ENHANCE YOUR NUTRIENT INTAKE BY FOLLOWING THESE SIMPLE GUIDELINES:

- **Choose nutrient dense foods**
  Whole grains and brightly colored fruits and vegetables typically have high nutrient levels. Choosing lean, free-range sources of protein and fat, as well as organic foods is also important.

- **Preserve nutrients during cooking**
  Avoid overcooking food to optimize nutrient retention. Whether baking, grilling, or steaming, fruits and vegetables should still be colorful and slightly crisp when consumed.

- **Buy fresh local foods—organic when possible**
  Reducing the amount of time foods are in storage or transit helps to preserve the naturally occurring nutrients in foods. Less transit also means less CO_2 generated in the atmosphere.

- **Take high quality nutritional supplements**
  Choose a high quality, hypo-allergenic nutritional supplement brand that is free of fillers, coatings, binders, allergens, artificial colors, preservatives, hydrogenated oils or other excipients. These undesirable ingredients can diminish the bioavailability or health-promoting potential of the nutrients. Unlike foods, supplements also have the benefit of providing consistent levels of vitamins and minerals. For specific health concerns, it is important to choose supplements that reflect active ingredients and dosage levels used in studies. Ask your health professional for more information.

***These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.**

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Why You Need Supplements

Find out why you may not be getting optimal levels of essential nutrients.

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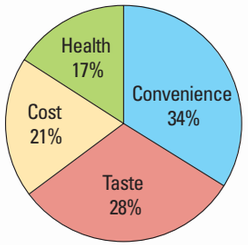
by Juniper Devecis, MS, RD, CCN

Today's diets are depleted of vitamins, minerals, essential fatty acids and other nutrients due to the decreasing quality of our food supply and busy lifestyles. Combining a healthy diet and dietary supplements is the best approach to achieve optimal health.

FOOD CHOICES ARE BASED ON CONVENIENCE:

Modern lifestyles typically involve juggling work, family and other activities. This leaves little time devoted to quality food choices and meals, leading instead to selections based on convenience. These options tend to be higher in fat, refined carbohydrates and sodium and usually involve extensive processing to enhance taste, which can destroy or remove nutrients. Furthermore, higher amounts of these types of foods are associated with marginal micronutrient intake and low serum concentrations of vitamin A, E, C, B_{12}, folate and carotenoids.



In a survey of almost 2,000 adults, the most important values in choosing a lunch were convenience and taste. Health was the least important value.

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THE AMERICAN DIET NEEDS IMPROVING:

Data from the National Health And Nutrition Examination Survey (NHANES) indicates that only 40% of Americans ate the recommended five or more servings of fruits and vegetables per day. The standard American diet is typically characterized by a high intake of:

- Saturated Fat
- Red Meat
- Refined Grains
- Sugar

It is also generally low in essential fats, which are critical for healthy cardiovascular function, inflammatory balance and cognitive support.* Essential fats include:

- Omega-3 fatty acids: fish, flaxseed and walnuts
- Omega-6 fatty acids: vegetable oils, grains and seeds

Americans typically consume a diet that has a ratio of 10:1 omega-6 to omega-3 fatty acids. Research indicates that an optimal ratio is closer to 3:1.

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FACTS ABOUT TODAY'S FOOD SUPPLY:

Consuming a balanced diet that meets the recommended servings of fruits, vegetables, whole grains, essential fatty acids and lean sources of protein still may not ensure ample nutrient intake due to changes in our food supply. A recent comparison study evaluated potential changes in the average nutrient content of 43 fruits and vegetables between 1950 and 1999 and found the following results:

- 6% decrease in protein
- 16% decrease in calcium
- 9% decrease in phosphorus
- 15% decrease in iron
- 38% decrease in riboflavin
- 20% decrease in ascorbic acid

Food quality changes like these are the result of multiple factors:

Storage time and maturity at harvest

Nutrients can be harmed during storage or transportation. A 2004 study cited that storing tomatoes for 5 days decreased ascorbic acid by almost 13%. Harvesting plants prior to proper maturity diminishes nutrient content potential, particularly for fiber, vitamin A, vitamin C and polyphenols.

Genetic selection

Modern fruits and vegetables are genetically selected, and in some cases modified, for shelf life, high yield or other growth characteristics rather than their ability to extract or synthesize nutrients from the environment.

Atmospheric CO_2

An increased level of CO_2 in the atmosphere, due to pollution, decreases the nitrogen, potassium, magnesium and protein content of plants.

Fertilization quality

Fertilization of the soil with isolated key nutrients such as nitrogen, phosphorus and potassium, as opposed to more comprehensive fertilizers, can alter the composition of plants and lead to nutrient losses. For example, plants raised on high-potassium soil have higher levels of potassium, but reduced levels of calcium and magnesium.

Growing region

Differences in climate and soil type can cause large variations in nutrient content. Calcium-rich soil will produce plants higher in protein, while potassium-rich soils produce plants higher in carbohydrates. Regional rainfall can create wide variations in vegetable mineral composition, particularly for calcium, magnesium and potassium.

Farming practices

Free-range animals produce meat with significantly higher levels of omega-3 fatty acids and conjugated linoleic acid. Dairy products made from grass-fed animals are also higher in vitamin A, E and beta-carotene. Unfortunately, most farm animals are restricted to feedlots and given regular hormone or antibiotic treatments, resulting in meat containing lower levels of these critical nutrients.

Industrial waste and contamination

Chemical residues and industrial waste, including heavy metals, pollute the land, water and food supply. A 2004 analysis of 2,644 individuals found that "most people in the U.S. carry a significant body burden of pesticides and pesticide metabolites," with the average person testing positive for 13 out of the 23 analyzed. Estrogenic compounds, such as DDT and its metabolites, polychlorinated biphenyls (PCBs) and p-nonyl-phenol and bisphenol-A, are of particular concern.

References

1. Guenther PM, Dodd KW, Reedy J, Krebs-Smith SM. Most Americans eat much less than recommended amounts of fruits and vegetables. *J Am Diet Assoc.* 2006 Sep;106(9):1371-9.
2. Bazzano LA, He J, Ogden LG, Loria CM, et al. Fruit and vegetable intake and risk of cardiovascular disease in US adults: the first National Health and Nutrition Examination Survey Epidemiologic Follow-up Study. *Am J Clin Nutr.* 2002 Jul;76(1):93-9.
3. Johnston CS, Taylor CA, Hampl JS. More Americans are eating "5 a day" but intakes of dark green and cruciferous vegetables remain low. *J Nutr.* 2000 Dec;130(12):3063-7.
4. Kant AK. Consumption of energy-dense, nutrient-poor foods by adult Americans: nutritional and health implications. The third National Health and Nutrition Examination Survey, 1988-1994. *Am J Clin Nutr.* 2000 Oct;72(4):929-36.
5. Blanck HM, Yaroch AL, Atienza AA, et al. Factors Influencing Lunchtime Food Choices Among Working Americans. Health Educ Behav. 2007 Jun 29.
6. Suzuki K, Ito Y, Nakamura S, Ochiai J, Aoki K. Relationship between serum carotenoids and hyperglycemia: a population-based cross-sectional study. *J Epidemiol.* 2002 Sep;12(5):357-66.
7. Zampelas A, Panagiotakos DB, Pitsavos C, et al. Fish consumption among healthy adults is associated with decreased levels of inflammatory markers related to cardiovascular disease: the ATTICA study. *J Am Coll Cardiol.* 2005 Jul 5;46(1):120-4.
8. Davis DR, Epp MD, Riordan HD. Changes in USDA food composition data for 43 garden crops, 1950 to 1999. *J Am Coll Nutr.* 2004 Dec;23(6):669-82.
9. Albrecht, WA. Our Teeth and Our Soils. Annals of Dentistry. 1947. Vol 6.
10. Bear FE. Variations in vegetable mineral content. Soil Science Society of America Journal. Sept-Oct 1991. 55(5).
11. Molyneux SL, Lister CE, Savage GP. An investigation of the antioxidant properties and colour of glasshouse grown tomatoes. *Int J Food Sci Nutr.* 2004 Nov;55(7):537-45.
12. Punna R, Rao Paruchuri U. Effect of maturity and processing on total, insoluble and soluble dietary fiber contents of Indian green leafy vegetables. *Int J Food Sci Nutr.* 2004 Nov;55(7):561-7.
13. Marín A, Ferreres F, Tomás-Barberán FA, Gil MI. Characterization and quantitation of antioxidant constituents of sweet pepper (Capsicum annuum L.). *J Agric Food Chem.* 2004 Jun 16;52(12):3861-9.
14. Galgano F, Favati F, Caruso M, Pietrafesa A, Natella S. The influence of processing and preservation on the retention of health-promoting compounds in broccoli. *J Food Sci.* 2007 Mar;72(2):S130-5.
15. Schafer KS, Reeves M, Spitzer S, Kegley SE. "Chemical Trespass: Pesticides in Our Bodies and Corporate Accountability." *Pesticide Action Network North America.* May 2004.
16. Mahaffey KR, Clickner RP, Bodurow CC. Blood organic mercury and dietary mercury intake: National Health and Nutrition Examination Survey, 1999 and 2000. *Environ Health Perspect.* 2004 Apr;112(5):562-70.
17. Kraft J, Kramer JK, Schoene F, Chambers JR, Jahreis G. Extensive analysis of long-chain polyunsaturated fatty acids, CLA, trans-18:1 isomers, and plasmalogenic lipids in different retail beef types. *J Agric Food Chem.* 2008 Jun 25;56(12):4775-82.
18. Searles, SK et al, "Vitamin E, Vitamin A, and Carotene Contents of Alberta Butter." *Jour of Diary Sci.* 53(2) 150-154.
19. Price LB, Johnson E, Vailes, R, Silbergeld E. Fluoroquinolone-Resistant Campylobacter Isolates from Conventional and Antibiotic-Free Chicken Products. *Environ Health Perspect.* May 2005. 113(5): 557-560.