

Thoughts on Diet and Hearing Loss

Published: March 12, 2014

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Yes, it matters. You are what you eat. Really, there's no room for debate. And yes, the quantity and quality of food you eat does appear to impact hearing (more on this in a few paragraphs). To be fair, one cannot pragmatically address diet in isolation from exercise, as calories consumed and calories expended are clearly related! Exercise matters a great deal, too, specifically with regard to cognitive ability and how the brain processes sound.

The United States is the most obese country in the world because the calories we consume are (generally speaking) plentiful in quantity and inadequate in quality (please note, I am not saying never have great tasting, fun-to-eat junk food. I am saying "let the eater beware." Yes, sometimes I eat fun foods, too, it's just not part of my typical day-to-day veggie/vegan diet). No preaching here, I am not telling you what to eat. We all get to pick and choose and this is just an opinion editorial, which confirms exactly what your mother told you about junk food!

Perhaps we might divide food consumption into two general categories. Category One might be "restaurant foods," which for many people (often) includes a juicy grilled steak, pizza, baked potatoes with all the delicious dressings, fries, cheese burgers, nachos, Rubeen sandwiches, hot dogs, chilly cheese steaks, shrimp, lobster (I know, many of you are salivating) and...a diet cola (Really? Diet cola?). And let's make Category Two "store bought" (i.e., grocery store prepared) foods. I recall hearing years ago something like...If the food you're buying contains a nutritional analysis—the little nutrition facts tags that document the calories, the fat content etc.—you probably shouldn't be eating it! That is, fruit, nuts, veggies and FRESH fish/meat/poultry do not have nutritional facts labels. TaDa! Then, consider (most) breakfast cereals, soda, macaroni and cheese, ice cream, frozen dinner foods, packaged snacks, etc...lots of nutrition fact labels on those, and to my way of thinking, they likely should not be consumed. And if I may delve into fruits...seems to me they are mostly not good for us (except bananas), they are essentially sugar and they possess little/no nutritional value...sorry! I know, people eat the red and blue ones for antioxidants, but clearly this is not as easy and straight-forward as most people think.

Remember Watson and Crick from DNA? Well, Dr. Watson recently published his theory that antioxidants "more than likely cause—rather than prevent—cancer. Dr Watson was pretty clear his new theory is "among my most important work since the double helix." He reports mesenchymal (connective tissue, derived from mesoderm) cancers inevitably possess grossly heightened amounts of antioxidants that block cancer therapies. Watson said "...the time has come to seriously ask whether antioxidant use more likely causes (rather) than prevents cancer..." and "...blueberries best be eaten because they taste good, not because their consumption will lead to less cancer...." (see [article on antioxidants](#)).

The [United States Centers for Disease Control reported January, 2012](#) (CDC) "more than one-third of adults and almost 17 percent of youth were obese in 2009–2010. There was no change in the prevalence of obesity among adults or children from 2007–2008 to 2009–2010. Obesity prevalence did not differ between men and women. Adults aged 60 and over were more likely to be obese than younger adults."

Likewise, [ABC News reported in March 2013](#) that Dr. Kumar of the Pediatric Weight Clinic at the Mayo Clinic said “Childhood obesity affects every organ system in the body.” (Really? We need a Pediatric Weight Clinic? Kind of embarrassing for the home team, just sayin.’) Further, obesity places children at an increased risk for “diabetes, high blood pressure, and high cholesterol. In fact, roughly 70 percent of obese youth are thought to have at least one risk factor for heart disease....” ABC News notes “experts agree that obese youth are at high risk of becoming obese adults, prompting even more health problems, including joint disease, heart disease, sleep apnea, and certain cancers.” And of course, obesity increases the risk of psychological issues, too. “Childhood obesity has been linked to depression, anxiety, and poor self-esteem.” I could go on, but let’s face it, we all know.

So what does this have to with hearing loss?

In the *International Journal of Audiology* (2013, Vol 52, p. 369-376), Spankovich and Le Prell report “a significant relationship between dietary nutrient intake and susceptibility to acquired hearing loss is emerging.” Indeed, the authors reflect on the National Health and Nutrition Examination Survey (NHANES, 1999-2002), which included some 21,000 participants. Of course, once you whittle it down to those with audiometric data (audiometric questionnaire, otoscopic exam, tympanometry and pure tone air conduction tests at 0.5, 1.0, 2.0, 3.0, 4.0, 6.0 and 8.0 kHz) they still had a sizable pool of some 2,366 adults, categorized by “age at time of interview,” resulting in five age groups 20-29, 30-39, 40-40, 50-59, and 60-69 years). Of note, the pure-tone averages (PTA) of the left and right ears were averaged together for each participant and the Low Frequency PTAs (0.5, 1.0 and 2.0 kHz) and High Frequency PTAs (3.0, 4.0, 6.0 and 8.0 kHz) were reported.

Of course it’s far more difficult to quantify the quantity and quality of foods consumed over a long period of time, than it is to quantify hearing loss at a moment in time!

The Healthy Eating Index (HEI) was used to report “overall dietary quality” based on estimates of consumption of meat, dairy, vegetable, fruits, and grains and based on estimates of fat, saturated fat, cholesterol, and sodium intake. HEI score ranges from 0 (worst) to 100 (best). The average HEI score of the 2,366 participants was 63. For details on how the HEI numbers are derived, refer to Spankovich and Le Prell (2013) and the [CDC](#).

The CDC Web site (June 15, 2013) states: The Healthy Eating Index (HEI) is a measure of diet quality that assesses conformance to federal dietary guidance. USDA calculated Healthy Eating Index component and overall scores from dietary recall interviews collected during the National Health and Nutrition Examination Survey (NHANES). The overall HEI score is the sum of 10 dietary components, weighted equally. Each component of the index has a maximum score of 10 and a minimum score of zero. The maximum overall HEI score is 100. High component scores indicate intakes close to the recommended ranges or amounts; low component scores indicate less compliance with the recommended ranges or amounts.

Spankovich and Le Prell reported, “there was a statistically significant negative relationship between HEI and High Frequency PTA....” They report participants with higher HEIs had better HFPTAs and there was a similar trend (but not statistically significant) for Low Frequency PTAs. That is, people who consumed better quality calories had better hearing. In their summary and conclusions, Spankovich and Le Prell stated, “the potential effects of healthy eating on the auditory system require additional evaluation in prospective studies. If the relationships between diet and hearing function suggested here are confirmed, clinicians may be able to improve patient care via the integration of advice on healthy eating into this clinical dialogue.” As you can tell, I thought

their paper was very important and overall excellent and it certainly brings forward issues most of us never thought about previously (i.e., diet and hearing). I urge each of you to get a copy. In the meantime, the only other thing I'd add is that as well-educated, state licensed doctors and healthcare professionals, shouldn't we consider the whole person, all of the time, anyway?

Just sayin'.

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