

Rachel's Environment & Health News

#527 - Dietary News of 1996

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There was good news and bad about the American diet in 1996. The bad news is that people in the 1990s are eating far more pizza, tacos and pasta dishes loaded with hidden fats, compared to 30 years ago. "The most sweeping changes in the American diet can be traced to fast foods --increases in mozzarella cheese for pizza, tomato products for ketchup and pizza, pickles for relish, potatoes for fries, chicken for Kentucky fried, ice milk for soft serve, beef for burgers, and soft drinks. These are foods that are high in fat, saturated fat, salt and calories, and low in fiber," says Bonnie Liebman of the Center for Science in the Public Interest in Washington, D.C.[1] McDonalds spends \$800 million each year advertising its wares while the National Cancer Institute spends only \$1 million each year promoting fruits and vegetables.

During the period 1965-1991, consumption of grains, fruits and vegetables actually declined among part of the population --African-Americans living below the poverty line. (Among wealthy whites, the trend ran strongly in the opposite direction.) Many of the free foods distributed to women and children as part of the nation's welfare programs are high in fats and cholesterol; furthermore, pizza, burgers, and tacos have become popular school lunch items as McDonalds and Burger King have invaded the schools, participating in the national frenzy to "privatize" everything possible.

However, some good news about heart disease, cancer and diet also came along in 1996. Holiday party-goers needn't feel too guilty about eating chocolate or drinking alcohol (in moderation), according to new studies. Chocolate and alcohol both appear to reduce considerably the chances of having a heart attack. A daily cup of tea offers the same protection.

Grapefruit, orange, and tangerine juices were found in 1996 to protect somewhat against breast cancer. In addition, a common household remedy, aspirin, was also reported this year to protect some women against breast cancer.[2] Aspirin had previously been shown to protect against colon cancer, heart disease, and stroke.

Wine, Beer, Liquor

Studies over the past decade have shown that atherosclerosis (plaque deposited on the inner walls of the arteries, reducing blood flow) occurs when "bad" cholesterol (low-density lipoprotein [LDL] cholesterol) combines with oxygen.

This insight has caused scientists to search for items in the diet that might prevent LDLs from combining with oxygen. These studies have identified several anti-oxidants that seem to do the trick: vitamin E, vitamin C, and beta-carotene (a class of naturally-occurring red and yellow dyes, one of which gives carrots their orange color).[3]

The value of vitamin E was confirmed again at the conference Experimental Biology '96 in Washington, D.C. in late April. Lisa Nicholson of the University of Southern California School of Medicine (Los Angeles) reported a 5-year study showing that a vitamin E supplement was very effective at reducing the accumulation of artery-clogging plaque in a small study group of 56 individuals (32 men and 24 women). Participants in the study, aged 38 to 60, were given 100 international units of vitamin E per day (or 10 times the recommended daily allowance). At the end of 5 years, the vitamin E supplements had reduced average plaque buildup by an amount "equivalent to 14 years of aging," Nicholson told Janet Raloff of SCIENCE NEWS.[4] In March, 1996, a study of 2002 individuals with serious heart disease showed that vitamin E supplements (of 800 and 400 international units per day to two different groups) reduced heart attacks in both groups substantially.[5]

In the past two years, new studies have identified other chemicals --called flavonoids --that also prevent the oxidation of "bad" cholesterol. These flavonoids are present in alcohol, chocolate, tea,

and certain fruit juices.[6]

In 1995, John D. Folts of University of Wisconsin (Madison, Wisc.) showed that wine and red grape juice helped prevent atherosclerosis in dogs, while white grape juice did not.[7] At the conference Experimental Biology '96 in April, Folts reported more experiments with atherosclerotic dogs, showing that dark beer was effective at preventing plaque deposits from building up in dogs' arteries.[8] Guinness Extra Stout, a dark, malty brew, was twice as effective as a lighter-colored beer (Heineken lager).

Tea was as effective as the dark beer, Folts reported. Furthermore, tea seemed to have a lasting effect. After taking tea for a week, dogs needed only half as much tea (one cup per day) to achieve the beneficial effect, Folts said. Coffee, on the other hand, made the dogs' atherosclerosis worse.

At the same conference, Kenneth K. Carroll of the University of Western Ontario in London, Ontario reported that the flavonoids in grapefruit, orange and tangerine juices were powerful cancer inhibitors in laboratory animals.[9] The best of these was tangerine juice.

Danish researcher Hans Ole Hein in March published a study in the BRITISH MEDICAL JOURNAL solving the "French paradox." French people generally have high cholesterol levels in their blood yet don't experience high rates of heart disease. Hein and his colleagues say the French seem to be protected by flavonoids in the wine they drink. [10,11]

Eric Brimm of the Harvard University School of Public Health examined 25 separate studies showing that moderate alcohol use reduces the chances of serious heart disease.[12] He concluded that there is "strong evidence" that all alcoholic drinks, used in moderation, reduce the dangers of heart disease. He says, therefore, it seems to be the alcohol that provides the benefit and "it doesn't matter what beverage you get the alcohol in."

Hein and Brimm both think doctors should begin recommending a drink with dinner for most patients at high risk of heart disease. However, not everyone agrees. Marion Nestle of New York University told Janet Raloff of SCIENCE NEWS that "under no circumstances should persons who don't drink [alcohol] be encouraged to do so" because of "the enormous social impacts" of alcohol on society: drunk driving, violence against women and children, and accidents (involving guns, boats, etc.).[9] You should ask your doctor what he or she recommends for you.

Chocolate

Chocolate isn't entirely good for people either, because of the fat and sugar that usually accompany it. However Andrew L. Waterhouse of the University of California at Davis reported in September that the flavonoids in chocolate are more powerful than red wine in protecting against heart disease.[13] A 5-ounce glass of red wine contains about 210 milligrams (mg) of antioxidants; a cup of hot chocolate made with 2 tablespoons of cocoa would deliver 146 mg of antioxidants, and a 1.5 ounce chunk of milk chocolate, 205 mg. Waterhouse suggests a beneficial synergistic effect from combining red wine with dark chocolate.

A danger of chocolate in addition to the sugar and fat is possible addiction. Americans consume 2.86 billion pounds of chocolate each year --about 11 pounds per person per year, but certain 'chocoholics' consume far more than the average.[14] Daniele Piomelli of the Neurosciences Institute in San Diego, California in August reported finding a chemical in chocolate, called anandamide, which is closely related to the cannabinoids in marijuana.[15] Anandamide is a pleasure-inducing opiate which hits all areas of the brain, creating a "global high," says Piomelli.[16] Some people just can't seem to get enough of it.

Aspirin

A case-control study of 511 women with breast cancer, and 1534 women who did not have the disease, showed that women who took aspirin or ibuprofen at least three times a week for 5 years cut their chances of getting breast cancer by one third. If these findings are confirmed in other studies, these nonsteroidal anti-inflammatory drugs (NAIDs) will become the first chemicals found to protect against this malignancy.[2] In the study, women who took one aspirin or ibuprofen every day had the best chances of avoiding breast cancer. About 180,000 new cases of breast cancer occur each year, causing approximately 46,000 deaths annually.

Americans take 20 to 30 billion aspirin every year with few side effects, though some people experience irritation of the stomach lining and bleeding.[17] Several studies in the 1980s showed that aspirin can protect against colon cancer.[18] Many physicians now recommend an aspirin a day for their patients. Ask your doctor.

Because so much remains unknown about the effects of diet on health, probably the best advice still comes from Terence, the Roman playwright who said in 166 B.C., "Moderation in all things."

--Peter Montague (National Writers Union, UAW Local 1981/AFL-CIO)

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[1] Jane E. Brody, "Study Finds a Three-Decade Gain in American Eating Habits, but a Long Way to Go," NEW YORK TIMES September 5, 1996, pg. A14, describing Barry M. Popkin and others, "A Comparison of Dietary Trends Among Racial and Socioeconomic Groups in the United States," NEW ENGLAND JOURNAL OF MEDICINE Vol. 335, No. 10 (September 5, 1996), pgs. 716-720.

[2] Randall E. Harris and others, "Nonsteroidal Antiinflammatory Drugs and Breast Cancer," EPIDEMIOLOGY Vol. 7, No. 2 (March 1996), pgs. 203-205.

[3] A good overview of antioxidants can be found in Barry Haliwell, "Free radicals, antioxidants, and human disease: curiosity, cause, or consequence," THE LANCET Vol. 344, No. 8924 (September 10, 1994), pgs. 721-724.

[4] Janet Raloff, "Vitamin E slows artery 'aging,'" SCIENCE NEWS Vol. 149 (May 4, 1996), pg. 287.

[5] Nigel G. Stephens and others, "Randomised controlled trial of vitamin E in patients with coronary disease: Cambridge Heart Antioxidant Study (CHAOS)," THE LANCET Vol. 347 (March 23, 1996), pgs. 781-786. For a discussion of the limitations of this study, see Rudolph A. Riemersma, "Coronary heart disease and vitamin E," THE LANCET Vol. 347 (March 23, 1996), pg. 776.

[6] Michael Hertog and others, "Dietary antioxidant flavonoids and risk of coronary heart disease: the Zutphen Elderly Study," THE LANCET Vol. 344, No. 8878 (October 23, 1993), pgs. 1007-1011. And see J. Raloff, "Add tea to that old 'apple a day' adage," SCIENCE NEWS Vol. 149 (October 30, 1993), pg. 278

[7] Heather S. Demrow, Peter R. Slane, and John D. Folts, "Administration of Wine and Grape Juice Inhibits In Vivo Platelet Activity and Thrombosis in Stenosed Canine Coronary Arteries," CIRCULATION Vol. 91, No. 4 (February 15, 1995), pg. 1182. And see John Folts, "An In Vivo Model of Experimental Arterial Stenosis, Intimal Damage, and Periodic Thrombosis," CIRCULATION [Supplement IV] Vol. 83, No. 6 (June 1991), pgs. IV-3 to IV-14.

[8] Janet Raloff, "A couple of heart-friendly dark brews," SCIENCE NEWS May 4, 1996, pg. 287.

[9] Janet Raloff, "Juicy anticancer prospects," SCIENCE NEWS Vol. 149 (May 4, 1996), pg. 287.

[10] Hans Ole Hein and others, "Alcohol consumption, serum low density lipoprotein cholesterol concentration, and risk of ischaemic heart disease: six year follow up in the Copenhagen male study," BRITISH MEDICAL JOURNAL Vol. 312 (March 23, 1996), pgs. 736-741.

[11] J. Raloff, "Have Danes solved the French paradox?" SCIENCE NEWS Vol. 149 (March 30, 1996), pg. 197.

[12] Eric B. Rimm and others, "Review of moderate alcohol consumption and reduced risk of coronary heart disease: is the effect due to beer, wine, or spirits?" BRITISH MEDICAL JOURNAL Vol. 312 (March 23, 1996), pgs. 731-736.

[13] Andrew L. Waterhouse and others, "Antioxidants in chocolate," THE LANCET Vol. 348 (September 21, 1996), pg. 834. And see "Chocolate: As hearty as red wine..." SCIENCE NEWS Vol. 150 (October 12, 1996), pg. 235.

[14] J. Raloff, "Coming: Drug therapy for chocoholics?" SCIENCE NEWS Vol. 147 (June 17, 1995), pg. 374.

[15] Emanuelle di Tomaso, Massimiliano Beltramo, and Daniele Piomelli, "Brain cannabinoids in chocolate," NATURE Vol. 382 (August 22, 1996), pgs. 677-678.

[16] "...but we eat it for pleasure," SCIENCE NEWS Vol. 150 (October 12, 1996), pg. 235.

[17] S. Sternberg, "Aspirin Users May Trim Breast Cancer Risk," SCIENCE NEWS Vol. 149 (February 24, 1996), pg. 116.

[18] L. Rosenberg and others, "A Hypothesis: Nonsteroidal Anti-Inflammatory Drugs Reduce the Incidence of Large-Bowel Cancer," JOURNAL OF THE NATIONAL CANCER INSTITUTE Vol. 83, No. 5 (March 6, 1991), pg. 355.

CORRECTION

In RACHEL'S #525 we described David Brower as the "founder" of the Sierra Club. The Club was actually founded in the early 1890s by John Muir. Mr. Brower became the Club's first executive director in 1952 and changed the Club from a regional conservation club to a modern national environmental organization.

Descriptor terms: food safety; breast cancer; colon cancer; diet and health; cholesterol; fat; mcdonalds; center for science in the public interest; heart disease; chocolate; wine; beer; alcohol; liquor; tea; coffee; grapefruit juice; orange juice; tangerine juice; aspirin; ibuprofen; nonsteroidal anti-inflammatory drugs; atherosclerosis; anti-oxidants; vitamin e; vitamin c; beta-carotene; flavonoids; anandamide; cannabinoids; cspi; sierra club; david brower; john muir;