

American Institute for Cancer Research



**Everything
doesn't
cause
cancer**



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for Cancer Research

Facts on Preventing Cancer

A Common Fear

If you are like many Americans, you are worried about cancer. In a recent survey conducted by the American Institute for Cancer Research (AICR), 39 percent of respondents said that cancer was their number one daily concern among a list of various diseases and physical conditions.

In the same survey, 30 percent – or one in four Americans – thought that cancer is impossible to prevent. Clearly, Americans are worried about cancer because they do not know what they can do to help prevent it.

Is There Any Hope?

In 2007, the American Institute for Cancer Research and its affiliate, the World Cancer Research Fund in the U.K., published a landmark report, *Food, Nutrition, Physical Activity, and the Prevention of Cancer: a Global Perspective*. The report was written by a panel of world renowned scientists who reviewed all the available evidence on diet, physical activity and weight management in relation to cancer prevention. They concluded that approximately one-third of all cancer cases could be prevented if everyone ate a healthy diet, was physically active every day and maintained a healthy weight.

The Second Expert Report contains an important message for cancer prevention and survivorship: There are changes you can make in how you eat and what you do every day that can reduce your chances of developing cancer. The recommended changes can be grouped into three guidelines:

AICR Guidelines for Cancer Prevention



- Choose mainly plant foods, limit red meat and processed meat
- Be physically active every day in any way for 30 minutes or more.
- Aim to be a healthy weight throughout life.

And always remember... Do not use tobacco in any form.

Although they may not be able to follow the guidelines during treatment, as cancer patients recover their health, scientists are finding that the recurrence of cancer may be prevented by following these guidelines.

Cancer cases could drop by...

30% if people would avoid tobacco.

Approximately $\frac{1}{3}$ if people would eat a primarily plant-based diet, get regular exercise and maintain a healthy body weight.

The Myths about Cancer

The origins of cancer are complex, and no one knows exactly what causes it. But scientists do have a good idea about which factors increase cancer risk. Yet they aren't the factors many people associate with cancer.

For example, there is no proven link between pesticide residues on produce and cancer occurrence. Yet in the AICR survey, 71 percent of Americans believed pesticide residues are a risk factor. They also thought that food additives, stress, breast implants, beef hormones, genetically modified foods, power lines, artificial sweeteners and cell phones are significant risk factors for cancer. But research shows little or no support for these assumptions.

There are many other supposed agents that have been labeled cancer-causing for which no scientific evidence or no consistent scientific evidence exists. This list includes fluoride in the water, antiperspirants, abortion, birth control pills, proximity to nuclear facilities and electromagnetic fields from electric blankets, computer terminals and household appliances.

Major Cancer Risks

The major factors that are scientifically proven to increase cancer risk all relate to a person's diet or lifestyle – things that you can choose to do something about. Although cancer occurs more frequently with age, you can greatly diminish your cancer risk by leading a healthy lifestyle and minimizing your exposure to the following factors.

Tobacco. Cigarettes, cigars, smokeless tobacco and regular exposure to secondhand tobacco smoke are responsible for nearly one-third of all cancer deaths in the United States each year. Avoiding tobacco will significantly decrease your risk of cancer.

Diet. A diet that lacks an abundant variety of vegetables, fruits, whole grains and beans and includes too much fat – especially red and processed meats – is associated with higher risk for cancer and other chronic diseases. Plant foods contain vitamins, minerals, fiber, antioxidants and phytochemicals (unique plant substances) that inhibit the beginning and growth of cancer. There is convincing evidence that diets high in vegetables and fruits decrease the risk of cancers of the colon, rectum, lung, stomach, mouth, pharynx and esophagus. You can further reduce your cancer risk by limiting your consumption of red meat to 18 oz. per week; and avoiding processed meats like ham, sausage and bacon.

The Importance of Exercise

Regular physical activity is an essential part of a healthy lifestyle. Strong scientific evidence shows that exercise protects against colon cancer and possibly breast and lung cancers. Because exercise burns calories, it also reduces the risk of cancers attributed to obesity. AICR recommends an hour a day of moderate activity, such as gardening or brisk walking, and an hour a week of vigorous activity, such as tennis, swimming or hiking.

Alcohol and Salt. Alcohol consumption has been convincingly linked to cancers of the mouth, throat, esophagus, larynx and liver. The risk of cancer increases with the amount consumed. To decrease your risk, health experts recommend that women

have no more than one drink a day and men no more than two drinks a day. Limit your consumption of salt and salty foods.

Obesity. Research now indicates that obesity is an independent cancer risk. It has been linked to colon cancer and postmenopausal breast cancer in particular, as well as cancers of the endometrium, pancreas, prostate and kidney. Aim for a healthy body weight by reducing your portion sizes and increasing your activity level. If you do not see your weight gradually decreasing, contact your doctor or a registered dietitian for a more individualized plan.

Sun Exposure. Excessive exposure to ultraviolet radiation (found primarily in sunlight, as well as sunlamps and tanning booths) causes premature aging of the skin and skin damage that can lead to skin cancer. By avoiding bright sunlight from 10 a.m. to 4 p.m., wearing protective clothing and using a sunscreen with a sun protective factor (SPF) of at least 15, you can reduce your risk.

Minor Cancer Risks

Some of the factors that people worry about cause only a relatively small percentage of cancer cases or only affect a small section of the population. It's important to put these minor risks into perspective.

Genetics. Five to 10 percent of cancer cases are attributed to the presence of an inherited gene mutation ("cancer gene"). Although an inherited gene flaw increases a person's cancer risk, it does not guarantee that a person will develop cancer. A person's diet, lifestyle and environment have much more influence.

Regular screening tests can help detect cancer at its earliest and most treatable stage. If you have a strong family history of cancer or if a genetic test shows that you carry a cancer gene, you have an especially good reason to conduct routine self-examinations and see your doctor for periodic screening tests.

Air, Land and Water Pollution. Some environmental pollutants, like pesticides, have been shown to induce cancer in laboratory animals at high doses, but they pose little risk to most people because of very low concentrations in the air, land or water. As a result, environmental pollutants are believed to contribute to a

Pesticide Residues and Food Additives

The U.S. government and international bodies regulate the use of pesticides and food additives. When used according to regulation, these substances are not known to increase cancer risk. To further reduce residues on food, scrub vegetables and fruits under running water. By eating a variety of foods, you can limit your exposure to any one additive or contaminant.

very small percentage of cancer incidence.

A significant source of environmental pollution is the combustion of fossil fuels in motor vehicles, homes and industry. To help control this pollution, keep your car well tuned and consider using car pools or public transportation. You can also work with local citizen's groups to identify and eliminate polluted sites in your community.

Ionizing Radiation. There are both natural sources of radiation, like ultraviolet rays from the sun and radon (a naturally occurring gas), and man-made sources, like x-rays and radioactive waste. The risk of cancer increases in relationship to the length and intensity of exposure. Radiation may account for about 3 percent of all cancer incidence.

Radon is considered a significant cause of lung cancer. To find out how to test your home for excessive levels of radon, contact the U.S. Environmental Protection Agency at 1-800-SOS-RADON (1-800-767-7236) or visit www.epa.gov/iaq/radon.

Medical x-rays are also a known, minor cancer risk, but the benefits of x-ray diagnoses usually outweigh the cancer risk. You may wish to consult with your doctor about the need for each x-ray.

Occupational Factors. Some workers come into regular contact with known carcinogens, such as asbestos, nickel, cadmium, uranium, radon, vinyl chloride and benzene. Consequently, researchers estimate that a small percentage of cancer cases result from workplace exposure. It is important to remember that the vast majority of Americans are not exposed to occupational cancer risks.

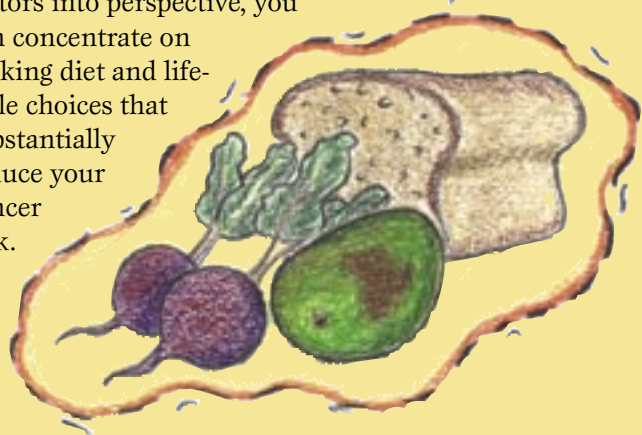
To decrease your risk, be aware of possible carcinogens in the workplace. Wear recommended protective

gear and strictly follow all safety procedures. A list of at-risk occupations and probable carcinogenic substances can be found on the National Cancer Institute's website at seer.cancer.gov/publications/raterisk/risks95.html.

Viruses. Some viruses have been implicated in certain cancers. These include the Epstein-Barr virus, hepatitis B and C viruses, human papilloma-virus (HPV) and the human T-cell leukemia virus. Practicing safe sex, avoiding the use of drug needles and being vaccinated for hepatitis B will protect you considerably from these viruses. Regular Papanicolaou (Pap) tests can find precancerous lesions caused by HPV before cervical cancer develops.

You're in Control

By putting the major, minor and unproven risk factors into perspective, you can concentrate on making diet and life-style choices that substantially reduce your cancer risk.



Eating a mostly plant-based diet low in fat, exercising regularly, maintaining an appropriate body weight, eliminating tobacco use, drinking alcohol in moderation (if at all) and limiting exposure to sunlight should help you live a long, healthy life.

When you encounter sensational stories about “proven” cancer agents in newspapers, magazines, television shows, radio programs and on the Internet, use your common sense. Make sure the information is science-based and the source is reliable. Remember that research studies show that the major factors in cancer risk are things you can control.

This pamphlet gives information based on the AICR recommendations for Cancer Prevention, developed from the Expert Report: *Food, Nutrition, Physical Activity, and the Prevention of Cancer: a Global Perspective*. The report, produced by WCRF/AICR, is the largest study of its kind ever published and its recommendations are based on the most comprehensive review of all the available evidence.

Recommendations for Cancer Prevention

1. Be as lean as possible without becoming underweight.
2. Be physically active for at least 30 minutes every day.
3. Avoid sugary drinks. Limit consumption of energy-dense foods (particularly processed foods high in added sugar, or low in fiber, or high in fat).
4. Eat more of a variety of vegetables, fruits, whole grains and legumes such as beans.
5. Limit consumption of red meats (such as beef, pork and lamb) and avoid processed meats.
6. If consumed at all, limit alcoholic drinks to 2 for men and 1 for women a day.
7. Limit consumption of salty foods and foods processed with salt (sodium).
8. Don't use supplements to protect against cancer.

Special Population Recommendations

9. It's best for mothers to breastfeed exclusively for up to six months and then add other liquids and foods.
10. After treatment, cancer survivors should follow the recommendations for cancer prevention.

And always remember – do not smoke or chew tobacco.

AICR is part of the World Cancer Research Fund global network, which consists of the following charitable organizations: The American Institute for Cancer Research (AICR); World Cancer Research Fund (WCRF UK); World Cancer Research Fund Netherlands (WCRF NL); World Cancer Research Fund Hong Kong (WCRF HK); World Cancer Research Fund France (WCRF FR) and the umbrella organization World Cancer Research Fund International (WCRF International).

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