beverage industry.

ABA strongly supports the work of this Committee and is grateful for the opportunity to provide input to Committee members as they begin their important task of developing recommendations for diets that promote health and reduce the risk of chronic disease.

ABA shares the goal of USDA and HHS to achieve energy balance in the American diet for all Americans, including individuals who are overweight and obese. To that end, ABA and its member companies have introduced several voluntary and ambitious initiatives.

For example, we have placed prominent calorie counts on the front of all of our packages, and in 2014, ABA partnered with the Alliance for a Healthier Generation on a nationwide initiative to reduce beverage calories consumed per person nationally by 20 percent.
We wish to share four points. First, all foods, including sugar-sweetened beverages, can be part of a balanced diet. To help consumers moderate the sugar they get from beverages, we are offering more beverages in smaller portion sizes and greatly expanded beverage options with less sugar or no sugar.

In 2013, the Academy of Nutrition and Dietetics stated that proactive, empowering and practical messages that emphasize a total diet approach promote positive lifestyle changes. Also, in 2014, McKinsey Global Institute reported that interventions like smaller portion sizes have the most overall and cost-effective impact on obesity.

We encourage the Committee to support a framework that prioritizes food choice over food restriction. Beverages are generally important for hydration, and beverages such as juices and dairy contribute important nutrients.

ABA supports FDA and DGAs in the 2015 DGAs’ added sugar target of 10 percent of total
calories. CDC data and other recent publications on 15-year trends continue to show significant declines in sugar-sweetened beverage consumption, while obesity prevalence continues to rise.

Sugar-sweetened beverages are contributing are less to overall dietary sugar and added sugar, due in part to industry’s innovation in providing a wide range of beverage options and smaller-portion packaging.

Second, as noted in ABA submissions of May 9, July 22 and August 13, growing evidence supports low- and no-calorie sweetened beverages as one possible tool to assist consumers in weight management.

Public Health England acknowledges the positive role of low- and no-calorie sweeteners and sugar reduction in weight maintenance, and the European Food Safety Authority recognizes they are of value for blood sugar control.

Research also shows that consumers of low- and no-calorie sweetened beverages have improved diet quality, due to lower sugar intakes.
These beverages are also equivalent to water in overall weight management, as supported by published research.

Third, as caffeine has been included for consideration as a food component, it is worth noting, as the ABA submitted previously, that numerous caffeinated beverage intake assessments show caffeine levels at or well below the accepted, safe, moderate range of 400 milligrams per day from all sources. We urge the Committee to consider caffeine holistically from all sources.

Finally, beverage categorization should be based on similar characteristics to minimize confounders from other calorie sources when interpreting findings. For the Committee’s reference, the ABA proposed a framework in its August 13 submission.

In summary, the ABA and its member companies are committed to practices that provide transparent and accurate information about its beverages.

Thank you.
MS. BROWN: Thank you.

Commenter number nine?

MS. GRAHAM: Good afternoon. Thank you for the opportunity to comment. My name is Allie Graham, and I’m here today on behalf of the National Potato Council, or NPC, that provides a unified voice for the U.S. potato growers, and represents the interests of the U.S. potato industry on national issues.

Potatoes are a nutritional powerhouse that are a good source of eight different vitamins and minerals for human health, including fiber and potassium, two of the nutrients of concern as identified by the 2015 DGAs.

Research shows that potatoes can serve as a springboard vegetable, meaning when served, a wider variety of vegetables are consumed. Despite these benefits, potatoes are classified as a starchy vegetable, which has become disparaging term with repercussions across federal feeding programs.

We believe that this is based on the
premise that carbohydrate quality of white potatoes is somehow inferior to other vegetables. In studies examining specific foods within dietary patterns, potatoes are sometimes placed in same category as are refined grains, candies and desserts, leading researchers to conclude that white potatoes are not a healthy food choice.

Many healthy dietary patterns, including Mediterranean diet, feature potatoes as a staple vegetable. Because of their nutrient density and evolving research in carbohydrate quality, NPC recommends that the Committee reevaluate the categorization of a starchy vegetable and consider consumption of quality carbohydrates when evaluating research within systematic reviews.

Potatoes also play an important role across the life stages. For example, one medium white potato offers key nutrients during pregnancy, including vitamin B6, C, folate, potassium and dietary fiber.

Recent research in children indicates
that potato consumption can influence cognitive
performance and satiety at increased levels,
compared to other carbohydrates such as rice or
beans. NPC recommends the Committee recommend
potato consumption across the life stages.

Finally, most potato products are
minimally processed, with some containing as few
ingredients as three ingredients: potatoes, oil
and salt. Food processing isn’t essential to
promote quality and safety of products, and there’s
little research to show long term benefits of
limiting processed foods on nutritional status.

Categories within the processing
classification systems, like NOVA, discourage
healthier product innovation, because it’s often
not possible to reformulate out of categories, such
as ultraprocessed.

NPC urges the Committee to exclude
studies from systematic review that focus on
categorization of foods solely based on processing.

In closing, potatoes are a
nutrient-rich vegetable that fit within multiple
healthy dietary patterns, including plant-based.

Given their versatility and affordability, potatoes can provide much-needed health benefits across socioeconomic groups. As such, we ask the Committee to recognize the nutritional benefits of potatoes in the 2020-2025 DGAs.

Thank you for your consideration. More detailed information is included in our written comments. Thank you.

MS. BROWN: Thank you.

Next, we’ll have commenter number 10.

MS. REINHARDT: Thank you. Good afternoon. My name is Sarah Reinhardt. I’m a public health dietician and a lead analyst of food systems and health at the Union of Concerned Scientists in Washington, D.C.

I want to thank the members of the committee for lending your time and your expertise to this process. Thank you to the staff at the USDA and HHS for the hard work that you do to make this process transparent and accessible to the public.
I know it’s a lot of time.

The stated goal of the Dietary Guidelines for Americans is to make recommendations about the components of a healthy and nutritionally adequate diet, to help promote health and prevent chronic disease for current and future generations.

I’m here today to ask the Committee to fulfill its obligation to protect the health of future generations by evaluating the scientific basis for sustainable diets and incorporating its findings into the scientific report.

The 2015 Dietary Guidelines Advisory Committee, in its rigorous review of the evidence on the relationship between dietary patterns, sustainability, and food security found that a diet higher in plant-based foods, such as vegetables, fruits, whole grains, legumes, nuts and seeds and lower in calories and animal-based foods is more health-promoting and is associated with less environmental impact than is the current U.S. diet.

Though dismissed amid political controversy, these findings remain relevant and
provide a foundation from which the current Committee may draw conclusion. However, the last five years have also seen rapid growth and research on healthy and sustainable diets.

Because the present Committee was precluded from updating the systematic review on this topic, my colleagues at the Union of Concerned Scientists and the Friedman School of Nutrition Science and Policy undertook this task ourselves.

Closely replicating the methodology described in the scientific report of the 2015 Dietary Guidelines Advisory Committee, we evaluated the body of scientific literature on dietary patterns, food sustainability, and food security to identify relevant studies published between July 2015 to September 2019.

Our results now under scientific peer review include 22 relevant studies on U.S. dietary patterns alone. Our results broadly support the key findings of the 2000 Committee, but they challenge them on one key conclusion.

Of nine studies explicitly comparing
the current average U.S. diet to the healthy U.S. style diet recommended by the Dietary Guidelines, a majority found that the healthy U.S. style diet is not inherently more sustainable.

And what that means is this: If the federal government publishes and promotes Dietary Guidelines but disregard sustainability research, the diet it recommends today would put a healthy diet out of reach tomorrow.

In its forthcoming report, I urge the Committee to review and report findings based on the current body of scientific research on sustainable diets, including the systematic review by the 2015 Committee and the recent update we’ve completed, which will be submitted to the public record for the Committee’s consideration.

Thank you.

MS. BROWN: Thank you.

We’ll now have commenter number 11.

DR. DUBOST: Good afternoon. I’m Dr. Joy Dubost, head of nutrition at Unilever North America. We appreciate the Committee examining
beverages in the context of dietary patterns and would like to highlight two recently published studies related to beverages and specifically unsweetened tea.

First, we believe there is a gap in the current Dietary Guidelines in providing clear, overarching guidance and more specific recommendations on beverage consumption. The current Guidelines are limited by not fully detailing specific types and amounts that should be consumed as part of a healthy dietary pattern.

This would include beverages that not only achieve nutrient and food group recommendations, but also provide vital nutrients such as flavonoids, which have demonstrated clinical significance.

We would like to bring to your attention the recently published manuscript and advances in nutrition entitled, "The Role of Beverages as a Source of Nutrients and Phytonutrients."

Based on observational studies, randomized clinical controlled trials, and
meta-analyses, the authors highlighted the role
beverages can play as part of the Dietary Guidelines
and considered beverages not traditionally
included, such as those that are
phytonutrient-dense, including unsweetened tea,
which is one of the best sources of flavonoids in
the diet. The authors noted the multiple benefits
of consuming tea, including reduced risk of
cardiovascular disease mortality.

A key point brought forth is, although
these compounds lack a DRI, their amounts from
fruits, vegetables, whole grains fall short of such
beneficial effects.

Eight ounces of unsweetened tea, being
major contributors of these phytonutrients,
provide amounts exceeding that found in one cup of
commonly consumed fruits and vegetables. The
authors recommended replacing sugar-sweetened
beverages with unsweetened tea.

Considering the current mean intake of
added sugars in the United States is significantly
higher than recommendations, substitution of one
eight-ounce sugar-sweetened beverage with unsweetened tea would bring these averages significantly below the recommended added-sugar limits while providing flavonoids.

We recommend that USDA and HHS provide healthy beverage guideline, including those that deliver bioactive components associated with optimal health. We would also recommend a "my cup" to accompany "my plate" to empower consumers to make smart beverage choices.

Second, sponsored research by Unilever was published in the Journal of Nutrients. This explored tea consumption and seven other beverage categories that relate to individual dietary quality as well health outcomes. The findings are very notable, and we'll be providing this via written comment.

Overall we saw beverage patterns that were associated with dietary choices that included a significantly lowered consumption of high-calorie beverages, alcohol and added sugars.

In addition, daily unsweetened tea
consumption is associated with a statistically
significant higher HDL and BMI in adults. We
appreciate your time and we’ll be submitting these
comments in writing.

Thank you.

MS. BROWN: Thank you.

Next, commenter number 12.

MS. SILVERMAN: Good afternoon. My
name is Jessi Silverman. I am a policy associate
and registered dietician at the Center for Science
in the Public Interest, a nonprofit consumer
advocacy organization that provides science-based
food and nutrition advice.

We led efforts to eliminate artificial
trans fat from the food supply, secure the nutrition
facts label and added sugar disclosure comment,
provide calorie labeling on chain restaurant menus,
improve school lunches, and remove sugary drinks
from schools.

On behalf of CSPI, thank you for the
opportunity to talk with you today about nutrition
for pregnant and lactating women, infants and
children under two years of age. CSPI’s written comments include our complete set of recommendations regarding these life stages, and today I will highlight four of them.

First, the best available evidence supports advising women to consume a similar dietary pattern during pregnancy and lactation, as recommended by the 2015 Dietary Guidelines for the general adult population: higher in vegetables, fruits, whole grain, nuts, legumes, low-mercury fish, low-fat dairy or nutritional equivalent alternative, and vegetable oils and lower in red and processed meats, refined grains, added sugar, sodium and saturated fat.

Consistent with advice of other public health experts, we urge the Committee to recommend that pregnant women, infants and young children avoid sugary drinks and other sources of added sugars -- excess added sugars. Excuse me.

Second, CSPI urges the Committee to consider minimizing the harms of mercury exposure and maximizing the nutritional benefits of seafood.
consumption during pregnancy and lactation to
protect the neurocognitive development of the
infant.

To balance these considerations,
consumer need clear, focused advice to choose these
fish, and don’t choose these fish, such as the list
compiled by CSPI, referenced in our comments.

In addition, the EPA’s current
reference dose for limiting mercury exposure is
almost 20 years old. Taking into account recent
scientific evidence, one-half the current
reference dose is the highest level of mercury
exposure that should be tolerated until the EPA’s
new risk assessment is completed, particularly
given the developmentally sensitive nature of
pregnancy and lactation.

Third, Hispanic Americans should be
priority populations for tailoring prenatal folic
acid advice in a culturally appropriate manner.
Hispanic Americans experience a relatively high
prevalence of folic acid preventable spina bifida
and anencephaly.
While many Americans mothers-to-be consume folic acid from enriched cereal grains because of mandatory fortification requirements for these products, fortification of corn masa flour, a common staple of Hispanic Americans’ diet, is voluntary and rare.

Finally, we ask the Committee to recommend safe limits on infant consumption of rice cereal to protect children from exposure to inorganic arsenic, which is associated with impaired intellectual development.

More than half of infant rice cereals tested by the Food and Drug Administration contain inorganic arsenic at levels equal to or greater than the agency’s proposed limit. Caregivers need a guidance to limit rice and offer other iron-fortified cereal grains, as recommended by the American Academy of Pediatrics, the FDA and others.

Thank you.

MS. BROWN: Thank you. Commenter number 13?

MS. OHLHORST: Sarah Ohlhorst, on
behalf of the American Society for Nutrition. ASN, a professional society with more than 7,000 members who advance excellence in nutrition research and practice, appreciates the opportunity to provide input to the 2020 DGAC.

ASN emphasizes the importance of the strength of the evidence to drive dietary guidance, particularly as all new recommendations are developed for ages birth to 24 months, B-24, and for women who are pregnant and/or lactating.

Making B-24 recommendations that are practical to meet the needs of today’s families and caregivers is vitally important, as is basing B-24 recommendation on the overall balance of scientific evidence.

As the Committee looks at beverage consumption, recommendations regarding the importance of water consumption as part of healthy dietary patterns is of particular importance for these subgroups.

We also urge the Committee to address the nutritional status of women prior to
conception, as well as the different nutritional needs during pregnancy for age groups such as adolescence and advanced maternal age.

Of equal importance, the Committee should prioritize that practical, evidence-based nutrition guidance be established for the rapidly growing aging population. A recent U.S. Government Accountability Office report recommended that the 2025-2030 DGAs focus on the nutritional needs of older adults, but we shouldn’t wait until then.

Although modern medicine has increased the life span, the incidence of disease does not decrease as we age. Up to half of all older adults are at risk of malnutrition, and nearly 25 percent of those in their 60s and older have sarcopenia.

A continued focus on shortfall nutrients, such as dietary fiber, particularly for the aging population, is important, as well as information on the various sources and practical ways Americans can fill these gaps.

Nutrition research provides the
strength of the scientific evidence upon which answers to the DGAC’s questions can be built. Therefore, ongoing and future nutrition research is of utmost importance to the development of the DGAS.

Nutrition research will also help us investigate the important research needs and gaps identified by the DGAC. As a nation, we need continued support for the key national sources of dietary intake data, including NHANES, USDA’s Economic Research Service reports, and the dietary reference intake, without which we cannot sufficiently develop DGAs.

A lack of dedicated support for nutrition research stifles both the development of the DGAs, as well as the next generation of nutrition scientists who will make up future DGACs. We encourage the DGAC to reference in its final report the importance and need for ongoing support for nutrition research and dietary intake data to continue to produce relevant DGAs.

Thank you.

MS. BROWN: Thank you. We’ll now have
number 14.

MR. JONES: Good afternoon. I'm Chris Jones, director of marketing and strategy, here speaking on behalf of the National Pork Board and the more than 65,000 U.S. pig farmers that we represent.

As the Committee continues to work toward assembling a technical report to inform the 2020 Dietary Guidelines for Americans, we look to again offer the following considerations regarding the role of lean meat, including pork, in a healthy diet.

Beginning with infants and toddlers, pureed meat is a nutrient-rich option for a first primary food in complementary feeding. Research demonstrates positive effects on a proportionate growth, micronutrient intake and developmental milestones.

For children and adolescence, lean meat offers high-quality protein to support proper growth and development. A protein-rich breakfast has shown to help with weight management and
glycemic control in adolescents, and protein foods that also provide iron, zinc and B vitamins, like lean meat, are crucial for active brains.

In adults, there’s a growing body of evidence that shows that lean, high-quality protein like pork could benefit weight, heart health, and Type 2 diabetes. During pregnancy and lactation, adequate amounts of protein are crucial for a baby’s growth.

Lean pork also provides Vitamin B12 and highly bioavailable iron, two more nutrients that support the health of both the mother and baby during this life stage.

Lean protein like pork is important for older adults, as higher protein diets help prevent sarcopenia and declines in muscle mass and bone density, thereby helping to prevent functional decline and reducing the magnitude of associated consequences like frailty and falls.

Regarding overall dietary patterns, the 2015 Dietary Guidelines emphasized that these are adaptable and can be tailored to individual
preferences to make them more attainable, enjoyable, and culturally appropriate.

Research has shown that the DASH and Mediterranean diets, for example, can be expanded to include lean pork for the same positive health outcomes. We would also like to highlight recent research that suggest saturated fats are not associated with outcomes such as cardiovascular disease as we had previously believed.

Given this context, a nutritionally balanced diet can include foods that contain saturated fats, but are nutritious overall. Furthermore, lean, nutrient-rich animal protein such as pork can help fulfill nutrient needs, while limiting the amount of calories eaten.

A three-ounce serving of pork is an excellent source of thiamin, selenium, protein, niacin, vitamin B6 and phosphorus, and a food source of riboflavin, zinc, and potassium. Pork also provides several important nutrients identified by the 2015 Guidelines between iron, potassium and vitamin B12.
Thank you for your time, your work and we will provide written comments as well.

MS. BROWN: Thank you. We’ll now have commenter 15.

DR. CLINTHORNE: Good afternoon. My name is Dr. Jonathan Clinthorne, and I’m here on behalf of Atkins Nutritionals. Today I want to discuss two major points. The first is that while it has been stated that the 2020 Dietary Guidelines are intended for the general population, the general population is not healthy.

Seventy-two percent of American adults are overweight or obese. Fifty-two percent have prediabetes or diabetes. Therefore, by excluding studies from your systematic reviews that enroll participants in a treatment diet, you are effectively not producing guidelines for the general population, something suggested by the National Academies’ report.

Ultimately, that’s well over 100 million who are not receiving relevant eating guidance. It’s also important to recognize that,
despite the fact that the Guidelines are intended for the general healthy population, they’re most definitely influencing nutritional recommendations for people who are not considered healthy.

Let me give some examples. The Guidelines inform the school lunch programs. Current data indicates that one in five school-aged children has obesity, while about 20 percent of adolescents are estimated to have prediabetes.

They also inform nutrition recommendations for the Department of Veterans Affairs in their feeding programs for the elderly. And yet the prevalence of type 2 diabetes is higher in veterans than it is in the general population, and nearly one in three are considered obese.

Meanwhile, one in four elderly people are estimated to have type 2 diabetes and 48% of people 65 and older have prediabetes. The Guidelines also clearly inform the nutrition policy for many medical associations and hospitals, and if these health care providers are not guiding people
who have diet-related chronic diseases, then who

is?

The Guidelines are clearly being used to
provide nutritional recommendations for many
people with diet-related chronic diseases, so why
not make sure that these guidelines are based on
pertinent science?

My second point is that during your
assessment with dietary patterns, you must
accurately define low-carbohydrates diets in order
to properly account for this body of research.

The USDA has stated that you are
considering including studies where less than 45
percent of energy coming from carbohydrates is
qualifying as a low-carbohydrate diet, because this
is outside of the AMDR.

I am here to tell you that this is an
inaccurate characterization of low-carbohydrate
diets. We encourage the USDA to define
low-carbohydrate diets as containing less than 25
percent of energy from carbohydrate, or 133 grams
of carbohydrates per day.
This recommendation would be consistent with the adequate intake of 130 grams of carbohydrates per day set by the National Academies. In conclusion, I strongly encourage the Advisory Committee to focus on the good of all Americans and accurately define low-carbohydrate diets.

Thank you.

MS. BROWN: Thank you. We’ll now have commenter number 16.

DR. PALMER: My name is Chris Palmer. I’m a physician and researcher at Harvard Medical School. As we all know, we now have epidemics of obesity and diabetes in this country.

Most people assume these problems are fairly straightforward. They are, after all, lifestyle diseases. They revolve around choices, what people eat and, whether they exercise, simple explanations with simple solutions. Eat less, exercise more.

I’m here to tell you that it is not so simple. You see, back 25 years ago, when I was a
young physician, I was following the Dietary  
Guidelines to a T, eating the recommended diet and  
exercising regularly.  

I was meticulous about it, because I  
wanted to avoid the fate that I saw in the hospital  
every day, and yet the Guidelines didn’t work for  
me. I had high blood pressure and high  
cholesterol, even though I was only in my 20s.  

After years of the guidelines not  
working, I was told that I had to go on medication.  
In a last-ditch act of defiance, I changed my diet  
to a low-carbohydrate diet.  

Lo and behold, after three months, all  
of my cardiac risk profile improved dramatically.  
I have never looked back and I’ve remained healthy,  
off medications, for 23 years now on this diet.  

As a physician, I want to understand  
what happened. Why did the Guidelines fail me, and  
what can we do about it going forward? One clear  
problem with past Guidelines is that they weren’t  
based on the best science.  

They were based on correlational
studies, not randomized controlled trials.

Everyone knows that correlation doesn’t equal causation. I wish the past Guidelines Committee knew that.

We also know that when diets leave people feeling hungry, they are destined to fail. If people often feel hungry, maintaining a normal weight is next to impossible.

We now have science showing that hunger is driven by many hormones and their effects on the brain. One of these is insulin. When a brain is insulin-resistant, it is hungry.

So what can we do about this? One solution already proven to work is eating a low-carbohydrate diet. You see, the science now explains why this diet has worked so well for me, but it is not just me.

As a physician, I’ve seen this work in countless patients. I have a patient right now who’s lost over 150 pounds and has kept it off for over four years. He’s still going strong. And by the way, he also has schizophrenia.
Most people see him as profoundly ill and unmotivated, yet he did this and is still doing it, because it works. With accurate and effective advice, even he can maintain a healthy weight now, and his cardiac risk profile improved dramatically too.

I ask you to prioritize the science and include a low-carbohydrate diet as at least one option in the new Guidelines. The American Diabetes Association has done this and so should you.

Hundreds of millions of people are counting on all of you to get this right.

MS. BROWN: Thank you.

Commenter number 17?

MR. TUMA: I’m Pepin Tuma with the Academy of Nutrition Dietetics, representing more than 107,000 registered dietitian nutritionists and other nutrition professionals. There are two related themes we’d like to underscore this afternoon.

First, the scientific report needs to
provide clear, relevant dietary guidance appropriate for distinct subpopulations. And second, it’s critical to draft the scientific report bearing in mind the immense real impact for work you’re doing, specifically the fact that the guidelines will dictate vast amounts of food policy, nutrition education, and consumption patterns in the United States.

First, we applaud the shift to a life stages approach as an important step in ensuring the Dietary Guidelines are both relevant and accurate. These Guidelines will be the first to include nutrition guidance tailored for infants and young children, and we hope they will provide relevant guidance for the elderly, the 133 million Americans with one or more chronic health conditions, and for individuals with various cultural backgrounds.

As DGAC members said yesterday, we must meet people where they are, recognizing the role that socioeconomic status, health, food insecurity, and life stage plays in determining how to help Americans meet their diverse dietary needs.
Second, it’s important to assess how the recommendations in your scientific report and the final Guidelines currently are and will be translated into practice.

In the past two months alone, the GAO published a report looking at nutrition assistance programs intended to meet the needs of older adults. And USDA proposed yet another change to the child nutrition programs standards, likely to limit access to an adequate amount and variety of fruits and vegetables.

Whether it’s the Child and Adult Care Food Program, congregate or home-delivered meal programs, National School Lunch Program or the School Breakfast Program, the Dietary Guidelines form the basis for these underlying nutrition requirements, and it is appropriate and indeed necessary to ascertain whether these programs are successfully meeting the requirements.

Many children consume two-thirds of their meals at school. Are these meals ensuring children meet two-thirds of their dietary needs in
every way, in a healthy way? Are they helping to establish healthy eating behaviors, or are we moving backwards again?

The GAO report states that HHS plans to focus on older adults in a future update to the Guidelines, but has not documented a plan for doing so, and it recommends documenting such a plan to help ensure Guidelines better address the needs of the population.

We respectfully encourage your Committee to identify opportunities to address these issues now, enabling a more robust plan to be developed and solidified in advance of the 2025-2030 Guidelines.

So whether you’re tasked with implementing government food and nutrition programs, or you’re simply just a single American trying to eat right, it can be challenging to meet these recommendations.

But the solution is not to change them or throw up our hands and tacitly not agree with them. The scientific report can provide clarity,
acting as a compass for the direction, development
and implementation of the federal program's
nutrition standards.

When there are challenges identified in
meeting food patterns, acknowledge them in advance
and couple guidelines with known strategies to help
facilitate behavior change, like nutrition
education, that will help facilitate full adoption
of the DGAs in different food environments.

Thank you very much.

MS. BROWN: Thank you. We’ll now have
commenter number 18.

DR. CARNEY: I’m Linda Carney, MD from
DrCarney.com. I’m a physician practices lifestyle
medicine on children and adults near Austin, Texas,
and I’m double-board-certified by ADEM and the
American Board of Lifestyle Medicine.

In my private practice, I enjoy helping
my patients recover from many diseases when they
completely stop eating animal products.
Overwhelming amounts of scientific evidence show
that the best diet is an oil-free, low-fat,
plant-based diet of whole, unprocessed foods which powerfully reverses disease.

When my patients avoid eggs, dairy, seafood, and other meats, they reverse multiple sclerosis, diabetes too, high blood pressure, heart disease, and asthma, which I myself reversed when I began eating an oil-free vegan diet.

Complex carbohydrates like quinoa and beans are foods to promote, not to mislabel as bad carbs like sugar and white flour. In our new Dietary Guidelines, animal products should be completely replaced by vegetables, beans, fruit and whole unprocessed grains.

The excellent scientific research in Adventist Health Study 2 clearly shows how destructive animal foods are with the less animal products eaten, the less diabetes, cancer, stroke and heart attacks.

As you teach America what a healthy diet is for each age, after weaning off breast milk, note that the Academy of Nutrition and Dietetics writes that low-fat vegan diets are healthy for every age.
I served as medical director for the employees of Whole Foods Market, who came through Rip Esselstyn’s Engine Two Immersion, proving to corporate American that they could save money on health care costs.

After just one week of eating an oil-free, plant-based diet without meat, dairy or eggs, my staff measured the Whole Foods Market employees at the beginning of the week and at the end of the week, and we saw cholesterols come down a hundred points in just five days.

I was able to get many of them off blood pressure medicine and safely off insulin by some of them by the end of the week with normal blood sugars and weight loss, despite eating all that they wanted and loving the food.

Please formulate guidelines that admit how truly disease-producing it is to eat beef, even when it’s lean and grass-fed, or eggs, even if they’re oil-free -- cage-free and organic, and how dangerous dairy is, even if it’s low-fat, and how fish promotes cancer and diabetes.
The USDA suffers a clear conflict of interest by promoting dairy and meats as healthy to eat, despite all the scientific evidence to the contrary. Please let us stop forcing the children in day care to drink cow milk to get federal subsidies, because we know that 70 percent of the world’s children suffer when they’re damaged by dairy.

Unless USDA takes a clear stance against animal products, Americans will get sicker and sicker, despite our spending more per capita of our gross domestic product on health care.

Save America. Save our health, USDA.

Please ditch dairy. Mooooove meat off the menu.

MS. BROWN: Thank you. Next we’ll have commenter number 19.

DR. FRANTZEN: Good afternoon. I’m Lana Frantzen, and I proudly represent our dairy farmers of America, and I have done so for the last 20 years. I feel very passionately about working for dairy farmers and with Dairy MAX, our regional dairy council.
I want to start with the most important point that I want to share with you all today, and that is, dairy is essential in life. We know that when we look at the nutrient package that dairy delivers, it’s -- there is no other.

When I think about the current Dietary Guidelines, we look at the fact that real cow’s milk is in over 94 percent of all American homes, and we also note that the goal moving forward is to connect the benefits with all cultures and help people understand the unique nutrition that dairy delivers.

I have my PhD in nutrition. I have 25 years of experience in nutrition education. I was raised in San Antonio, Texas, not far from here where, unfortunately, type 2 diabetes is prevalence within our Hispanic community.

We need to all work together to ensure that the Guidelines are reaching those who need them most. Cardiovascular disease and type 2 diabetes is prevalent in our U.S. population. African Americans and Hispanic Americans may be at an even
higher risk.

Dairy is essential for three reasons. First, the intake of dairy foods is associated with the reduced risk of cardiovascular disease, type 2 diabetes, and lower blood pressure in adults.

With a focus on health disparities, the National Medical Association and the National Hispanic Medical Association support three servings of dairy a day as a way to decrease the nutrient intake shortfall.

When we look at milk, cheese, and yogurt, they deliver a variety of nutrients, specifically three of the nutrients of public health concern. Three servings of dairy will deliver up to 70 percent of the vitamin D and calcium, and 30 percent of the potassium in our diet.

And lastly, we know there’s decades of science to support the health benefits of dairy. There was a study published this week in Nutrients that illustrates a simple, realistic dietary change at the population level consisting of the
recommended three servings of dairy a day could result in over $12 billion in health care cost savings.

Despite those benefits, I know there is a lot of misinformation on lactose intolerance. My father and my brother are both lactose intolerant. Let's be clear that if lactose intolerance is confirmed, that health care providers --

MS. BROWN: Thank you.

DR. FRANTZEN: -- can support -- thank you.

MS. BROWN: We'll now have commenter number 20. Okay. Can we move to commenter number 21?

DR. DODDS: Good afternoon. My name is Dr. Michael Dodds, and I'm whole health lead scientist at Mars Wrigley, and an adjunct professor at UIC College of Dentistry in Chicago.

On behalf of Mars Wrigley, I provided oral comments to the Dietary Guidelines Advisory Committee at the July meeting. I thank USDA and HHS for the opportunity today to provide highlights of
new research on the effectiveness of chewing sugar-free gum as a preventive oral health practice to protect teeth, important to intake of fruits, vegetables, whole grains, and other healthy foods.

This research is germane to the protocol for the evidence review that the subcommittee on Data Analysis and Food Pattern Modeling cross-cutting working group will conduct to describe and evaluate current prevalence of nutrition-related chronic health outcomes, including dentition.

The 2005-2010 Dietary Guidelines recognized the importance of oral health prevention by recommending brushing, flossing, and drinking fluoridated water, but the 2015 version did not.

The evidence I will present today supports adding sugar-free gum for 20 minutes after snacks or meals to this list. Dental caries is one of the most common of all chronic conditions in the United States.

NCHS estimates that nearly nine percent of children two to four years of age and over 25
1 percent of adults suffer from untreated decay.
2 Fluoridation of water supplies and improvements of
3 lifestyles have helped reduce caries prevalence,
4 but national rates of tooth decay continues to
5 present a major public health concern.
6 Tooth loss has been associated with loss
7 of ability to consume fibrous, nutrient-dense
8 foods, and impaired social functioning.
9 Therefore, dental diseases have a detrimental
10 effect on quality of life, health and well-being in
11 both childhood and older age.
12 A new systematic review has found
13 evidence reinforcing effectiveness of sugar-free
14 gum in helping to improve oral health. This
15 research was independently carried out by the
16 faculty of dentistry at King’s College London with
17 financial support from the Wrigley Oral Health Care
18 Program.
19 It examined differences in levels of
20 caries in adults and children who chew sugar-free
21 gum compared with non-chewing controls. Results
22 found that chewing sugar-free gum significantly
reduced caries incidence, giving a preventive fraction of 28 percent, compared to 24 percent preventive fraction for fluoride toothpastes and fluoride supplements.

This research is the most robust systematic review conducted to date into the effectiveness of sugar-free gum in reducing caries incidence. Results reinforce the growing body of evidence highlighting an important role for chewing sugar-free gum in improving oral health, especially for the growing number of people who snack frequently.

As the subcommittee begins its review of the health outcomes, we request inclusion of the research articles analyzing this meta-analysis. Oral health preventive practices have significant dietary benefits for all Americans by updating Dietary Guidelines to reflect how changing eating behaviors is having a renewed emphasis on preventive measures such as brushing, flossing, and the use of sugar-free gum after snacks and meals.

USDA can create the basic guidance for
nutrition and dental professionals, along with community practitioners, for the population with alarmingly high dental problems. I thank you for the opportunity to provide these comments.

MS. BROWN: We’ll now have commenter number 22.

DR. ERIKSEN: Good afternoon. I’m Dr. Nancy Ericksen. I’m representing myself. First, thank you for allowing me to make comments this afternoon and thank you for your hard work.

As a maternal-fetal medicine doctor, I continue to see the rate of obesity and other chronic diseases escalate among pregnant women every year, leading to ever-increasing adverse maternal outcomes, pregnancy outcomes, including maternal death.

The maternal mortality rate in the United States is currently the highest of all the developed nations, with many of causes of death directly or indirectly the result of obesity, hypertension and cardiovascular disease.

In other words, they are all potentially
preventable causes of death. As you know, the United States is currently in a health care crisis, with seven out of the 10 leading causes of death attributed to lifestyle, leading to skyrocketing and unsustainable health care costs.

The number one killer of Americans, heart disease, has already been shown to be reversible by a high-fiber, whole food, plant-based diet, consisting of more than 60 grams of fiber per day.

This same high-fiber diet has also been shown to substantially reduce the risk of obesity, diabetes, hypertension, stroke and cardiovascular disease, and recently there’s been two meta-analyses that show there’s a dose response to fiber.

One of which was published two years ago shows that consumption of 50 grams or more of daily dietary fiber can reduce your risk of colon cancer by 50 percent.

The other shows that for women consuming 15 grams or more per day can increase their
risk -- or lower their risk for estrogen-receptor-positive breast cancer by 15 percent.

In other words, if they consume more than 60 grams per day, they can reduce that risk by 60 percent. And this same diet has also been shown to reverse diseases like obesity, diabetes, cardiovascular disease and others.

Yet currently the Dietary Guidelines only recommend 25 grams per day of fiber for women, and 30-34 grams per day for men, only half of what is really required to make a substantial impact on reducing disease and reversing disease.

And as we know, it’s not just the calories or the micronutrients or the macronutrients. It’s how those calories are packaged. High-fiber diets have been shown repeatedly to both prevent and reverse disease.

And quite frankly, I became board-certified in lifestyle medicine recently because I want to send a message to patients that a high-fiber diet is really optimal for their
health, but they’re confused.

So I’m appealing to you as the Dietary Guidelines in the next season to increase the requirement for daily dietary fiber to a level at which we can actually prevent and reverse disease.

This esteemed Committee is at an historic crossroads today. Each of you has the ability to advance the health care of all Americans by simply stating in the Guidelines, we recommend a high-fiber diet for all Americans.

MS. BROWN: Thank you.

Commenter number 23.

DR. GOLDNER: Hello. My name is Dr. Brooke Goldner, and I’m a board-certified physician, and I specialize in disease reversal using nutrition. Now, before I became a doctor, I actually was a patient.

I was diagnosed at 16 years old with lupus. I had stage four kidney failure. I had blood clots that caused mini-strokes. I endured years of chemotherapy and steroids just to survive.

Now, all I ever learned never helped me
with my health. It was always about survival. I did three years of genetic research at Carnegie Mellon. I went to medical school. I was chief resident.

And yet I still needed medicine to survive. Twelve years, I was sick. And then 15 years ago, I changed my diet to a plant-based diet and got rid of dairy, no animal products, and within three months, the lupus was gone.

I have been healthy for 15 years with no sign of disease. I’ve had children, and I’ve dedicated my life to this, and over the past decade, I have helped thousands of people reverse lupus, rheumatoid arthritis, multiple sclerosis, diabetes, heart disease, number-one killer, all by getting them to stop eating meat and dairy and eggs and focus on vegetables and high-nutrient plant foods, and the results are consistent and they are profound.

As a doctor, my colleagues can attest to the fact that we are chasing down an epidemic of disease that we cannot hope to catch up to or
overtake, because people are getting sicker with every meal they eat.

But you can make that difference. Because people don’t know who to trust, but if the Dietary Guidelines say that people should be focusing on a plant-based diet full of vegetables and fruits, and they should be limiting or eliminating meat and dairy, eggs, they will have at least the right information to start making better decisions.

And so both as a doctor that is desperately trying to save lives, and as a former patient who has almost died many times because I didn’t have this information, I beseech you to take this seriously.

This decision about what’s recommended to the public about what they eat should not be based off of what’s good for industry. It should be based on what’s good for human health, and there are people who are suffering and dying right now from the lack of this information.

So I ask you to take that seriously.
The literature is clear, and the results we see are true. When you eliminate meat, dairy, and eggs, people’s health gets better, so please recommend a plant-based diet. Encourage people to limit or eliminate animal foods, so that you can save lives.

Please help me with this mission. I appreciate your time. Thank you for your attention.

MS. BROWN: Thank you.

We’ll now have commenter number 24.

DR. HEANER: Hi. My name is Dr. Martica Heaner, and I am a nutrition professor at Hunter College, part of the City University of New York, and I’ve also been a research scientist studying obesity at Columbia University.

Last year, Canada released their Dietary Guidelines and took bold steps de-emphasizing the role of dairy. Currently, the USDA not only recommends low-fat dairy, dairy is granted special status as one of our five major food groups.

Dairy should not be granted special
status. At best, it should be a sometime food, like sugar-sweetened beverages. Dairy foods from animals are problematic for a variety of reasons for a majority of the population.

Milk is the perfect biological compound for baby cows, but milk is not designed for humans. If the Committee advises that humans -- adult humans, especially, should consume milk, logically, they should recommend breast milk from humans, not from cows or animals.

Milk does contain nutrients: fats, carbohydrates, protein and micronutrients. The Guidelines have addressed the problems with saturated fat by recommending low-fat dairy. However, problems that people experience with the other two macros have not been addressed sufficiently.

An estimated 50 million Americans are lactose-intolerant, including up to 90 percent of Hispanics, African Americans and Asians. In addition, an estimated 10 percent or so of people have allergies to milk proteins or other compounds.
in the milk products.

This prevalence may be higher because many people do not realize that many of their health symptoms or conditions like acne, migraines, pain from arthritis, allergies, asthma can be caused by or exacerbated by the dairy they consume daily.

I used to eat dairy every day and loved it. I didn’t realize it was causing my asthma. I was on two inhalers a day. My doctor told me it was my one cat. It was only when I had an anaphylactic reaction and truly nearly died -- I couldn’t breathe -- to one sip of milk, that I realized how toxic dairy is.

I gave up dairy, and my asthma disappeared. I have not used inhalers in seven years. I now have five cats, no asthma. There is no denying that dairy contains nutrients.

It is a healthy food for cows, after all. It’s high in protein and calcium. If you look at the research, though, you’ll find that hay is also high in protein and calcium. However, just as with dairy, humans have a hard time digesting hay.
I urge the Committee to remove dairy as its own food group, and to de-emphasize it as a dietary recommendation. There are great profits to be made from dairy, and I understand we have concern for the farmers, but with new technology, all industries evolve, and many dairy farmers are starting to produce plant milks, plant cheeses --

MS. BROWN: Thank you.

DR. HEANER: -- and growing vegetables.

MS. BROWN: Thank you.

We'll next have commenter number 25.

MR. MARTINEZ: Good afternoon. My name is Tony Martinez, and I'm from Ossining, New York. I'm an attorney. I am a type 2 diabetes and heart disease patient in remission through a ketogenic carnivorous diet, and I'm also a candidate for the New York State Senate in my district, because I'm very concerned on these issues.

I had a heart attack on March 29, 2014, and I have recovered through diet alone. I'm basically on a ketogenic carnivorous diet for five
and a half years, and I now have saved over $24,000 in prescription drugs that I otherwise would have required had I not put my condition into remission.

I understand that people here have very strong feelings about what people should be eating and so forth. The point is I have to say -- is we have to have options, particularly a low-carb option, and the fact that this needs to should be recognized.

Low-carb means 25 percent of calories, not 45, with the all due respect. And -- because that’s basically -- I keep my calories to about 20 percent carbohydrate.

And these guidelines that you’re going to be putting together have to take into account options that the majority of this country is not healthy, metabolically healthy.

So we need to have options, and to give you one -- to give you some input on how impactful this is in my state, right now, diabetes costs the state of New York on Medicaid dollars alone over $1.5 billion.
That’s for the neediest group of community in our state, people who really need health care. And the budget, the Medicaid budget, right now is in a deficit of $6 million. And our Governor, Governor Cuomo, has announced in his budget statement, he’s going to cut $2-1/2 billion across the board if the legislature doesn’t do one of both of two things, raise taxes or cut services on their own, and nobody likes that, and nobody needs to be in that position.

We need some flexibility. So the fact that I’ve been able to save over $24,000 in prescription drug costs, just by following a ketogenic carnivorous diet, which works for me.

And just for the record, if I can clarify, the most nutrient-dense food are animal-based; they’re not plant-based. So we need options, and we need to temper our passions about imposing our views on everybody.

We just need options. So I ask the Committee for that consideration. Thank you.

MS. BROWN: Thank you. We’ll next have
commenter number 26.

DR. WALLACE: Good afternoon. My name is Dr. Taylor Wallace, and I’m providing comment on behalf of myself as principal at Think Healthy Group, and an affiliate professor at Department of Nutrition and Food Studies at George Mason University, as well as a decade-long researcher in the area of flavonoids.

My travel here today was provided by Unilever; however, I did not accept honoraria for financial incentive for these comments, which are mine alone.

Research on flavonoids and other bioactives have exploded over the past decade. Our lab alone published numerous peer review manuscripts highlighting the role of various flavonoids subclasses in the prevention of cardiovascular disease, the number-one killer of Americans.

We further highlight the role that flavonoids play in improving blood lipids, lipid oxidation, flow-mediated dilation and blood
pressure.

Evidence also shows that dietary intake of flavonoids may help modulate multiple cytokines, chemokines and inflammatory factors such as NF-kappa B, in addition to promoting flow-mediated dilation by enhancing the synthesis of endothelial nitric oxide.

Certainly, higher intakes of fruits and vegetables help to promote health and protect us from disease incidence, but these effects are solely due to their essential nutrient contents, but also their bioactive contents.

In particular, tea drinkers have been shown to have up to 20 times the flavonoid intake of non-tea consumers. Using the National Academies' standards, our group recently published a systematic review of nearly 40 prospective cohort studies on tea flavonoid consumption and cardiovascular disease events and mortality.

We found linear dose response relationships of tea intake on all-cause mortality, cardiovascular morality, cardiovascular events,
and stroke events. Two other fairly recent
systematic reviews, including one which assessed
the effects of tea flavonoids on flow-mediated
dilation, as well as a Cochrane Review, assessing
the effects of tea flavonoids on blood pressure and
blood lipids, provide mechanistic insight into our
findings on cardiovascular events and outcomes.

No adverse effects of flavonoid intake
were noted among the hundreds of studies included
in these systematic reviews. For once, the
epidemiology and clinical trial data are
consistent, and it’s time that nutrition policy
reflects these findings.

We must begin to give guidance to
Americans around the consumption of dietary
bioactive compounds, such as flavonoids. And
finally, to the Committee, on behalf of myself and
everyone else here from Washington, D.C. today,
thank you for giving us the opportunity to come and
comment somewhere nice and sunny.

Houston has been lovely.

MS. BROWN: Thank you. We do want to
announce that we’ll do three more comments, and then
we’ll take a brief break, and so we’ll do three more,
beginning with number 27.

DR. CHAWLA: Good afternoon. My name
is Dr. Bandana Chawla. I’m also a physician, and
I’m happy to see so many other physicians here
because they’re passionate about the health of
their patients and their community.

I am triple board-certified in internal
medicine, hospice and palliative medicine, and now
the new evidence-based field of lifestyle medicine.
I’ve been practicing here in the Houston area for
over 20 years.

For the sake of my patients’ health and
the health of everyone in our American community,
I urge this Committee to inform the public and
explicitly state the hazards of processed meats in
the new Guidelines.

Processed meats, such as hot dogs,
bacon, pepperoni, sausage, and lunch meats, all
increase the risk of colorectal cancer,
cardiovascular disease, and even early death. The
World Health Organization has determined that processed meat is a major contributor to colorectal cancer, classifying it as type one carcinogenic to humans. Just one hot dog or a few strips of bacon consumed daily increased cancer risk by 18 percent.

The World Cancer Research Fund and the American Institute for American Cancer Research have also found that the evidence on processed meat and cancer is clear-cut.

Colorectal cancer isn’t the only cancer risk that comes from consuming processed meat. Eating 50 grams of processed meat daily also increases the risk for prostate cancer, pancreatic cancer, and overall cancer mortality.

And a study of more than 200,000 women found that eating about 20 grams of processed meat each day, less than half the size of a regular hot dog, increased breast cancer risk by 21 percent.

Those who consume the most processed meat also have an increased risk of death from cardiovascular disease, according to a National Institute of Health study of more than half a
million people.

Experts from Harvard University recommend that Dietary Guidelines exclude red and processed meat in favor of plant-based foods for the benefit of human health and the environment, according to a publication from the American Diabetes Association.

Researchers reassessed the health impacts of these foods and found close associations between red and processed meat consumption and diabetes and increased mortality.

The evidence is clear, and the general public needs this Committee to educate and empower them. It is USDA’s obligation to encourage the American people to eliminate processed meat from their diet so they can reduce the risk of several illnesses, and hence the suffering --

MS. BROWN: Thank you.

DR. CHAWLA: -- that results from them.

Thank you.

MS. BROWN: Next, we’ll have commenter number 28.
DR. CHAWLA: Hi. I’m Dr. Munish Chawla. I’m representing myself. I’m a board-certified physician in radiology and lifestyle medicine. Thank you very much for the opportunity to speak here today.

The USDA Guidelines are not just important for lay citizens but are important for the National School Lunch Program, which helps guide the nutritional adequacy of the meals that are served at our schools.

With the current epidemic of chronic diseases in our society such as diabetes, heart disease, and obesity, and in particular, childhood obesity, these Dietary Guidelines are more important than ever.

The 2015-2020 Guidelines do a great job of informing the public that it is important to focus on a healthy eating pattern. As per the current Guidelines, this healthy eating pattern includes a variety of vegetables, fruits, whole grain, low-fat dairy, and proteins, and furthermore, it is specified that a healthy eating
pattern limits saturated fat and sodium.

This statement should be applauded, since we have clear evidence which shows saturated fat increases our cholesterol, which is an important risk factor for heart disease. The largest contributor of saturated fat in the American diet today is dairy.

So dairy should not be part of My Plate. This should be replaced with water. This will not only reduce saturated fat in the diet, but it will decrease the overall calories in the meal, which is crucial, given the current obesity epidemic.

Supporting figures in the current Guidelines which use My Plate as a teaching tool also indicate that we should decrease consumption of saturated fats, sodium and added sugars.

It would be extremely helpful for Americans if specific foods were mentioned, so it is clear what foods should be avoided. A clear statement which states, greatly reducing the consumption of mixed dishes, such as burgers, pizza, pasta with meat sauce, would greatly reduce
the amount of saturated fat and sodium in the meal.

Other similar statements, such as reducing consumption of cakes, pies, cookies, and pastries, would greatly reduce the consumption of saturated fat, refined grains, and sugar. I would also urge that a more clear example of healthy choices be given.

A well balanced meal such as tofu with vegetables served with rice and a garden salad would be far superior to the currently highlighted meal of spaghetti with meatballs.

We have the research and all major organizations, such as the American Heart Association, World Health Organization and others, agree that as a society, we need to reduce our consumption of meat, dairy and eggs, and increase our consumption of vegetables, fruits, and whole grains.

Thank you for your time.

MS. BROWN: Thank you. We’ll next have commenter number 29, which will be the last before a 10-minute break.
MS. EIGES: Good afternoon. My name is Amy Eiges, and I’m here representing myself and millions of people who have faithfully followed the Guidelines, only to find themselves in poor health.

Year after year, diet after diet, I ate according to the government’s recommendations to lose weight but found it impossible to sustain. It left me chronically hungry, morbidly obese, and prediabetic.

Over and over, I was told that eating everything in moderation, calories in, calories out, following the Guidelines was the answer, and it wasn’t working because I must be doing it wrong.

I needed more self-control and more willpower, and it was all my fault. When my mother died suddenly from congestive heart failure, a direct result of type 2 diabetes, I woke up and clearly saw my future.

Devastated by her death, I realized if I didn’t try something different, I would suffer the same fate. So a few years ago, imprisoned in a body with a seemingly insurmountable 200 pounds to lose,
I did some research, and discovered a very low-carbohydrate ketogenic diet.

I started eating real whole foods, protein, vegetables, dairy and fats to satiety. I don’t eat when I’m not hungry. I don’t count calories. It’s that simple. No gimmicks, no fads, no special products.

To date, I have lost 173 pounds. I have reversed prediabetes, and my cardiovascular health is vastly improved. Triglycerides cut in half, cholesterol great. I have successfully reclaimed my health by not following the Guidelines, and I’m far from alone in this.

Thousands of us are following a low-carbohydrate plan after finding out we could not depend on the harmful advice we were given. Our trusted medical community, following the Guidelines, has failed us.

It was not that we were fat, sick, and lazy. We were fat, sick, and misinformed. If just one of many "experts" I saw over the years had looked at the rigorous science, I and countless others like
me might not have been tortured for decades.

I might have had the life I was meant to live. What so few are aware of is the Guidelines are not for people who are metabolically unwell, those with prediabetes, high blood pressure, diabetes, obesity, heart disease, which altogether is a staggering 88 percent of this country.

The Guidelines are only for the remaining 12 percent whose bodies are metabolically flexible enough to handle more than half of their calories in carbohydrates and six servings of grains a day.

But what about the rest of us? What are you offering those of us who became sick and damaged under your watch? A true and proper definition of low carb is under 25 percent of calories. Anything more, and the benefits are greatly reduced.

If this option had been available to countless doctors over four decades of trying to get healthy, they would have been able to offer me a solution that actually works.

What most doctors won’t know is that
this option is safe and effective unless you allow it to be one of the approved dietary patterns. Until then, their hands are tied and we all get sicker with the one-size-fits-all option.

You have the power to finally, finally end so much suffering by reversing course on the health epidemics that are ravaging this nation. Please land on the right side of history and be the heroes our country so desperately needs, it's long overdue.

MS. BROWN: Thank you. Okay. We will take a 10-minute break, so convene at 3:40 -- 2:40 Central Time. And we'll talk with commenter number 30.

(A short recess was taken.)

MS. BROWN: We'll ask everyone to begin taking their seats. Please take your seats. Okay.

Thank you. Commenter number 30.

DR. SCHMIDT: Hi. My name is Dr. Darren Schmidt. I spoke to you in July in D.C. I focus on nutrition in my practice, my private practice for 23 years at The Nutritional Healing
My clinicians and I have seen 60,000 nutrition visits in the last five years. I want to tell you about my patient Yael Rosner, a former Ms. Israel, who had been struggling with her health.

She says to me, I must admit that I was sure I was being healthy since I was following the U.S. Food Pyramid. I became prediabetic, had neuropathy in my feet, hypertension, overweight and bloating.

When you had me switch to a low-carb diet, I started to sleep better and longer, my feet stopped hurting, my blood pressure dropped 20 points, and my blood glucose dropped 40. I’m losing pounds and people are complimenting me and I’m happier.

So I’m not surprised at this. I’ve had thousands of patients over the years have great results with the low-carb diet. Jeremy Martin had spondylitis for 10 years. Painkillers ruined his gut.

He took Cipro, which destroyed his
tendons and nervous system. Years of eating high-carb foods was his cause, and now with the low-carb diet, he’s off all medications, pain-free, down 60 pounds, and he’s smiling again.

These patients switched their diet to the opposite of the current Dietary Guidelines. Why is there such a discrepancy between the Guidelines and these great results? Well, let me explain it like this.

Do you remember the six steps of the scientific method that we all learned in grade school? Here they are. Step one, make an observation. Step two, form a hypothesis. Step three, test that hypothesis with an experiment to see if it’s actually true or not. Four, analyze the data. Then report the data. Then other scientists have to replicate it.

Epidemiology is only the first two steps out of six. It is certainly missing the experiment. Therefore, it is an incomplete scientific process. It is mostly just survey. This includes the Blue Zones, Loma Linda,
Seventh-Day Adventist, EPIC data, Okinawa, Eskimo, and NHANES.

It is your charge by the law that you have to use the preponderance of science. It takes all six steps of the scientific method to qualify as science, not just the first two steps, like an epidemiological survey. The majority of your studies you are using are incomplete regarding scientific method.

Therefore, they are not science and need to be discarded, per the jurisdiction of the law that you’re operating. We need diversity in the Guidelines. There is no one diet for all. The low-carb diet has to be an option in your report, just like the American Diabetes Association did.

There are 100 clinical trials, experiments, actual science that proves the low-carb diet is safe and effective. Please add at least one line in your report that says a low-carb diet of 25 percent or less of calories from carbohydrates is a safe and viable option, because it is.
This is your opportunity to reverse 40 years of non-scientific guidelines, and it would be two scientists to finally resolve our nation’s health problems. And please don’t make me have to come back in five years to repeat myself. Add the low-carb option now. Thank you.

MS. BROWN: Thank you. Commenter number 31.

MR. HAZARD: My name is Tyler Hazard, and I’m providing testimony on behalf of Compassion in World Farming USA, an international animal protection and environmental organization.

According to the U.S. Department of Agriculture and the Department of Health and Human Services, the goal of the Dietary Guidelines is to "promote health and reduce risk of chronic disease for current and future generations."

I’m here today to emphasize it is impossible to meet that objective without dedicated, evidence-based consideration of the environment impacts of our current food system.

There is global recognition that food
choice has devastating consequences for our
environment, from greenhouse gas emissions to soil
degradation to water pollution.

There's also global recognition that
the worst types of food for our delicate and
deteriorating ecosystems are in fact animal
products, chiefly dairy and meat, products that we
as Americans massively overconsume, in some cases
on levels three to four times the global average.

If we continue our over-reliance on
animal protein, agriculture alone will catapult us
past two degrees warming by 2050, at which point
scientists warn of catastrophic consequences
including, to this Committee's prior concern,
within our food supply.

We know that an intensifying climate
with more frequent severe weather and distribution
channels inundated by sea level rise will see reduce
food yields, quality, safety, accessibility and
stability, creating a landscape of food insecurity
across the globe, the effects of which will
disproportionately impact women, children and
elderly and be worse for lower-income families and communities of color.

Further, that we know that alongside increased rates of food insecurity, the climate crisis will increase mental health and stress disorders, infectious disease, and chronic illness, risking the rapid deterioration of our nation’s health, which stands in direct opposition to your objective.

Due to this alarming reality, the United Nations Intergovernmental Panel on Climate Change has repeatedly called for a global reduction in animal product consumptions, and in three separate special reports in the last year alone, have called for a transition towards plant-based diets, specifically noting the national Dietary Guidelines as a key opportunity to shift public consumption.

From a health perspective, we ought to already advise more plants and less meat, as countless studies demonstrate the short- and long-term benefits of plant-based diets on
individual health, specifically in areas of cardiovascular disease, type 2 diabetes, colorectal cancer and all-cause mortality, the very health issues we’ve been selected to study.

We are living in an unprecedented time of climate emergency, where millions of schoolchildren across the country flee their classrooms and take to the streets to combat government inaction, in fear where the planet will leave them if we fail to address this issue, if we fail to stave off our pending crisis, if we fail to lead our kids with a regenerative food system that enriches nature rather than depleting it. Make no mistake: we are failing these children.

So I ask you to follow the precedent of our forward-thinking allies at the United Nations and countries like Canada and France, who have recently adopted Dietary Guidelines that recognize critical link between food consumption and human health and long-term food security, and I ask you to follow the precedent of your Advisory Committee predecessors who in 2015 --
MS. BROWN: Thank you.

MR. HAZARD: -- who had the courage and foresight to acknowledge --

MS. BROWN: Thank you.

MR. HAZARD: -- that a rabid consumption of animal products will inevitably --

MS. BROWN: Your time is up.

MR. HAZARD: -- push us past planetary boundaries will be strained --

MS. BROWN: We will move to our next commenter, commenter number 32.

DR. BRENNA: I’m Tom Brenna. I’m now at the Dell Medical School, The University of Texas at Austin, where I’m a professor of pediatrics, of chemistry, and of nutrition. I’ll add my welcome to Texas for all of you.

I’m presenting on behalf of myself and a number of coauthors who I’ll mention in a moment. Five years ago, I was in my last years of 28 years on the active faculty at Cornell in the Nutrition Department, and I was a member of the Dietary Guidelines Committee.
I found that oral comments meeting to be most interesting, as I’m sure you are. My main reason for being here is to bring your attention -- bring to your attention a peer-reviewed journal -- a peer-reviewed paper in a journal, "Prostaglandins, Leukotrienes and Essential Fatty Acids," that is intended to answer the two seafood questions on the relationship of seafood consumption in pregnancy or in childhood on neurocognitive development.

Taking advantage of the new procedure this year, early posting of questions, a group of 13 scientists including myself, senior scientists, all academic researchers, I’ll note, with expertise in psychiatry, child development, toxicology, and all with an interest in nutrition, came together in a grassroots effort, a grassroots voluntary effort, and we can report no financial conflicts of interest.

The NESR protocols are transparent and enable anyone to replicate them. We faithfully replicated -- or at least that was our intent, to
faithfully replicate the NESR systematic review process, with kind advice from the NESR staff before we started.

Our results are on the DGAC comments website, along with our comments and the papers were posted, and they are open access. We did all the work ourselves. We had no staff, no grad students, no post-docs. We did it all ourselves. You know how much work that would be.

You'll see familiar information when you look at the papers. You'll see analytical framework searches, evidence tables. Listening yesterday, I was not surprised and gratified to say that we've come to very similar conclusions with the Seafood committee.

I think we can help each other. If you look at our paper, you will see not only support for the conclusions that were mentioned yesterday, but you'll also see including documenting moderate evidence for benefit and moderate evidence for no harm, and we support that designation.

Our paper also may be of value in
evaluating dose response. We did convert units and 
worked on that. So I thank you very much for your 
attention and wish you luck in the work in front of 
you.

MS. BROWN: Thank you. We’ll now move 
to commenter number 33.

MS. JANUS: I’m Erin Janus, 
representing myself.

Last year, in Canada, dairy was 
officially removed from the food guide. After the 
science was reviewed by leading health 
professionals, it was concluded that dairy is 
neither required nor recommended for a healthy and 
balanced diet for any person at any age, but there’s 
already an overwhelming number of physicians, 
dietitians, nutritionists, and scientists who 
we’ve heard from today that adamantly recommend 
dairy be removed from the Dietary Guidelines.

So I’m not going to stand here and talk 
about the many negative health consequences of 
dairy. I’m here to bring up something else that 
pertains to dairy that’s often grossly ignored and
overlooked, and that is ethics.

The ethics of dairy has been undermined by the dairy industry for decades, resulting in very little knowledge about the animals who are used and exploited to produce our beloved dairy products.

It’s because of this that the average person is entirely oblivious to the standard practices that make up dairy production. For example, the average person does not know that all dairy cows are repeatedly inseminated, year after year, against their will, just to make them produce milk.

The average person does not know that every mother cow is separated from her baby calf after just a few hours at birth in order to prevent her baby from drinking her milk. And the average person does not know that all mother dairy cows are eventually sent to a slaughterhouse where they are hung upside down and their throats are slashed open, all while still alive.

By the way, for any of you who cast any doubt, everything I just mentioned is standard
practice, legal, certified humane, and commonplace
will all U.S. dairy operations, not just some.

So at what point will decision-makers recognize that dairy cows are not commodities or units of property, but rather they are highly sensitive, intelligent, emotional beings who deserve a life that is free from exploitation and human violence?

When will it be recognized and accepted that these unethical practices are completely unnecessary to make healthy food choices in our daily lives?

I hope that with all the current and previous expert recommendations to remove dairy consumption, advising against dairy consumption and to remove it from the Guidelines, with Canada being a prime example of how a civilized nation can remove dairy from their Dietary Guidelines while still providing healthy recommendations, that the Advisory Committee will not only recognize that we can be healthy without consuming dairy products, but that it ought to be removed on the basis --
MS. BROWN: Thank you for your comment.

MS. JANUS: -- of ethics? Thanks.

MS. BROWN: We’ll now move to number 34.

MS. JARDINE: Hello. My name is Margaret Jardine. I am a dietitian and a diabetes educator. I work at a large county hospital in Dallas, Texas. I am here on behalf of myself.

Thank you for the opportunity to provide my comments and expertise. When I first became a dietitian 25 years ago, I rarely saw a person -- over 25 years ago, I rarely saw a person with class III obesity. Now I see it daily.

I see younger and younger people with type 2 diabetes on numerous medications, people who should be in the prime of their lives and the peak of their productivity.

The epidemics of obesity and diabetes should be considered a national tragedy. I believe this Committee should put the health of the American people at the forefront of the Guidelines by presenting evidence-based information about disease prevention.
The healthiest people on the plant
consume plant-based diets that are high in
unrefined carbohydrates from whole grains, legumes
or pulses, fruits, vegetables, nuts and seeds.
They eat very little animal products or processed
foods.

I have several recommendations I
believe the Committee should consider. First, be
specific about the foods to limit in order to reduce
disease.

Instead of recommending Americans limit
saturated fats, trans fats and sodium, the
Guidelines should recommending limiting or
eliminating red meat, processed meat, poultry and
cheese.

Second, the vegan option of the healthy
vegetarian eating pattern should be more prominent.
If you look at the Adventist Health Study 2, the
vegan group is the only group that had an ideal body
weight. They also had a significantly lower
incidence of type 2 diabetes when you compare it to
the vegetarian group.
Third, be more up-front about the lack of long-term evidence on low-carbohydrate diets. Yes, I know these diets contribute to weight loss. That does not mean they’re healthy. There are numerous, large, peer-reviewed studies indicating that people who limit grains, pulses, fruits and starchy vegetables have early mortality. And numerous studies linked animal products to obesity and diabetes, as well as cardiovascular disease.

I think you would be hard pressed to find a non-industry-funded study that demonstrates animal products reduce disease. I have submitted some articles of evidence supporting my statement for your convenience.

Thank you so much for your time.

MS. BROWN: Thank you.

Next we’ll move to commenter number 35.

MS. WELLAND: My name is Diane Welland, and I am the nutrition communications manager for the Juice Products Association. JPA is a trade association representing processors, growers, packers, suppliers, and distributors to the juice
industry.

We support the current Dietary Guidelines for Americans stating that 100 percent juice introduces beneficial nutrients to the diet and, in appropriate amounts, can be included in a healthy dietary pattern.

Several new studies confirm juice’s positive role in the diet. They are in adults an NHANES analysis study published in Nutrients in October 2019, showed that 100 percent fruit juice consumption is associated with a 10 percent higher healthy eating index score than non-juice consumption.

The higher HEI score was due to higher intakes of whole fruit and total fruit and lower intakes of added sugar, saturated fat and sodium. Juice drinkers also had significantly higher intakes of calcium, vitamin D, potassium, thiamin, folate, vitamin B6 and vitamin C, with the first three nutrients considered nutrients of concern by the 2015 Dietary Guidelines.

Adults who consume 100 percent fruit
juice have lower body mass index, lower body weight, a 22 percent lower risk of being overweight or obese, and a 27 percent lower risk of metabolic syndrome, compared to non-consumers.

Similar results related to diet quality and nutrient intake have been found in children. An August 2019 study in Frontiers in Nutrition found that, in children, high-quality diets had more milk, more water, and more juice than lower-quality diets.

There's also no significant relationship between 100 percent juice and body weight status in children. In addition, a 2019 scientific review in Nutrition Reviews showed 100 percent juice adds a significant number of bioactives to the American diet without negatively impacting weight status or chronic disease risk.

Group bioactives include carotenoids, polyphenols such as flavonoids, and more. The review looked at polyphenols derived from fruit and 100 percent fruit juice. It showed it's similar to coffee and tea.
Fruit and fruit juices have been identified as major polyphenol contributors in the diet. The data suggests bioactive found in fruit and fruit juice may have the potential to positively impact human health.

Some of the health benefits associated with fruit polyphenols reported in the study include reduced risk of cardiovascular disease, which is also supported in the American Journal of Clinical Nutrition, and benefits neurocognitive function and exercise performance.

Given these new data, JPA recommends the following: 100 percent juice should continue to be part of the fruit and vegetable group and considered a major beverage for consumption; the DGA should acknowledge that, like fruits and vegetables, 100 percent fruits contains beneficial plant compounds known as bioactives; it should be encouraged for good health; and the final policy document should recommend that Americans consume a diet containing a variety of fruits rich in bioactives, and include mention that fruits and vegetables and 100 percent
juices are primary sources of bioactives.

Thank you.

MS. BROWN: Thank you. We'll now have commenter number 36.

DR. OTTO: Thank you for the opportunity to present the views of the American Heart Association. My name is Marcia Otto. I'm an assistant professor at The University of Texas School of Public Health and a member of the nutrition committee.

The AHA is committed to helping people achieve a healthy diet. Eating a healthy diet is one of the best ways to fight heart disease, which remains the number-one cause of death in the United States.

To lower risk of heart disease, AHA recommends a diet that emphasizes fruits, vegetables, nuts, whole grains, lean protein and fish, by minimizing the intakes of trans fats, processed meats, refined carbohydrates and sugary beverages.

AHA recommendations, just like the
current Dietary Guidelines, focus on a healthy dietary pattern, rather than a single nutrient, ingredient or food. While admitting nutrient needs is important, focusing on the overall dietary pattern may help the consumers translate recommendations into action when choosing what to eat.

We encourage the Committee to keep the focus on healthy eating patterns when it develops its report. There are three elements of heart-healthy dietary patterns that I’d like to address today.

First, dietary fats. The Guidelines should recommend replacing intake of saturated fat with unsaturated fats, particularly polyunsaturated fats, as such replacement is associated with lower risk of heart disease.

Replacing saturated fats with carbohydrates, however, especially refined carbohydrates and sugars, does not lower heart disease risk.

Second, the Committee should consider
lowering the current recommendations for added sugars. Many adults and children have very little room in their diet for empty calories, and we need to go lower than 10 percent in order to have a healthy diet while meeting their essential nutrient needs.

Added sugars intake is associated with poor cardiovascular health in children at levels far below current consumption in the United States.

Third, we understand that the Committee is not examining sodium at this time, but the Guidelines must incorporate the new dietary health reference intake. The first is specific to chronic disease risk reduction and include recommendations to lower consumptions of key sources of sodium, particularly processed foods.

Finally, we encourage the Committee to consider how these recommendations can be implemented. Policy- and population-based solutions are also needed. Thank you.

MS. BROWN: Thank you. We understand commenter number 37 cancelled, but we’ll pause to
confirm.

(No response.)

MS. BROWN: And we'll move to commenter number 38.

MR. FRYE: Good afternoon. I'm Cary Frye, senior vice president of regulatory affairs at International Dairy Foods Association in Washington, D.C. IDFA is a membership organization that represents dairy cooperatives and processors who make the nation's milk and dairy products.

Good nutrition is a foundation to health and wellness for adults and children alike, and dairy is a crucial part of a healthy diet. There is no equal replacement for cow's milk, which provides nutrients including high-quality protein, calcium, vitamin D and potassium, and offers health benefits such as better bone health and lower risk of type 2 diabetes and cardiovascular disease.

USDA and HHS continue to hold that American children and adolescents over four years old are not consuming the recommended amounts of
dairy. Lactose-free and reduced lactose products offer these nutritional benefits for consumers who have sensitivities to lactose, and are accessible today in any supermarket, making moot the arguments that people who have sensitivities to lactose must adopt a non-dairy diet.

Lactose-reduced milks account for 5 percent of milk sales, and virtually all cheeses are lactose-free. Disappointingly, this Committee, as well as American consumers, have been subject to misleading claims about dairy products.

These false claims have confused and scared the public, using weak studies based on questionable scientific methods, and preyed on the media’s preference for controversy.

Since the last DGAs, three things have occurred that should cement dairy’s place in future recommendations.

First, health organizations, including the Academy of Nutrition and Dietetics, the American Academy of Pediatrics, and the American Heart Association, recommended children ages one to
five consume just two beverages: cow’s milk and water.

Second, dietary advice in other countries have recommended full-fat dairy products as part of healthy dietary patterns. Third, several meta-analyses indicate that there is no negative effect on heart healthy when consuming dairy, no matter whether these dairy products are full-fat or low-fat.

IDFA’s members have three requests for the Committee. First, dairy should continue as a separate group in the 2020 Dietary Guidelines for Americans.

Second, the DGAs must preserve the recommended three servings of dairy per day in dietary patterns to ensure Americans meet their recommended essential nutrient intakes.

And third, the Committee should embrace the evidence showing dairy foods at all fat levels are part of a nutritious diet. We appreciate the opportunity to provide these oral comments and ask the Committee to consider the science presented in
our written comments.

    Thank you.

MS. BROWN: Thank you. Commenter 39?

Do we have -- okay.

We will move then to commenter number

40.

MR. NGUYEN: Hello. I’m Minh Nguyen.

I’m a registered dietitian with the Physicians

Committee for Responsible Medicine, a nonprofit

 nutrition advocacy organization.

    I’m a native Houstonian. In fact, I did

my dietetic internship right here in the Texas

 Medical Center across the street, at Texas Women’s

 University. So I welcome y’all to my hometown, and

 also thank you for listening to our comments today.

    Today I’d like to discuss the risk of

 low-carbohydrate diets, specifically diets that

decrease carbohydrates while increasing intake of

 protein and fat. Despite incomplete and

 conflicting data regarding their long-term effects

 on health effects, people continue to adopt them

 with misguided hopes.
Low-carbohydrate diets are generally used for quick weight loss, which is calorie restriction at best, disease-promoting in reality. Low-carbohydrate -- you know, all these types of diets, it is also taught that cholesterol and saturated fat consumption is harmless, despite strong evidence to the contrary.

Low-carbohydrate diets tend to result in reduced intake of fiber, a underconsumed nutrient; and increased intake of animal protein, cholesterol, saturated fat, all of which are overconsumed by Americans and a risk factor for mortality and cardiovascular disease.

A prospective cohort study and meta-analysis published in the Lancet Journal in 2018 investigated the association between dietary carbohydrate intake and mortality, and the researchers found that mortality increased when carbohydrates were exchanged for animal-derived fat or protein, and mortality decreased when the substitutions were plant-based.

Research shows that a low-carbohydrate,
high-protein diet is not helpful and leads to poor endothelial function, higher C-reactive protein, which is a marker of inflammation; stiffer arteries, higher cardiovascular risk, higher cardiovascular mortality, higher cancer mortality, and just higher overall mortality.

Unlike a low-carbohydrate diet, a plant-centered diet high in complex, unrefined carbohydrates from whole plant foods have proven to reverse heart disease and signs of early-stage prostate cancer in randomized controlled trials.

I encourage the Committee to set guidelines that follow the science. Make it clear to Americans what foods should they be consuming more of; mainly, more minimally processed plant foods, such as fruits, vegetables, whole grains, and legumes.

I also encourage the Committee to make it clear which foods Americans should be eating less of, namely animal-based foods such as meat, dairy and eggs. Thank you for the opportunity for me to speak today.
MS. BROWN: Thank you.

Commenter number 41.

MR. JOHNSON: Hi, everybody. I’m Guy Johnson, executive director of the McCormick Science Institute, and perhaps, not unsurprisingly today, I have one word for you, flavor.

Or if you prefer, we could use the word that Dr. Mattes has been using, palatability.

Whatever you call it, 86 percent of consumers, according to IFIC’s latest data, think it’s the most important factor that they have in determining what foods to buy and eat, which makes it one of the biggest barriers to the consumption of healthier foods, but I’m here to tell you that it does not need to be that way.

You can add flavor to healthy foods without sugar, fat, salt or calories in a variety of ways. Take spices and herbs, for example.

There are controlled intervention studies that show that spices and herbs can increase the consumption of fruits and vegetables in a high school cafeteria setting by 15 to 20 percent.
Spices and herbs have helped free-living adults lower their sodium intake by almost 1,000 milligrams a day over a five-month period. And spices and herbs can compensate for the loss of flavor or palatability in foods that have reduced in saturated fat by 60 to 65 percent and added sugar by a third.

And I’m here with some good news. There’s a brand-new study conducted in France that shows that a pulse hummus-type appetizer with cumin, ginger, shallots and a little bit of garlic reduced the loss in palatability of a 50-percent reduction in sodium.

And there’s more research on the way. So the current Dietary Guidelines do a pretty good job of starting out on this by recommending that spices and herbs be used to flavor foods, rather than salt.

But we’ve got a long way to go. The data you presented yesterday shows that a lot of people are not meeting the Dietary Guidelines. And so I think flavor is your best shot at making it happen.
So what I’m going to ask you to do, when you’re writing a report, think of yourselves as not only scientists, which obviously you are, but consumers, which you also are, and look for ways to use the Guidelines to remove some of those barriers to healthier eating.

Maybe even make it fun, like Dr. Boushey said yesterday, and I think we can do it, even with those burgers and sandwiches.

Thank you very much.

MS. BROWN: Thank you. We’ll now have commenter number 42.

MS. MCGUIRE: Good afternoon. My name is Jennifer McGuire, and I am a registered dietitian with expertise in nutrition communication. I work for the National Fisheries Institute and spend much of my time following the latest seafood science, and translating it for media, fellow health care professionals, and families.

The studies about the beneficial role in seafood in brain development and health, as well as heart health, have been captured in your literature
review, and speak for themselves. So I’m not going
to get into that.

Instead, today I’m going to focus on
what the science says about the quantifiable impact
of Americans’ low seafood consumption on public
health.

Starting at the beginning, pregnant
women in this country eat less than two ounces of
seafood per week. This is less than one-quarter of
the 2015 Dietary Guidelines’ recommendation to eat
eight to 12 ounces or two to three servings of
seafood each week during pregnancy. So how does
that translate into health impacts?

Based on data from the FDA’s net effects
of eating commercial fish assessment, the very low
amount of seafood a pregnant women in the U.S.
currently eats contributes 0.7 points to her baby’s
IQ.

While that’s certainly better than
nothing, she can boost her baby’s IQ by 3.2 IQ points
by eating the recommended amount of seafood.

Unfortunately, the low seafood intake
that most expecting moms eat in this country leaves 2.5 IQ points on the table per baby, for a population-wide loss of about 9.5 million IQ points annually.

Moving on to the impacts of seafood deficiency on heart health, a December 2019 study published by Plos Medicine estimated the annual heart disease and type 2 diabetes costs in the U.S. associated with suboptimal intake of 10 food groups.

These included things like fruits, vegetables, seafood, nuts and seeds, grains, sugar-sweetened beverages, sodium, all of the food groups that y'all are looking at.

Researchers found the second-largest contributor to costs is low consumption of seafood omega-3s, accounting for $1.27 billion in heart disease costs per year.

Researchers conclude the mean consumption of seafood in the U.S. is extremely low, and thus there is much to gain from an increase to ideal levels of consumption.
As you create your report, I implore you to keep in mind, not only what the science shows about the health benefits of eating certain foods, but the relative magnitude of those benefits.

Thank you.

MS. BROWN: Thank you. Commenter number 43.

MR. DIAMOND: Good afternoon. My name is Larry Diamond. I am a health coach and researcher from Austin, Texas, and I want to paint a picture of January 2013, seven years ago, what my health state was like at that time.

I had been morbidly obese for well over 20 years, my entire adult life. I had all five markers of metabolic syndrome. I was constantly hungry, and I was also constantly tired.

And I had an epiphany. What if, instead of the cause of my obesity being eating more and moving less, what if that was a result of the diet that I was following? And I was very much following a high-carb recommended Dietary Guidelines of real foods.
But for me, that was keeping me constantly in a state of high insulin. I had blood sugar swings. So I was hungry every few hours. I remember not being able to go as much as I wanted to, more than a few hours, without eating.

And I had a family. I had advanced degrees. Like many, many Americans, why couldn’t I stop eating? So I decided to delve into that aspect of my life, and I found that low-carb, real-food diets, between 50 grams and 130 grams, created a condition called fat adaptation, that was the breakthrough that saved my life.

And at the time, seven years ago, I had a newly adopted daughter with my wife, and I did not think that I would be alive today. So what is fat adaptation, and why should a low-carbohydrate option included in the Dietary Guidelines?

Fat adaptation means that, during the day, we run on free-fatty acids and ketones. Those are clean-burning fuels for organs. You spare glucose for the few cells that need it in the brain, the red blood cells.
You have steady blood glucose. You reverse metabolic syndrome. My trigs over HDL went from seven to well under one. You’re never hungry because you have access with your own body fat at all times.

So my family is healthy. My wife lost 70 pounds. I lost 120. We’re terrifically energetic. Please include this option for all Americans. Thank you.

MS. BROWN: Thank you.

We’ll move to commenter number 44.

DR. EYTAN: Good afternoon. My name is Ted Eytan, and I’m a family medicine specialist residing in Washington, D.C., here on behalf of The Nutrition Coalition. I have no ties to pharmaceutical, food or device manufacturers, because screening for conflicts of interest is important.

It’s amazing to be here in 2020, because I grew up with the first Dietary Guidelines in Phoenix, Arizona. I remember how my family responded to the mass media messages and how
dramatically the food environment changed.

For me, I was calorie-restricting as early as age 12, unable to control my weight or appetite, and this is not normal. Kids, indeed all of us, should feel satiated from eating a nutrient-dense, minimally processed food diet, and we should exist at a normal weight without much thought, and then lead long, productive, healthy lives.

It is now 2020, and when someone says they’re eating healthy, we don’t know what that means anymore. It might seem like a group like ours wants one specific dietary pattern endorsement in the 2020 DGA.

This is not the case. Our goal is that nutrition policy be based on rigorous scientific evidence. We care that the recommendations that go out to all Americans be trustworthy, reliable, and up to date.

The process for reviewing the science needs to be based on an accepted state-of-the-art methodology like GRADE or Cochrane. With
grade-limited evidence as you showed yesterday, it would be proper both to not issue recommendation or issue a weak recommendation, which would allow health professionals to tailor their care to the needs of the people they serve.

We only have to remember the reversals on dietary cholesterol and low-fat diet to be reminded that caution is far better than overstepping what the science reliably tell us. We applaud you for considering a greater range of dietary patterns as well as types of dietary fats in the topics and questions under review.

These include importantly the continued caps on saturated fats. These fats have been tested in rigorous clinical trials on tens of thousands of people in studies funded by the NIH, yet no Dietary Guidelines committee has ever directly reviewed them.

They are excluded from your review because they took place prior to 1990. Nineteen systematic reviews including these trials have been published since 2010. Please include this data in
your review.

This is gold standard data, and it should not be ignored. Yesterday, we saw the horrific data regarding the metabolic health of Americans. Have you given up on the idea that the DGAs should reduce chronic illness instead of accept its increased prevalence?

Quoting the 2015 Guidelines: "These Guidelines embody the idea that the healthy eating pattern is not a rigid prescription but rather an adaptable framework in which individuals can enjoy foods that meet their personal, cultural and traditional preferences."

This is what we need, a true range of dietary patterns based on rigorous clinical trial evidence. This would be a DGA we’d all be proud of. We’re here to eliminate metabolic illness with you.

Thank you.

MS. BROWN: Thank you.

Next, commenter number 45.

DR. MILLER: My name is Dr. Debra Miller, and I’m the senior vice president for
scientific and regulatory affairs at the National
Confectioners Association, or NCA. We thank the
DGAC for this opportunity to appear before you
today.

NCA is the leading association
representing the U.S. chocolate and candymakers.
I likely do not need to tell you all, but consumers
love the products that our members produce.

In these brief comments, we would like
to provide some insight on our special and unique
category and outline our industry’s voluntary
efforts to help consumers manage their calorie and
sugar intake.

We also strongly encourage the DGAC to
recognize the key role that portion control and
portion balance must play in the 2020-2025 Dietary
Guidelines.

So despite an array of consumer
education efforts, including mandatory nutrition
labeling and, more recently, restaurant menu
labeling, obesity remains the nation’s most
critical nutrition issue.
Over the past four decades, researchers have documented that the sizes of meals, snacks, and beverages have increased rather dramatically. One promising and, we think, underutilized strategy for taking this issue is to help consumers to understand and consume appropriate-sized portions.

The importance of portion control is recognized by leading authorities including the American Heart Association, the American Cancer Society, and the CDC. Emphasis on portion control allows individuals to enjoy the foods that they love within the context of a balanced diet.

Chocolate and candy products are unique. They have long been associated with gifting, holiday traditions, family celebrations and the like. Consumers appreciate the unique role that chocolate and candy can play as an occasional treat in a happy and balanced lifestyle.

They further understand that these treats generally contain some sugar. Because our members understand the connection that consumers have to the products we make, our industry is
committed to helping consumers manage their calorie
and sugar intake, while still enjoying their
favorite treats.

To that end, in 2017, the confectionary
industry launched the Always a Treat Initiative.
As part of this initiative, over the next few years,
consumers will see more options in smaller-sized
packages and innovative new products.

We are proud to make this commitment
with the Partnership for a Healthier America, who
will help us track our progress and verify this a
meaningful initiative.

It is important to note that sugar is an
essential ingredient in chocolate and candy, and
not only does sugar provide sweetness, but it also
provides structure and texture in confections.

According to NHANES data, most
Americans have candy about two or three times a
week, for about 40 calories, and about five grams
of added sugar per day from those confectionary
items.

Thus the average amount of candy can fit
into the U.S. dietary -- the daily value for added sugar. While our industry understands that the Dietary Guidelines on added sugar is important, we also believe that incorporating --

MS. BROWN: Thank you.

DR. MILLER: -- a treat on occasion is important as well.

MS. BROWN: Thank you. With additional time, we'll move to commenters on the standby list originally, beginning with number 46.

No? Forty-seven?

DR. GUSTIN: I'm Dr. Anthony Gustin.

I'm a sports medicine and functional medicine clinician from Austin, Texas, and I've seen firsthand the power of nutrition in practice. Using my clinical experience I've scaled a whole-food, low-carb platform that over 45 million people have engaged with.

Results have been incredible. Thousands of people have used real-food, low-carb diets to fix insulin resistance, diabetes, obesity and more. I'm not against real-food
carbohydrates, rather for the recognition and
inclusion of low-carb, defined as 25 percent or less
of total calories from carb as a dietary option for
people who may benefit from it.

Over 60 percent of Americans have
chronic disease and could benefit from this
approach, and the current 45 percent guideline
won’t be enough to turn their health around. I have
full confidence that when the Dietary Guidelines
are refreshed, we will collectively be intelligent
enough to incorporate the results from hundreds of
low-carb studies that we’ve seen in the last five
years, much like the ADA has done recently.

More concerning to me is when you
recommend a healthy, low-carb nutrition pattern,
where the energy will come from. If you reduce
carbs, you have to increase fat. However, the
current Guidelines demonize saturated fat and
promote polyunsaturated fat.

I understand the concern that saturated
fats lead to heart disease. When you look at the
science, it just doesn’t hold up. This is not too
dissimilar to the old recommendations for cholesterol that didn’t pan out.

Listening to everybody today, I know that’s going to be an unpopular opinion, but so was banning trans fat 30 years ago. Real food is not the problem. Saturated fat has been consumed for literally all human history, yet heart disease only started to become the killer it is over the last 100 years, not coincidentally, exactly when seed oils were the recommended polyunsaturated fats when the current Guidelines were first introduced.

Saturated fats are stable in the body and not easily oxidized. They’re used for things like energy metabolism, hormone production, cell membranes, nervous system maintenance and more. Saturated fats are naturally found in both animal and plant foods, and the majority of fat in breast milk. The best food for a developing human is saturated fat.

Humans do not lose the ability to use saturated fat after childhood. Polyunsaturated fats, by comparison, are highly reactive molecules.
They are many carbon double bonds reacting violently with oxygen, like firecrackers in the body. This peroxidation cascade results in highly toxic compounds, mitochondrial and DNA damage in oxidation of LDL particles.

Polyunsaturated fats come from heavily processed seeds going into oil. This process takes massive machinery and many chemicals. No human in history was ever able to eat the nutrient-void processed fat from thousands of seeds until the last 100 years.

I agree with the stance of this Committee that people should be eating nutrient-dense whole foods. The reality is real foods highest in nutrition per gram are those that include saturated fat.

Reducing polyunsaturated fat by allowing saturated fat shouldn’t be controversial. You are literally replacing nutrient-void, chemical-rich processed fake foods and industrial seed oils with natural, nutrient-rich whole foods that have saturated fat.
There doesn’t need to be a target for saturated fat, rather a removal of the current limitation, much like how the cholesterol limitation was dropped from the current Guidelines. This will allow people to get the most amount of nutrition per gram of food, while minimizing toxic seed oils.

Please make the right call and drop any limitation to saturated fat, much like you did with cholesterol in 2015. Thank you.


MS. MULLER: Hello. My name is Michelle Muller, and I am co-founder of Little Spoon, an early childhood nutrition company, for birth to eight years. Thank you to the Committee for lending your accessibility to the public today.

For quick context, I’ve been building Little Spoon for more than three years, launching our delivery service for cold-pressed organic baby food nationally in 2017. We offer a comprehensive nutrition solution, taking into account where children are developmentally and in their
starting-solids journey, and then provide
recommendations for a full baby food meal plan.

In 2019, we launched a line of vitamins,
probiotics and homeopathic remedies for an
additional layer of health support. At Little
Spoon, we know quality nutrition is critical during
the first years of life to set up a lifelong healthy
relationship with food.

As such, I have three areas I recommend
this Committee focus on as they write the Guidelines
for the next generation: spoon feeding, variety,
and limiting processed foods.

In the last public meeting, Dr. Kay
Dewey, the chair of the Birth to 24 Months
Subcommittee, stated that the Committee will be
looking more to what to feed and what not addressing
how to feed infants and toddlers, which I hope you
will all reconsider.

At Little Spoon, we strongly believe
that parents should choose spoon feeding over pouch
feeding. Pouches can be a convenient, on-the-go
option for those in-between snack moments and
special medical cases, but there is mounting research suggesting pouches can hinder healthy development of eating skills.

Spoon feeding allows your baby to learn to chew and experience sensory properties like aroma, texture, color and taste. Self-feeding also directly contributes to the development of motor skills, hand-mouth and hand-eye coordination, plus critical habits like taking breaks between bites and stopping when full.

Drinking a full meal through a pouch spout facilitates a lack of portion control and negative eating habits that we know can lead directly to obesity, type 2 diabetes, and other disorders plaguing our health system.

We know there is not one magical superfood, but rather a variety of foods that provide a nutritional punch when consumed together. Serving babies complementary foods from all colors of the rainbow is a great way to ensure they are receiving a myriad of nutrients.

Avoiding processed foods is also a must,
so we strongly believe that a baby’s first bite of food should be a fruit or a vegetable, instead of overly processed cereals like rice or oatmeal.

Scientists are learning more about the microbiome, its critical role in overall digestive health, and the positive impacts of probiotics on immunity. I encourage the Committee to include a stance in guidance on the use of probiotics in infancy and childhood.

In the adult nutrition guidelines, the USDA recommends whole vegetables, fruits and grains, and recommends to limit added sugars, salt, saturated and trans fats, ingredients solely found in processed foods.

Please consider that how baby and toddler food is processed matters. The heat processing that most shelf-stable brands use are rendering the food commercially sterile, lacking vitamins and nutrients, all critical for healthy development.

This is not to say we should ban shelf-stable baby food, but the fact that it’s 2020
and there is no transparent recommendation on the
benefits of feeding babies fresh food over --

MS. BROWN: Thank you.

MS. MULLER: -- commercially sterile

food is creepy. Thank you.

MS. BROWN: Thank you for your comment.

Next, we’ll move to 49. Forty-nine? No? Fifty?
Do we want to go next on that side, then, 51?
Fifty-two? Okay. We’ve got one, commenter 52.

DR. ALI: I’ve been a practicing
cardiologist for about 30 years, and I have served
in several leadership positions at Baylor College
of Medicine and HCA Houston Health Care.

For the first 24 years of my practice,
I advised my patients to follow a low-fat, healthy
whole-grain diet, with emphasis on fruits,
vegetables, and a reduction in animal food, sugar,
and saturated fat.

My patients did not improve on this
diet, despite being disciplined and following my
recommendations. I saw them gradually becoming
prediabetic or diabetic, increase their weight and
worsen their cholesterol. Many progressed to overt heart disease.

It was a dreadful experience to go to my office, because I felt I was ineffective and increasingly reliant on medications that made their lives worse.

About six years ago, because of my own personal experience, I began a low-carb diet, and I stand before you 30 pounds lighter and also applying the science of low carb for my patients.

I come across over 100 patients on a weekly basis. I have seen patients in their 70s, 80s and 90s improve on a low-carb diet and intermittent fasting. One practice reinforces the other.

Not only have I seen 30 to 50 pounds of weight loss, I have consistently seen them improve their blood sugar, their blood pressure, and their cholesterol quality.

They’ve been able to stop many medications, diabetic, blood pressure, and lipid-lowering medications. This has been a
transformative experience for me. My patient interaction is reinforced on a daily basis by our collective victory in their health.

I constantly hear them talking about being satiated and having control over their hunger on a true low-carb diet, which should mean less than 20 percent of calories coming from carbs.

Let us not forget that as humans our brain is 1,000 grams bigger than our closest ape ancestor. This is because we ate nutrient- and calorie-dense animal food and learned the art of cooking.

I humbly submit that a low-carb diet is a paradigm whose time has come for DGA to include it as an option.

While I cannot go into the science behind the low-carb diet in such a short time, there are plenty of robust clinical trials that give us the information that it decreases blood sugar, blood pressure, and improves cholesterol quality.

Thank you.

MS. BROWN: Thank you. Commenter 53?
MR. REYNOLDS: My name is Doug Reynolds, representing Low Carb USA. After discovering the concept of carbohydrate restriction and reversing my own health issues, I established Low Carb USA to provide a platform for others to learn what I did not know until I was 51.

It's important to recognize that this field has a growing mountain of rigorous clinical trial evidence behind it. While we applaud the initiative of the Committee for proposing to add a low-carb dietary pattern to the 2020 Guidelines, I do have grave concerns about the current proposed definitions for that pattern.

A threshold of 45 percent of calories from carbs doesn't even come close to defining a low-carb diet. A separate analysis of the scientific literature, looking only at studies below 25 percent, is encouraged, because this is the upper limit of the threshold.

More important would be to additionally define a ketogenic subcategory advising 10 percent or less. The differences you
will see in each of these groups is vast.

At levels below 25 percent, we eliminate sugar and processed carbohydrates and basically just eat real food, which results in enormous improvements in general health. Low Carb USA established a panel of advisors of highly respected scientists and physicians from around the world, and in May 2019, we published a set of clinical guidelines for therapeutic carbohydrate reduction as an intervention for use by physicians.

This identifies a number of low-carb categories with thresholds defining grams of carbs as opposed to percentages. The two lowest of these are very low-carb ketogenic, which is less than 30 grams, and low-carb ketogenic 30 to 50 grams.

It's at these levels that the magic happens. In other words, significant metabolic changes occur, including drastically reduced levels of inflammation, resulting in reduced chronic disease.

There are now hundreds of thousands of documented clinical cases with the reversal of many
chronic diseases, like type 2 diabetes, non-alcoholic fatty liver disease, all thought previously to be incurable. And every day, we hear about more.

The truth is that adding the currently proposed low-carb pattern will do far more harm than good. The Dietary Guidelines are supposed to be only for healthy people, but this is only about 12 percent of the population.

The reality is that the Guidelines are highly influential in establishing the food policies of most institutions, like hospitals, schools and our military, and they set the gold standard for clinical trials.

Running a clinical trial comparing any other dietary pattern against a so-called low-carb pattern consisting of 40 to 45 percent carbs would just result in more inconclusive evidence, because it’s not low-carb.

I hope you will recommend guidelines with a true range of dietary patterns for all Americans, including the vast majority of us
struggling with the diet-related diseases, not just a tiny elite portion.

Thank you.

MS. BROWN: Thank you. Next on this side, commenter 56?

DR. NGUYEN: Hello. My name is Dr. Tiffany Nguyen, and I’m a general pediatrician in the Houston area, working at Texas Children’s Pediatrics for the last 16 years.

I would like to speak from my experience with the pediatric population and urge the Committee to put a greater emphasis on fiber.

Here’s why. Constipation and obesity are two of the most common problems I see in my practice. In fact, a high percentage of my patients with abdominal pain are merely suffering from constipation, and more than 30 percent of my checkup visits reveal patients in the overweight or obesity range.

Increasing fiber intake is a proven, simple, and practical approach to help remedy these problems. In a study by Schmier and others in 2014,
increasing fiber intakes by three grams in just half of the U.S. population may relieve enough constipation to save an estimated $12 billion in health care costs. Basically just reaching for an extra apple or a banana a day is all it takes.

Recent expert studies revealed more than 40 percent of kids have obesity by their late teens, and it’s predicted that by the year 2030, about half of the population will have obesity.

Obese patients are at increased risk of developing many medical problems, including diabetes, hypertension, high cholesterol, stroke, osteoarthritis requiring hip and knee replacements, and even certain cancers.

Preventing obesity then is the ideal solution. Fiber promotes weight loss and prevents weight gain. It stabilizes blood sugar and decreases cholesterol, and it protects against constipation and colon cancer.

Parents often come into my practice expressing their concern that the children are not getting enough protein in their diet, and yet
studies show that more than 97 percent of Americans
do get enough protein, but in contrast, more than
97 percent of Americans do not get enough fiber.

Fiber deficiency then is the more
practical concern. A recommendation from the
Committee can boost public awareness and promote
increased fiber intake. Increased need for fiber
will compel business and agriculture to supply its
demand.

Together we can respectfully align
science, medicine, food industry, and public
education to promote a healthier and happier
lifestyles and drive down health care costs.
Although an apple of day may not keep the doctor
away, it’s a simple step towards better health for
our community.

Thank you.

MS. BROWN: Thank you. Commenter 57?

MS. MOHAMEDSHAH: Hello. I am Farida
Mohamedshah with the Institute of Food
Technologists, IFT. IFT is a global organization
of nearly 16,000 individual members from more than
100 countries.

IFT brings together the brightest minds in food science, technology and related professions from academia, government and industry to solve the world’s greatest food challenges. We believe that science is essential to ensuring a global food supply that is sustainable, safe, nutritious and accessible to all.

We appreciate the opportunity to provide input on the 2020 Dietary Guidelines for Americans, DGAs. IFT underscores the importance of ensuring that the recommendations regarding food and nutrient intake are evidence based.

We urge the Committee to continue the focus on evidence-based healthy eating patterns, such as those identified in the 2015-2020 DGAs, that epitomize a healthy diet, support food-based dietary recommendations to meet nutrient needs, and recognize that all food groups and foods, including processed foods, can be part of healthy eating patterns.

It is also critical that the recommended
healthy eating patterns allow consumers to have enjoyable eating experiences and meet their personal, cultural, lifestyle, and budgetary needs.

Food science and technology are invaluable in the development, production and availability of foods that can be part of healthy eating patterns, while also meeting our personal, cultural and other lifestyle needs.

It is important to recognize that fresh and locally grown foods alone are insufficient both in the amount and distribution to meet the nutrition requirements of the growing and diverse population, or the particular needs at each life stage, at all socioeconomic levels.

Hence food processing is crucial.

Through the application of food science and technology, food processing helps transform raw food materials and ingredients into a variety of safe, nutritious, palatable, accessible, convenient, and affordable foods that are available year-round.
Although in some instances, food processing may reduce some nutrients, in others it increases long-term retention and bioavailability of some nutrients and food components.

For example, processing makes the important antioxidant lycopene more available from canned rather fresh tomatoes. Food fortification and reformulation are proven to address nutrient concerns such as additional vitamin D or reducing the use of food components such as added sugars.

Yet without food safety and sustainability, efforts to improve nutrient and diet quality may be ineffective. IFT urges that the Committee and the Departments of Agriculture and Health and Human Services engage food scientists and technologists in the deliberation process.

Their insights and diverse ranges of expertise are critical to the discussion of healthy dietary patterns and implementation of at-scale solutions that address consumer acceptance, taste, convenience, affordability and accessibility.
In addition to nutrition and food science, it is critical to address consumer dynamics and behavior as germane drivers --

MS. BROWN: Thank you.

MS. MOHAMEDSHAH: -- for consumer adoption of nutritious food products --

MS. BROWN: Thank you for your comment.

MS. MOHAMEDSHAH: Thank you.

MS. BROWN: We'll next move to this side, commenter number 58. Thank you.

DR. SMIGEL: Yes. Thank you. My name's Dr. Jacob Smigel. I'm an emergency physician, board-certified in emergency medicine, and I've been working in the hill country outside Austin, Texas, for the past five years or so.

I had a little bit of a Doc Hollywood experience going out there I think, and it's been beautiful. But I find that I'm doing different work than maybe I'd imagined I would do or that you imagined I would do.

Most of my time is spent not treating emergencies as you might imagine them, like falling
off of scaffolds, or run over by cars, but rather
dealing with the acute presentation of chronic
disease, non-life-threatening heart attacks,
strokes, diabetic complications, hypertension, for
instance.

And that really comes to no surprise to
you, because it’s actually truly the bread and
butter of emergency medicine. And I’ve had an
interesting nutrition since medical school. I got
a modicum of nutrition training in medical school.

It got excited and it made me curious,
and I’ve been asking patients what they think about
nutrition or what they think about healthy diets?
And what I can ascertain from five years of spending
time in Burnet, Texas -- and I’m representing those
people here today -- is that most people’s
perception of diet has to do with three facts that
they’re sure of: protein is good, got to get your
protein; all carbs are bad; and bananas have a whole
lot of potassium in them. That basically sums up
their nutritional knowledge of most people.

And furthermore, there’s a disconnect,
because when I ask them, do you think the foods that
you’re eating could make you sick? They say, oh,
yeah. Do you think maybe changing the foods that
you eat could make you well? I don’t know. They
don’t seem to think so. There’s a clear disconnect
there for me. And that’s why I think we need clear
public health messaging, the clearer the messaging
the better.

This works in regards to public smoking
or smoking campaigns or wearing seatbelts or safe
sex practices. This is how we change the health of
the public. And I’m here today to urge you for
clear messaging regarding the optimal diet for
human health.

I note from the 2015 Guidelines, for
instance, a notation that there’s strong evidence,
from mostly prospective cohort studies but also
randomized controlled trials, having shown that
eating patterns that include lower intake of meats
as well as processed meats and processed poultry are
associated with reduced risk of cardiovascular
disease in adults.
Moderate evidence indicates that these eating patterns are associated with reduced risk of obesity, type 2 diabetes, and some types of cancer, the scourge of the ER, if not all health care professionals.

And I imagine a continuum of clear recommendations from grade school through adulthood that this is demonstrated in public institutions, in our public schools, and I would recommend to the panel to recommend one dietary pattern, recommended to eat a whole-food, plant-based diet, as has been mentioned before, but around whole grains, beans and pulses, fruits, vegetables, nuts and seeds as the optimal way to make big changes to get big results.

MS. BROWN: Thank you. Could we have commenter 59? Sixty?

MR. LEAR: Good afternoon. I am Al Lear, director of science and research for the International Bottled Water Association, IBWA. Water, including tap, filtered and bottled, plays a vital role in supporting nutritional health.
IBWA applauds the 2015 Dietary Guidelines for recognizing the importance of water in a healthy diet, and we were glad to see inclusion of water as a topic under beverages by the 2020 Dietary Guidelines Advisory Committee.

Scientific research shows that drinking water positively influences overall well-being and supports a number of healthy bodily functions and organs. The Centers for Disease Prevention and Control’s Drinking Water Fact Sheet recommends that drinking enough water every day is good for overall health.

As plain drinking water has zero calories, it can also help with managing body weight and reducing caloric intake when substituted for drinks with calories. We were glad to see that the 2020 Dietary Guidelines will include a focus on children from birth to 24 months, because the development of chronic diseases starts at an early age, and so do good drinking habits.

Consistent with CDC recommendations, consumption of breast milk or infant formula, along
with the introduction of water for children between six and 12 months old, is encouraged. As the Committee reviews the hydration needs for all age groups, IBWA urges special consideration for hydration requirements for adults 65 and older.

Proper hydration is an important consideration for the well-being of everyone, but it is of increased importance for older adults, as noted in the National Center for Health Statistics Data Brief, which notes that previous studies have shown that adults aged 60 and older are among the most vulnerable to dehydration.

In terms of consumer education, the importance of water in a healthy diet is recognized by 48 countries throughout the world, who promote water consumption in the nutritional guidance graphics.

However, water is noticeably absent in the most prominent educational tool that the United States Government uses to promote a healthy diet, the My Plate nutritional guidance graphic.

Water, in addition to the presence of
dairy, should be included on the My Plate nutritional graphic, since it is critical to good health.

The National Drinking Water Alliance recently submitted a comment to the Dietary Guidelines Advisory Committee signed by 62 individuals and 13 organizations comprising researchers, scientists, nutritionists, clinicians, public health professionals, and public health advocates, urging that both the Dietary Guidelines for Americans and My Plate clearly and consistently encourage the benefits of water consumption in place of sugar-sweetened beverages.

Thank you for the opportunity to provide comments this afternoon. IBWA supports the work of the Advisory Committee and will continue working with the Advisory Committee, USDA and HHS staff as you prepare the 2020 Guidelines for Americans.

MS. BROWN: Thank you. We’ll move to our last commenter before closing remarks, number 61.
DR. McADAMS: Good afternoon. I’m Dr. Molly McAdams. I’m a rancher and steward of the land. I’m also a PhD-level scientist, a businesswoman, and the mother of a teenaged athlete.

My family’s Texas ranch, which is about 90 miles north of here, has operated and provided beef to Americans since the 1830s. Across the human lifespan, beef is a great-tasting, nutrient-rich food that plays an important role in any healthy diet, including healthy pregnancies, growth and development of children, adults who want to maintain strength and energy, older Americans who want to age vibrantly.

Beef delivers great nutrition as a single-ingredient real food that people enjoy eating. As a supporter of the National Cattlemen’s Beef Association and through the Beef Check-off, I’ve proudly contributed to scientific research about this nutrient-rich food.

And thanks to cattle-raising practices, beef is leaner than ever before. Over 20
gold-standard studies have shown that beef contributes favorably to heart health and other positive health outcomes, and today the amount of beef we eat is consistent with what science shows to support healthy diets and is within current DGA recommendations.

We don’t need to cut back on beef intake to get a healthier diet. Rather, we should eat more nutrient-rich foods and less empty calories. History and science have shown that limiting meat doesn’t help people eat better and can actually lead to overconsumption of refined carbs, as well as foods high in added sugars and sodium.

Research now shows that plant-based diets aren’t a silver bullet, either. In addition, many Americans benefit from a low-carb, higher-protein diet with meat, and DGA should encourage this choice.

I’m a former grocery executive who led product development and health and wellness. I can tell you that America’s favorite protein food is beef. What a great opportunity, because beef pairs
perfectly with foods people aren’t eating enough of, like vegetables and whole grain.

In fact, many Americans would benefit from getting more nutrients like protein, iron, B vitamins and choline, all of which are easily found in beef but are not as easily found in plant foods.

On behalf of all who grow cattle, which are uniquely suited to convert inedible plants into high-quality, nourishing protein for humans to enjoy, and all of this is done on land that’s not suitable for farming crops, and as the mom with a growing athlete who needs protein-rich diets to thrive, I thank the Committee for your work, your steadfast commitment to developing 2020 recommendations based on sound nutrition science.

MS. BROWN: Thank you. That concludes our oral public comments, and we’ll now move to closing remarks.

CHAIR SCHNEEMAN: Great. Well, on behalf of the Committee, thank you to everyone for, first of all, preparing the comments, doing them in a very timely manner, and thinking about the needs
of the Committee.

    We appreciate your being here, and we appreciate the effort that you’ve made with those comments.

    I once again want to thank the staff at the Children’s Nutrition Research Center, where we’ve been hosted for the last two days, that we really have enjoyed being here, and we’ve really enjoyed the support from that staff.

    Likewise, to the USDA and HHS staff, who really support the work of this Committee but also made sure that this meeting went forward in a very efficient and productive way. So thank you to all of you, to helping the Committee meet its goals, meet its targets.

    I would remind people that, in terms of comments, the comment period is open until the Committee finishes its work, but we would encourage you to submit comments by February 7 to have the greatest impact in terms of the work ahead of the Committee right now.

    And I would also remind folks -- I
commented earlier, and I just remind you again that
the website often will have additional information
about the protocols, how we’re defining things
within those protocols, any modifications that
we’ve had to do, and as the Departments identify
areas where further information is needed under the
frequently-asked questions to help the public
understand the process that we’re using, that that
information is there. And either sign up to be on
the listserv for the Dietary Guidelines, but check
back on that website if you’re looking for
information, just to get what’s latest and what’s
current.

And with that, I thank my Committee
members for your diligence, your hard work, for
paying attention through two long days, and
actually a day of subcommittee meetings before
then.

And I’ll turn it back to Dr. Stoody.

DR. STOODY: Thank you. And yes, thank
you to members of the Committee for what has been
a very productive meeting. It really worked out
that this timing, I think, was the right time to bring everybody together, so thanks for those productive conversations in those subcommittee meetings, and the public discussion as well.

I think, as Tim said, there was very nice discussion over these two days. So thank you for that. Thanks to the members of the public and the public commenters, who joined us as well.

And if we can go to the slides? Kevin?

So just a little bit more in relation to what Dr. Schneeman said, and that is a wrap for meeting four. And definitely thank you to the Children’s Nutrition Research Center for all of their support throughout this meeting.

In case -- if you would like to refer back to information from this meeting, we will post, as we always do, the recordings from this meeting, as well as the presentations, minutes, and transcripts.

And we’ll get that information up as quickly as possible, and we will send a notification out through our listserv. If you sign up for our
listserv, we’ll be sure to notify you when that
information is available.

In case you missed it yesterday, we did
announce that the Committee will hold a meeting on
its report, and this is the first time we’ve done
this, where it will be a meeting really devoted to
the Committee fine-tuning and discussing their
report before they submit to the Departments by the
end of May.

So that meeting will occur on Monday,
May 11. It will be webinar only, and we’ll provide
more information about that as we get closer.

So as Barbara mentioned, we do try to
keep our website up to date, and if you’re
interesting in signing up for our listserv, go to
DietaryGuidelines.gov.

At the bottom of the page, there is a
link that says "Stay Updated." You click on that,
you can sign up for the listserv.

As Barbara did too, of course, in
addition to thanks to the Committee members, we do
like to take a minute to thank the many staff who
are involved in this process. And these are individuals who support the nutrition evidence systematic reviews. They support the data analysis with staff from across USDA and HHS; additionally, the food pattern modeling analyses. These individuals help process the about 17,775 public comments that we’ve received to date. They help support the keeping transparency at front of mind with updating DietaryGuidelines.gov. There are just so many elements, and one of the things that we rarely do is public meetings, and everybody kind of develops new skills to make it happen. So thank you for that.

I do want to note, as we’ve said, this was -- we have not had a meeting like this outside of the D.C. area in 25 years, and we contacted our ARS affiliates in a couple of different locations. Houston was just awesome. They were -- just the staff was -- sent us pictures. I mean, it’s like we’d never been here, but it’s like we had. So they thought of every single detail.
And there are two staff members in
particular that we would like to recognize, and they
are Perry Rainosek and Adam Gillum, and if you’ll
come down here very quickly?

(Applause.)

DR. STOODY: We have certificates of
appreciation to both of them, signed by Under
Secretary Lipps, on behalf of FNCS, for your support
of making this meeting a success and your really
huge attention to detail.

So thank you.

(Applause.)

DR. STOODY: Yeah. Thank you. So
with that, that’s a wrap. And with that, we’ll
adjourn for today, and we look forward to seeing you
at our next meeting in March, in Washington, D.C.
Thank you.

(Whereupon, at 3:57 p.m., the meeting
was adjourned.)
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CERTIFICATE

This is to certify that the foregoing transcript

In the matter of: Public Meeting

Before: 2020 Dietary Guidelines Advisory Committee

Date: 01-24-20

Place: Houston, Texas

was duly recorded and accurately transcribed under
my direction; further, that said transcript is a
true and accurate record of the proceedings.

[Signature]
Court Reporter