

Sports Nutrition

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The Athlete's Kitchen

Confused about what to eat? You are not the only one! Even I get frustrated with the changing landscape. One week medical reporters tout the benefits of taking a vitamin, and then the next week, they tell us it does no good. One week, the message is *don't eat eggs*; another week, eggs are OK. Aarrgh! To help resolve some of this confusion, the Tufts University Friedman School of Nutrition Science and Policy gathered experts to speak at a conference held in Boston (Oct. 2007). Here are some highlights about nutrition confusion that might be of interest to you.

Source of confusion #1. Genetic differences. Assuming you are health-conscious, you likely want to know if you should avoid foods such as eggs, salt, sugar. And you may also want to know if you should take supplements such as fish oil, calcium, vitamin D. While those seem like simple questions, the answers are difficult because we all have genetic differences that impact our nutrient needs. For example, salt can raise blood pressure in one athlete, but make no difference in another. Genetic variation skews the research results and ensuing recommendations.

Within our lifetime, genetic testing will offer personalized answers regarding who should or should not eat such things as salt. But genetic testing also raises concerns. That is, if you tell an athlete he is salt-sensitive and his blood pressure will rise if he eats salt, he will likely be inclined to cut back on his salt intake. But if you tell him salt has no effect on his blood pressure, will he abandon all discretion and consume extraordinary amounts of salt that create other health problems? We do not yet know if genetic testing is a wise way to resolve nutrition confusion!

Source of Confusion #2. Inadequate research. Meaningful nutrition studies are very difficult to produce. Good studies need to explore, for example, the effects of different doses of a vitamin over a long period of time in all different kinds of people, including large numbers of men, women, children, seniors, athletes, whites, africans, etc.. Such studies are not only very expensive to complete but also tough to fund. Food companies don't reap profits from funding such research because they cannot patent foods. Drug companies, in comparison, can get patents and make huge profits once a drug is proven effective.

Source of Confusion #3. Ethics. Unlike drug studies in which the subjects are drug-free until they take the drug, nutrition studies use subjects that already have stores of vitamins in their bodies. Creating a baseline deficiency in each subject would be unethical. Hence, nutrition research can only contrast a high vitamin intake with a low intake. To determine the thresholds at which a vitamin creates desired effects can take weeks or months—and lots more money.

Source of nutrition confusion #4. Nutrients work synergistically, so it's hard to know what to study. For example, you may want to know if you should take a calcium supplement to keep your bones strong and reduce your risk of breaking a bone. Studies that look at just calcium supplementation (without vitamin D) indicate calcium does not reduce bone fractures. But research with calcium + D suggests improved bone health; calcium works synergistically with vitamin D. Also take note, calcium and other nutrients have differing effects at different intakes. It's hard to know at what level the nutrient is most effective and at what level it offers no additional benefits.

Source of confusion #5. What to study. Foods contain zillions of compounds. When nutrition researchers attempt to connect a food to a disease, they often don't know which component of the food to study. For example, we know that eating fruits and vegetables reduces cancer. But what components are cancer-protective? Is it vitamin C? Folate? Beta-carotene? Potassium? Fiber? Phytochemicals?

Nutrition Confusion

Source of confusion #6. Food affects our health in different ways at different ages. For example, if you are pregnant (or planning to get pregnant), you may be afraid to eat fish, in fear the mercury in fish will damage your baby. Yet, fish contains the best sources of the omega-3 fats that are essential for optimal brain development in the fetus. Consuming too little DHA (of a type of omega-3 fat), can contribute to irreversible brain development problems.

With animal studies, a low intake of DHA results in slower brain maturation, attention problems, impulsivity and problem solving skills. With human studies that supplement the maternal diet with DHA, the babies learn faster and remember information better. By the time the babies have reached age 4, these benefits translate into higher IQs, and by age 5, longer sustained attention.

So, if you have been scared away from eating fish because of fear of mercury poisoning, you should be sure to look at the whole picture, whether you are a woman contemplating pregnancy or an athlete wanting to reduce the risk of heart disease. (Fish eaters have less heart disease.) The recommended intake is to enjoy DHA-rich fish such as pink salmon—despite possible mercury content—once a week and another 6 ounces per week of low-mercury fish and shellfish (shrimp, crab, scallops, sole, pollock). A typical 5-ounce serving of salmon offers 1,000 mg. DHA; the recommended daily intake is 220 mg. per day.

Source of confusion #7. The effects of a poor diet take years to unfold. As a young athlete in your 20's and 30's, you may think you are bullet-proof and immune from heart disease. Perhaps you eat whatever you want, whether it's omelets or pepperoni pizza. And you likely feel fine (today).

But if your see-food diet (you eat what you see) leads to high cholesterol in your 40s, you will have a higher risk of declining mental status as you age. Arteries clogged with cholesterol and saturated fat lead to not only cardiovascular disease, but also to dementia and Alzheimer's. The longer you live, the higher your risk of dementia. While only 1% of 60 year-olds have dementia, 40% of 90 year olds do. Yikes! What can you do to prevent dementia? Enjoy more fruits and vegetables, and fish (twice a week). What is good for your heart is also good for your brain!

Source of confusion #8. Messages to lose weight should really be to lose body fat. Don't crash-diet to lose weight quickly! You'll lose a significant amount of muscle. This results in a less-healthy body; your health depends on your muscle mass. For optimal health and weight, do strength training to build muscle and eat just a little less at night to lose fat.

Source of confusion #9. Advertisements for supplements and drugs downplay the importance of diet and exercise. Hence, pills and potent medications seem more effective than eating well and exercising regularly. Too few people realize that exercise is the best way to improve overall health and immune response, particularly as we age.

No confusion about this: If your parents and/or grandparents live a sedentary lifestyle, let them know they really should take a daily walk (preferably to the gym). Research indicates mice who exercised regularly had faster wound healing, better survival of flu and viruses, and less inflammation. Fit elderly people experience similar benefits. Eating well to fuel an active lifestyle is without doubt an important key to lifelong health and longevity!

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