

**Formulation of the 2010 Dietary Guidelines:
Recap of Meeting #2
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Last week (1/29-30/09) I spent two fascinating days at the 2nd meeting of the 2010 Dietary Guidelines Committee (DGC). (The first meeting was held on Oct 30-31, 2008 and the lengthy transcripts is now available (<http://www.cnpp.usda.gov/DGAsMeeting1.htm>). Check out the timetable for the whole process which will culminate in the publication of the revised Dietary Guidelines Fall 2010.

I was struck by the openness of this process and felt I had a front row seat to eavesdrop on conversations among leading health and nutrition researchers (members of the panel:

<http://www.cnpp.usda.gov/Publications/DietaryGuidelines/2010/DGAC/DGACpressrelease10-24-08.pdf>. By the way anyone can attend (no cost). You just have to register at the website. The link to open the Dietary Guidelines Pandora's box is: <http://www.cnpp.usda.gov/DietaryGuidelines.htm>.

The bulk of the morning on Day 1 was spent listening to nearly 50 representatives from food/nutrition/health companies, organizations/trade associations and a scattering of individuals; provide their allotted 3 minutes of oral input. (These comments along with many written comments are continually being updated and available for review online: <http://www.cnpp.usda.gov/DGAs2010CommentSummaries-Mtg2.htm>).

These oral comments fell into several basic buckets:

- a push for more whole foods (whole grains, fruits and vegetables) and less processed foods
- promotion of vegetarian and/or vegan diets
- concern about childhood nutrition (or lack thereof) and the nutrient content of school lunches
- support to continue the current fortification of grains with folic acid because this has helped reduce neural tube defects by 26%
- industry and trade associations' support for or defense of their foods/ingredients – from sugar and salt, to herbs and spices, rice and grains, milk/dairy, pork, beef and beverages
- encouraging DGC to make dietary guidelines easy to follow and to go beyond just web-based materials due to lack of access by many

Interestingly you could tell panel members were listening because through the next day and a half they alluded to these oral comments on occasion.

Next the NEL – Nutrition Evidence Library (not to be confused with the American Dietetic Assoc Evidence Analysis Library – which will be utilized to some extent) was described by a USDA staffer. The staff and committee members will be building the NEL with research studies that help answer the questions they are asking (plenty of these are noted below).

Studies will be added using the PICO format (this was new to me):

Population or primary problem

Intervention: intervention, exposure or procedure

Comparators (in the study)

Outcomes (study results)

Eventually the NEL will be made available to the public (most likely when the DGs are completed).

The next two presentations were provided by staffers from USDA and related agencies: The first focused on the *Usual Nutrient Intakes of Americans*. The presenter discussed the currently used data collection process for NHANES data and the Automated Multiple-Pass Method. She provided *usual intake* (defined as the long-run daily intake of a nutrient or food, of interest to policy makers to assess status of the population-at-large) data based on '01-'02 NHANES. The key findings of usual nutrient intake (24 nutrients) compared to Dietary Reference Intakes (DRIs) noted were:

- Energy intake was underreported overall by 11%, <3% for normal weight and 16% for overweight.
- Intakes of vit E, magnesium, vit A, vit C, calcium, potassium, fiber, and choline generally fall below estimated average requirements.
- Sodium intake for all adults (men and women) is >97% above adequate intake
- Cholesterol intake usually falls above 300 mg/day.

The second staffer presented a new way of analyzing usual intake data beyond the 24 hour recall, noting that 24 hour data only provides a snapshot in time and intake can vary day to day, seasonally, etc. Researchers (from National Cancer Institute) have developed a methodology to extrapolate data from NHANES ('01-'04) surveys to more accurately show *usual intake*. Using this method observations across most age groups show:

- insufficient fruit is consumed
- insufficient vegetable servings (all types/groups) are consumed (even counting potato chips and French fries)
- insufficient whole grains (with most grain intake being from non-whole grain)
- insufficient fish
- insufficient meat intake (and meat alternatives) – other than adult men and women whose intakes are in excess
- insufficient milk, yogurt, cheese
- insufficient oils
- excess solid fats
- excess added sugars

A key point (but not surprising): when energy consumption from solid fats, alcohol and added sugars (called SoFAAs): Among all sex-age groups, 75% or more of the population had intakes which exceeded the maximum recommendation for discretionary calories.

The third speaker (USDA staff) provided an interesting presentation showing how they are developing food intake patterns using the current food pyramid. Staff will use these to recommend the amounts of food various age groups need from each food group. This

is quite tedious work but in the end is intended to provide guidance to consumers about food choices within each food group (particularly in relation to the amount of SoFAAs).

To the meat of the matter...discussions among committee members

It appears that the 13 panel members (including chairperson Linda Van Horn, PhD, RD) will work (with lots of help from USDA staff). They have broken themselves up into subcommittees largely based on areas of interest and expertise. These subgroups are being chaired by a DG committee member and other DG committee members serve under the chair on various committees. There's much cross fertilization and many cross cutting issues between subgroups. They are attempting to not duplicate efforts with their questions or literature reviews.

As chair Linda Van Horn made a few points that resonated with me:

“Our never ending theme here has to be obesity prevention.”

“We need to focus on children to prevent obesity – primary prevention.”

Each subgroup chair shared the following in their presentations:

- Review of the questions asked by the 2005 DGC and whether these were sufficient, still relevant, needed revision.
- The need to introduce new questions for study and determine if further research has been conducted/published since 2004.
- The need for further expert information, guidance (from outside experts) who will be invited to the next meeting.

Below I will note the subgroups, chair of the subgroup (and chairs of the sub, sub groups) as well as a few interesting threads of conversations:

Group: Sodium, Potassium and Water

Chair: Lawrence Appel, MD, MPH

Water:

- The average American is not chronically dehydrated (this point was made by the beverage industry) (some concern with insufficient intake in the elderly)
- The issue of satiety with liquids vs. solids, can consuming water pre-meal decrease intake/increase satiety?

Potassium:

- What are the health effects of potassium intake on health? (noted that potassium seems especially beneficial to African Americans)
- Interactions between sodium and potassium
 - 2005 DGs brought out the insufficient intake of potassium and the ability of more potassium to blunt effect of high sodium
 - Continue to explore whether we need even more potassium due to our high sodium intake
- Mention of an ongoing IOM panel which is looking at strategies to reduce sodium intake (see www.iom.edu)

Sodium:

- Want updated data to show what is contributing the high sodium levels to the American diet
- What are the effects of salt/sodium intake on health in adults and children?
 - Many people would benefit from <2,300 mg/day, the 1,500 mg/day intake applies to about 60% of adults (overweight, hypertensive, etc)

Group: Nutrient Adequacy/Dietary Patterns

Chair: Sharon M. Nickols-Richardson, PhD, RD

- Nutrient adequacy defined as minimal intake to meet nutritional needs vs. energy balance
- ID shortfall nutrients (eg calcium, Vit D) and when deficient what is the impact on health outcomes
 - o Mention was made about an ongoing IOM panel looking at calcium and Vit D levels and whether they need to be revised from 2002 DRIs
- How can we increase the flexibility of food patterns to maximize nutrient adequacy
- What are the dietary patterns of people with high SoFAAs intake and what are their health outcomes? (comment made that long term data > 6 mos is not robust or plentiful)
- What environmental factors related to dietary patterns are associated with achieving recommended nutrient/food group intakes? And what's the evidence you can change them?
- What individual behaviors related to eating/food intake help/hinder nutrient adequacy: eg portions, TV viewing, skipping breakfast, food habit purchasing, sugar sweetened beverage consumption, etc. And what's the evidence you can change them?
- Special nutrient needs for certain sub groups: children, pregnant women, elderly
- Is there a health consequence (public health problem) from insufficient intake of certain shortfall nutrients/food group (eg Vit E we don't consume enough according to intake data but are there health repercussions?)

Group: Energy Balance, Weight Management and Physical Activity

Chair: Xavier Pi-Sunyer, MD, MPH

- What are optimal proportions of fat and carb to maintain BMI?
- What behaviors and environmental factors related to food intake most contribute to maintaining a healthy weight vs unhealthy weight?
- What's the optimal macronutrient mix to achieve BMI/long term weight management?
- What dietary patterns are associated with nutrient adequacy?
- How much physical activity does it take to maintain healthy weight, loose weight, avoid weight regain?
- Self monitoring is consistently important element of weight maintenance
- Concepts of mindful eating (Bryan Wansink's research mentioned)

Subgroup: Pregnancy/Pediatrics

Chair: Christine Williams, MD, MPH

- Will rely on many of the evidence analyses done by the American Dietetic Association (Evidence Analysis Library)
- Discussed topic of growing information and guidelines: excess gestational weight gain (an IOM report is expected on this topic)
- How does the nutritional status of the mother impact what happens to the nutritional status of the child first 2 years of life?

Group: Carbohydrate and Protein**Chair: Joanne Slavin, PhD, RD**

- Discussed the ecological framework of food intake (Mary Storey's work MN mentioned)
 - o Literature is emerging about the "neighborhood effect" of obesity
- 2005 review of carb and dental caries, incidence of diabetes, etc and update
- Review and discuss Glycemic Index and Glycemic Load concepts and determine if these are helpful in dietary guidance
 - o It doesn't seem to help people make healthier choices
 - o Do people avoid certain foods which are healthy?
- Review significance of added sugar intake to human health
- Review the health benefits of fiber, focus on the quality of fiber consumed (from whole foods vs added functional fiber) – any differences on health
 - o Fiber continues to be a shortfall nutrient
- Will look at added sugars and nonnutritive sweeteners to search for health effects, help/hinder weight gain/loss?
 - o Note: literature review on nonnutritive sweeteners not done in 2005
- Exploratory searches for research on health benefits and consumption of legumes, seeds, nuts and other plant products
- Does the type of carb consumed alter body weight and/or body weight maintenance?
- What's the role of non-digestible carbohydrate (dietary fiber) in healthy?
 - o Prebiotics, probiotics, whole foods (exploratory search planned)
- Interested in satiety and weight loss – are there carbs that help (noted a high priority of interest)?
- Discussed the need for a consumer survey about carb – from an image perspective. Comment made by Linda Van Horn that the consumer doesn't equate sugars wit carbs

Group: Ethanol**Chair: Eric Rimm, ScD**

- Will look at the impact of alcohol on people with diseases and the diet quality they can maintain when consuming various levels of alcohol
- Consider adding alcohol to discretionary calories (2005 only added sugars and solid fats) (comment by Linda Van Horn)
- 10% of men are in the 90th percentile for alcohol intake (3.5 drinks/day)
- Discussion about suppression of folate absorption with alcohol intake and general discussion about nutrient absorption with alcohol intake
- Relationship of alcohol intake in relation to obesity
- Discuss successful interventions for quitting alcohol intake

Group: Fatty Acids**Chair: Tom Pearson, MD, PhD, MPH**

- Look at trends in fatty acid consumption, trend tables 01-02 to 05-06 (most current data)
- Note that ATP-IV panel has been convened by NHLBI
- CRP – a biomarker at best
- N-3 – growing body of evidence around benefits, from hypertension, cognitive functioning, mental health, prostate cancer
- N-3/N-6 ratio – what is best for best health outcomes?
 - o AHA just published a statement last week on N-6
 - o No one is arguing anymore about the benefits of N-3, now arguing about potential negative effects around higher intakes of N-6 (cancer and brain function)
- What are the health effects of nuts, fish, eggs, chocolates and meats?
 - o This gave rise to a discussion about how difficult it is to delve into the benefits/risks of specific foods vs. food categories
 - o Protective effects of fish from epidemiological data but not from RCTs – “less than convincing”
- Satiety – what are the effects of sat fat, MUFA and PUFA on satiety
 - o Mention of CNS appetite signals
 - o GI satiety signals

Group: Food Safety and Technology**Chair: Roger Clemens, DPH**

- 2005 added section on personal food safety and this will be continued
 - o Fight Bac campaign integrated
- Discussion of methyl mercury in fish and controversy around EPA and FDA guidelines which are in disagreement
 - o Many issues discussed here related to populations at risk, type of fish (large, older) vs. all fish
- Note: by 2010 move ½ of the fish people consume will be farm raised
- Mention that attention will be paid in 2010 revision to food allergies

In conclusion:

The 3rd meeting of DGC will be April 29-30, 2009. I plan to be there and after the meeting will again provide a similar write up. And if you feel so inclined, write and submit comments to USDA at <http://www.cnpp.usda.gov/DietaryGuidelines.htm>. Instructions about submitting comments are provided. Feel free to e-mail me with questions/comments at hope@hopewarshaw.com.