

Nutrition Research & Hot Topics

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Oftentimes the reporting of nutrition research leaves people confused about what to eat. This Q&A aims to share evidence on some current hot topics.

Below are nutrition questions that I've been asked recently by healthcare providers, selected research on the topic and my take.

Is low carb or low fat better for weight loss?

This decades long debate still continues and now researchers are looking to genetics and epigenetics for clues as to why there is individual variation in weight loss responses to diets.

- 1) The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) tested low carb vs low fat diets in a rigorous, but small trial. The results: insulin fell on the low carb diet, but people lost more fat when cutting fat than carbs. Metabolic rates dropped on the low carb diet. [http://www.cell.com/cell-metabolism/abstract/S1550-4131\(15\)00400-3](http://www.cell.com/cell-metabolism/abstract/S1550-4131(15)00400-3)
- 2) Harvard's Pounds Lost study is the largest trial of its kind comparing low carb and low fat diets and found no difference of clinical significance. They concluded that the important question is whether one can stick to a diet long term, because caloric restriction was ultimately most important. When looking at genotypes, they have small and preliminary findings only. <http://www.ncbi.nlm.nih.gov/pubmed/19246357>
- 3) The Stanford Prevention Research Center (SPRC) has been running a large trial comparing low-fat vs low-carb diets. So far, the difference between the two groups' weight loss is small, but there is a large variation among participants. They are now looking for genetic and epigenetic clues to why some individuals lose more weight than others. The study is still in progress. Preliminary results: <http://onlinelibrary.wiley.com/doi/10.1002/oby.21331/abstract;jsessionid=BBA6BDCB9813FD68301B33378025D51D.f01t03>
- 4) The current Expert Panel recommendations for weight loss from the American College of Cardiology and The Obesity Society are as follows:
 - a) Cutting calories is most important - whether by cutting carbs, fat, portions or any other method of calorie control



- b) It's a good idea to first cut refined carbohydrates (white flour-based foods) and sugar when trying to lose weight
- c) Pick a diet you can maintain for life
- d) Favor fruits and vegetables

http://circ.ahajournals.org/content/129/25_suppl_2/S102.full.pdf

- 5) The 2015 US Dietary Guidelines for Americans also recommend you choose a diet that cuts calories and that you can maintain long term

<http://health.gov/dietaryguidelines/2015/>

My take: To lose weight, find a diet that allows you to cut calories that is something that can become your new way of eating. Make sure to eat a fruits or vegetables with every meal/snack, favor unprocessed foods and eat naturally high-fiber foods. Have a general knowledge of serving sizes so you can avoid serving yourself more than you need (we tend to finish whatever is put on our plates). Serving sizes have increased dramatically since the 1980's which means most of us mindlessly eat much more than we need. Follow the studies to see the results of new studies on genetics and epigenetics.

Do red and processed meat cause cancer?

For years, the American Cancer Society, the American Institute for Cancer Research and the World Cancer Research fund have recommended that we eat less red and processed meat. Last fall, the WHO published a very well-publicized report saying the same. The WHO classified red meat as a Group 2A carcinogen "probably carcinogenic to humans" and processed meat as a Group 1 carcinogen "convincing evidence it causes cancer." Tobacco smoking and asbestos are also category 1 carcinogens. This only means they both have sufficient evidence to conclude they are both carcinogenic, not that they are equally dangerous as was often mis-reported in the news media.

For every serving of red meat you eat (3 oz) each day, your risk of colorectal cancer increases by 18%. There is the same risk for each daily serving of processed meat (2 oz) that's eaten daily. Questions on what is red and processed meat? See this FAQ:

<http://www.who.int/features/qa/cancer-red-meat/en/>

My take: Limit processed meats, eat less red meat.

Is saturated fat ok now?

No, the same dietary advice has prevailed since the 2005 Dietary Guidelines for Americans - replace saturated fat with unsaturated fat. **But** don't replace saturated fat with carbohydrates, that won't reduce your risk of cardiovascular disease.

Frank Hu, professor of nutrition and epidemiology at Harvard's T.H. Chan School of Public Health says, "Saturated fat is still bad for heart disease risk. Evidence from studies on thousands of people shows that if you replace saturated fat with unsaturated fat, you reduce your risk of heart disease." Most experts agree with this.

The founder of Stanford's Health Improvement Program, cardiologist Dr. Jack Farquhar speaks about why "Butter is not Back!" in this open access [on-demand webinar](#).

My take: As above, the mistake many people make is cutting saturated fat and replacing it with carbohydrates. When their lipid panel becomes less favorable, many people conclude it was the carbs. Look at how much saturated fat you're eating. The goal is no more than 10% of your daily calories should come from saturated fat and replace saturated fat with unsaturated fats such as seafood, raw nuts, olive oil. For a quick reference on how many grams of saturated fat you should eat in your diet, see the chart below:

Total Calorie Intake	Limit on Saturated Fat Intake ^a
1,600	18 grams or less
2,000	20 grams or less
2,200	24 grams or less
2,500	25 grams or less
2,800	31 grams or less

^aAim to consume less than 10% of total calories from saturated fat.

Can I eat eggs?

Yes! The 2010 Dietary Guidelines recommended we limit our cholesterol intake to 300 mg/day (a large egg has 187 mg cholesterol). In the recent 2015 Dietary Guidelines - which were released in early 2016 - they removed the cap on cholesterol which is in line with research on dietary cholesterol and serum lipids. The evidence shows that cholesterol is no longer "a nutrient of concern since dietary cholesterol doesn't increase blood cholesterol levels." Eggs do

have some saturated fat, but less than 2 grams per large size egg. (Refer to the question above about saturated fat limits.)

My take: Eggs are a healthy source of protein and the yolk contains Vitamin D and B-12. The fat in eggs is a mix of saturated and monounsaturated fats.

Is artificial sweetener bad for me?

Currently, the FDA lists the following high intensity sweeteners on the Generally Recognized as Safe (GRAS) list. Below I made notes where there are some studies that suggest adverse health effects.

- Saccharin: this was found to cause cancer in human and animal studies, it was removed from the GRAS list, but the FDA later said the studies were inclusive and added it back to the safe list.
- Aspartame: three independent studies found this caused cancer in mice and rats
- Acesulfame potassium (Ace-K): The Center for Science in the Public Interest (CSPI) lists this as a poorly tested sweetener.
- Sucralose (Splenda): a study presented in 2013 and published in 2016 showed sucralose increased the lifetime risk of leukemia in male mice.
<http://www.tandfonline.com/doi/abs/10.1080/10773525.2015.1106075?journalCode=yjoh20&#.VvBBf5YrKqA>
- Neotame
- Advantame
- Steviol glycosides (Stevia)
- Luo Han Guo fruit extracts

The CSPI lists saccharin, aspartame, ace-K and sucralose as additives to avoid based on the available evidence.

But all the sweeteners listed above are approved by the FDA currently. In order for a food to be on the GRAS list, the food manufacturers provide data that say it's safe, but the FDA does no safety testing or independent review. Advocacy groups are currently fighting for increased oversight of how additives are approved for the GRAS list.

My take: Why risk it?

The recent study published on sucralose raises the question of whether it is indeed biologically inert as the manufacturer claims. I know some diabetics don't want to 'waste' their carbs on

sugar and use artificial sweeteners. I would take a look at how much you're using and why, and see whether you can reduce how much you use or avoid it. One packet of Splenda, for example, has 4 kcals and 1 teaspoon of sugar has 16 kcals. If you can suffice with one teaspoon of sugar, the calorie difference is negligible. Of course, not adding sugar is even better, but that's not realistic for everyone. When people ask "should I drink regular soda or diet soda," my preferred answer is neither, please. I wouldn't start drinking regular sugar-sweetened soda though, for fear that diet soda causes cancer. I would look at how much diet soda you're drinking and slowly titrate it down to an amount you find acceptable. Also, follow the research and advice of credible advocacy organizations, like CSPI.

What is the MIND diet?

In a recent study, researchers at RUSH found that the MIND diet, a hybrid of the traditional Mediterranean diet and the Dietary Approaches to Stop Hypertension (DASH) diet, decreased risk of Alzheimer's Dementia (AD) by 53% when participants scored in the top tertile. They are currently doing a dietary intervention clinical trial to replicate the results.

<http://www.ncbi.nlm.nih.gov/pubmed/26086182>

Another recent studies has also shown the heart health is linked to brain health, so it makes sense the diet for cardiovascular health is the same as for brain health:

<http://jaha.ahajournals.org/content/5/3/e002731.full>

If you took the 2016 Provider Well-Being survey, you should have received your own score and see how your diet compares with the MIND diet study results.

Here are the MIND diet guidelines to get the highest 'score':

- Eat \geq 3 servings of whole grains daily
- Eat 1 salad daily + another vegetable
- Snack on nuts most days of the week
- Have beans approximately every other day
- Eat poultry at least twice per week
- Eat fish at least once per week
- Eat berries at least twice per week
- Drink 1 glass of wine (5 oz) daily
- Limit fast food and fried food, butter and cheese to one serving per week



What is the Mediterranean Diet?

Also called the Traditional Mediterranean Diet, this is a diet pattern based on the dietary intake of residents of Greece, Southern Italy and Spain during the 1940-1950s. Over 50 years of research and epidemiological studies have shown benefits to this way of eating. See Oldways' food pyramid below to see the dietary components. This dietary pattern has more fish and less dairy than the MIND diet.

In addition to food, other keys to the Mediterranean lifestyle are daily exercise, sharing meals and appreciation of the pleasures of good food.

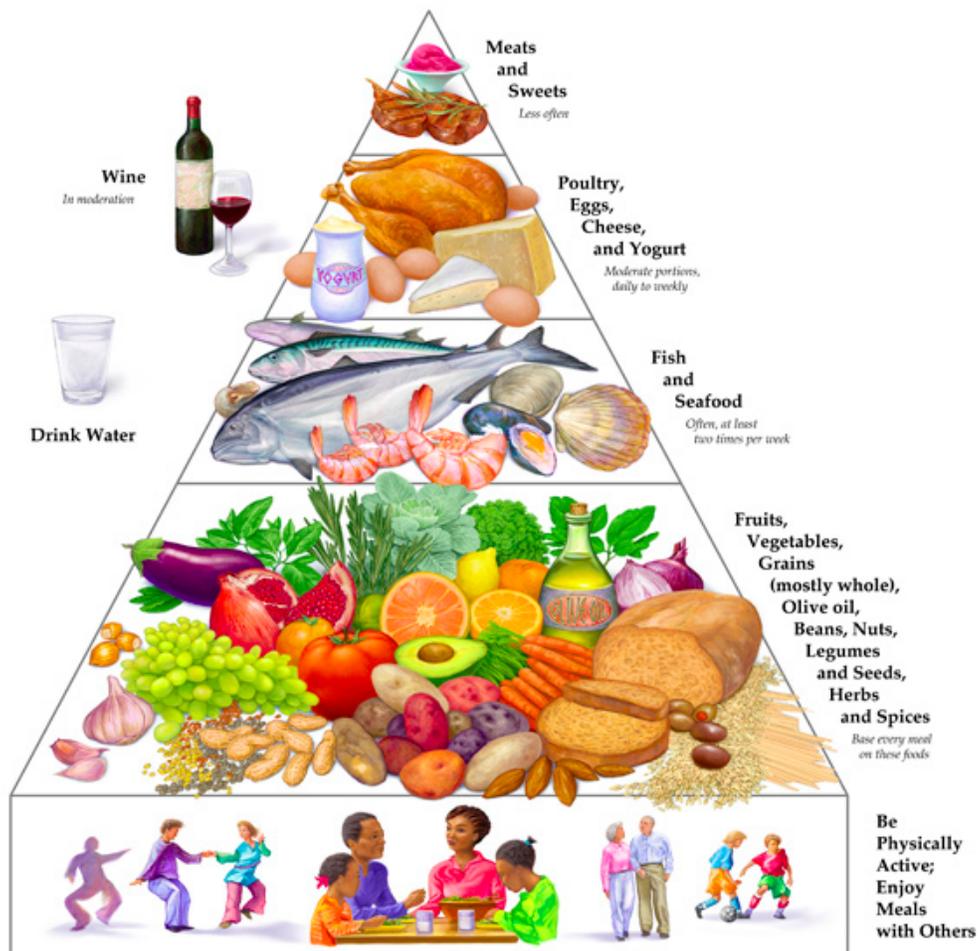


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