

## IN THE NEWS

## Another reason to skip the fries?



After hearing of the dangers of eating charred meat from the grill, now comes a new warning about another dietary carcinogen. Unpublished findings from Stockholm University, Sweden, show that acrylamide, found in high levels in fried and baked starchy foods (i.e. potatoes, cereal grains), is a cancer-causing agent. Acrylamide is used industrially in water processing plants and plastics manufacturing [J Agric Food Chem 2002 Aug 14;50(17):4998-5006]. Apparently, high cooking temperatures combines with certain types of food to form gene mutating acrylamide.

Swedish scientists set up a red flag after discovering up to 1000 mg/kg of acrylamide in various kinds of potato chips, 500 mg/kg in french fries and high levels in some breakfast cereals and crispbread. The World Health Organization (WHO) recommends one microgram (one-millionth of a gram) of acrylamide per liter of drinking water as the maximum exposure permitted in humans. The amount of acrylamide in a large order of

fast-food french fries is at least 300 times more than that.

Earlier research had found that rats fed fried animal feed for one or two months showed a higher level of acrylamide than controls [Chem Res Toxicol 2000 Jun;13(6):517-522]. Acrylamide is a known carcinogen and neurotoxin in rodents, but the jury is still out about human health effects. The U.S. Environmental Protection Agency (EPA) has documented that human short-term exposure to acrylamide can cause nerve damage; long-term exposure, as yet unconfirmed by research data, may cause nerve damage, paralysis and cancer [<http://www.epa.gov/safewater/dwh/c-voc/acrylami.html>].

Convinced that this is a serious issue, an international panel of 23 scientists convened for three days (June 25-27, 2002), following the findings, to discuss future action. WHO called for further urgent research to be conducted into the health risks of acrylamide [The Lancet 2002 Jul 6;360(9326):64]. Prudence would suggest staying away from suspected foods in the meantime. The identification of yet another dangerous carcinogen in our diet emphasizes the importance of protecting our genes against mutation by ingesting plant extracts such as indole-3-carbinol, lycopene and chlorophyllin. By protecting against gene mutation, we lower our risk of contracting cancer.

-Angela Pirisi

Studies: green tea provides  
powerful antioxidant protection

A large and increasing body of evidence is revealing the powerful health benefits that drinking tea provides, particularly green tea.

The experts revealed their findings at a meeting sponsored by the American Cancer Society, the U.S. Department of Agriculture, the Tea Council and other groups. They say tea may someday be added to the list of fruits and vegetables that Americans should include in their daily diet.

The secret is green tea's so-called "phytochemicals"-a group of specialized molecules which act as antioxidants, protecting DNA from inherent damage caused by free radicals in the body [J Am Coll Nutr 2002 Feb;21(1):1-13]. DNA damage is a typical precursor to cancer and is linked to heart disease [Proc Natl Acad Sci 1993 Sep 1;90(17):7915-22].

One USDA-sponsored study reported at the conference tested the effects of green tea on blood lipids in eight men and women over a three-week period. The researchers discovered that drinking five cups of green tea in that time lowered lipid levels of low-density lipoprotein. Total cholesterol, the experts reported, dropped 6% in the subjects who drank green tea. There was no effect on high density lipoprotein.

Yet another study investigated the effects of a substance typically found in urine that causes cellular oxidative damage (8-OHdG). University of Arizona scientists recruited 140 smokers and asked them to maintain their typical diets, but add green tea, black tea or water to the menu for four months.

At the end of the period investigators conducted urinalyses and found no changes in levels of 8-OHdG in participants who consumed black tea or water, but a 25% decrease among green tea drinkers.



-John Martin

Light, healthy diet may  
help starve cancer cells

Science has certainly made a case for the diet-cancer connection, suggesting that diet may contribute to one third of all preventable cancers in the Western world, making it as risky as smoking [Nat Rev Cancer 2002 Sep;2(9):694-704]. More specifically, the danger is that a high-calorie, high-fat diet leads to excess weight, which can result in a number of cancer-promoting events. A recent review study by UK researchers summed up that obesity increases the risk of cancers of the esophagus, colorectum, breast, endometrium and kidney [Lancet 2002 Sept 14;360(9336): 861-68].

One theory suggests that obesity breeds insulin resistance and that cancer cells feed off the extra sugar and insulin. So the lower or more controlled your blood glucose, the less fuel cancer cells gets. Israeli researchers at Ben Gurion University have similarly suggested that cancer cells use more calories than healthy cells to survive and multiply [J Theor Biol 2001 Jun 7;210(3):319-25]. Obesity is also said to adversely affect sex hormones, which may spur on hormone-fueled cancer development, as in breast cancer where fat tissue increases serum levels of free oestradiol [Lancet Oncol 2001 Mar;2(3):133-140].

Meanwhile, research at the Fred Hutchinson Cancer Research Center in Seattle has found that higher calorie consumption can double men's risk of prostate cancer [Cancer Epidemiol Biomarkers Prev. 2002 Aug;11(8):719-25]. A number of studies have also set forth the idea that high-fat foods may contribute to oxidative damage, which predisposes cells to cancer development. Simply put, evidence points to a preventive diet that is high in fruits and vegetables and low in fat, which translates into foods that are high in antioxidants, low in oxidants and that have lower glycemic values. New approaches for reducing excess serum insulin and body fat will be appearing in future issues of Life Extension magazine.



-AP

These statements have not been evaluated by the FDA. These products are not intended to diagnose, treat, cure or prevent any disease. The information provided on this site is for informational purposes only and is not intended as a substitute for advice from your physician or other health care professional or any information contained on or in any product label or packaging. You should not use the information on this site for diagnosis or treatment of any health problem or for prescription of any medication or other treatment. You should consult with a healthcare professional before starting any diet, exercise or supplementation program, before taking any medication, or if you have or suspect you might have a health problem. You should not stop taking any medication without first consulting your physician.