



Optimal Health

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TOXINS - SMOKING, ALCOHOL, CAFFEINE, AND MORE

SMOKING & ALCOHOL:

We really covered smoking and alcohol in our video lesson but there are some more toxins that people in the blue zones are not exposed very often or at all.

CAFFEINE:

I know, I know, you NEED your morning cup of coffee or your afternoon tea. And there are some benefits such as antioxidants and being less grumpy which has some implication of its own. But we can't neglect to point out the harmful side effects too.

The following excerpt is from "Proof Positive" a book by Dr. Neil Nedley and is used with permission. "Coffee is another common source of carcinogens in the American diet. The experts still debate whether coffee presents a significant cancer risk, but there is no question that this popular beverage contains cancer-causing chemicals. Such chemicals include methylglyoxal,^{148,149} catechol, chlorogenic acid, and neochlorogenic acid.¹⁵⁰

The pharmacologists acknowledge that even caffeine itself "has potent mutagenic effects" in laboratory studies of microbes. It can also damage the chromosomes of both plants and animals in lab settings.¹⁵¹ This fact can suggest that a substance is carcinogenic in humans. However, the same source believes that a person could not obtain high enough levels of caffeine with ordinary consumption of medications, foods, and beverages to increase cancer risk in this way.¹⁵²

This argument fails to take into account the fact that coffee brings together a variety of carcinogenic compounds. Caffeine is further superimposed on other cancer risk factors that we are all exposed to in varying degrees. In this context, there is concern that both coffee and caffeine may significantly increase cancer risk in the right setting. Such a conclusion agrees with the epidemiologic literature that shows caffeine and coffee sometimes increasing risk, and other times having no effect on certain cancers. The difference may have to do with the other carcinogens that individuals in a population may or may not be exposed to.

Dr. Winston Craig in his book, *Nutrition for the Nineties*, seems to come to a similar conclusion, even though he takes a somewhat different perspective.¹⁵³ Craig sides with research suggesting that caffeine is not a frank carcinogen itself, but is rather a co-carcinogen. This means that it can increase the likelihood that cancer will occur if it is in the presence of other carcinogens. The cancer sites that have been linked with coffee include kidney, breast, colon, pancreas, and ovary.¹⁵⁴ A look at a few of these epidemiologic studies is illuminating.

Pancreas cancer has probably received the most attention regarding increased risk from coffee. This apparently derives in large part from a highly publicized Harvard study in the early 1980s.¹⁵⁵ Other studies have not found such a relationship, bringing us back to my earlier point about the likely interaction between coffee, caffeine, and other risk factors. Coffee seems to bear a more striking relationship to bladder cancer. The first study that drew my attention to this was the large Adventist Health study. This epidemiological research involved some 24,000 California Seventh-day Adventists. The results of the study are depicted in Figure 16: Coffee Use and Bladder Cancer.¹⁵⁶



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Notice that those who drank two or more cups of coffee per day had twice the risk of death from bladder cancer as those that did not drink coffee at all. Other research such as that conducted at the State University of New York at Buffalo has confirmed the potential of coffee drinking to double bladder cancer risk.¹⁵⁷ Significantly, the Buffalo researchers looked at cases of bladder cancer, in contrast to the SDA investigators who compared bladder cancer deaths.

Other studies have also shown an increase in bladder cancer with coffee usage or other caffeinated beverages. This has led some to speculate that for bladder cancer, caffeine itself may be the main culprit in coffee. Fatal colon cancer has also been linked to coffee consumption. Those consuming two or more cups of coffee per day increased their risk of death from colon cancer by 70 percent when compared to those that consumed less than one cup a day. The study also revealed a dose-response relationship; that is, the more coffee consumed the higher the risk.¹⁵⁸

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FOOD ADDITIVES:

Food additives may not be on the top of the list for harmful chemicals but we can't negate the fact those in the blue zones rarely eat food additives. The info below was taken from our Nutrition 4 Optimal Health course so I won't repeat all of it.

One of the most commonly known additives is MSG. There are forms of MSG found naturally in vegetables right from the garden. But MSG is a trouble maker when isolated and used in massive quantities as an additive. Much like SALT!!!! Too much salt causes problems too. The FDA recognized MSG as a generally safe additive, but conflicting reports about side effects and risks are out there. Some of these side effects include asthmatic response, seizures, ADHD, hypothyroidism, fibromyalgia, and others. The FDA does not set a limit on how much can be added to food, so there is definitely cause for concern. Some of the conflicting studies have disproved the Chinese Food Syndrome, which was one of the most common reason for not eating MSG.

Nitrates and Nitrites. Studies have shown a link between increased levels of nitrates and increased deaths from certain diseases including Alzheimer's, diabetes, gastric cancer, and parkinson's. This is possibly through the damaging effect on DNA. Nitrosamines, formed in cured meats containing sodium nitrate and nitrite, have been linked to gastric cancer and oesophageal cancer. Sodium nitrate and nitrite are also associated with a higher risk of colorectal cancer. A small amount of the nitrate added to meat as a preservative breaks down into nitrite, in addition to any nitrite that may



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be added. The nitrite then reacts with protein-rich foods, such as meat, to produce carcinogenic NOCs (nitroso compounds). NOCs can be formed either when meat is cured or in the body as meat is digested. Good news, nitrates naturally found in fruits and veggies may actually protect against disease. One study on nitrates in beet juice showed it may help lower blood pressure. Trouble with studying one compound in a food is, foods are never just one compound and when the compound is tested outside the food the results are inconclusive.

Artificial sweeteners. Aspartame, Saccharin, Acesulfane-K and other artificial sweeteners are getting more and more attention. "One of the active ingredients in a popular artificial sweetener could have the potential to limit the impact of therapeutic drugs, reduce the number and balance of beneficial bacteria in the gut and alter hormone secretion", according to an article published in Journal of Toxicology and Environmental Health, Part A: Current Issues... In addition artificial sweeteners are associated with metabolic issues actually leading to weight gain and issues with diabetics.

Sulfites are substances that naturally occur in some foods and the human body. They are also used as regulated food additives. We've mentioned them here because sulfites are counted among the top nine food allergens. It may cause breathing difficulty within minutes after eating a food containing it. Asthmatics and possibly people with salicylate sensitivity (or aspirin sensitivity) are at an elevated risk for reaction to sulfites. Anaphylaxis and life-threatening reactions are rare. Other potential symptoms include sneezing, swelling of the throat, hives, and migraine. <https://en.wikipedia.org/wiki/Sulfite>

Plastics. Plastics are found everywhere in food packages. Frozen foods are not as much of a concern as foods that could be heated in storage or travel. Also, the plastic lining in canned foods is also suspect. In any case, when you can choose whole foods and prepare them yourself. It's so much better for you in so many ways.



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