



CANCER

Factors associated with risk

No one can predict if you'll get cancer, but this self-assessment can help you focus your prevention efforts. The best way to fight cancer is to create an internal environment hostile to cancer and favorable to your health, to be watchful and screen appropriately, and to treat early if necessary.

Put an "X" in the column that best describes you for each factor.

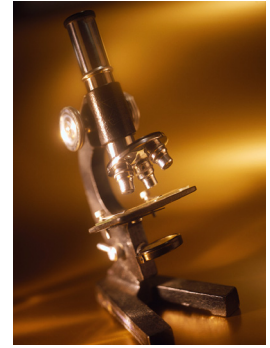
Risk Areas	Column A	Column B	Column C
1. Gender	<input type="checkbox"/> Male	<input type="checkbox"/> Female	---
2. Race	<input type="checkbox"/> African-American	<input type="checkbox"/> White	<input type="checkbox"/> Asian
3. Age	<input type="checkbox"/> 60 or older	<input type="checkbox"/> 25 to 59	<input type="checkbox"/> Younger than 25
4. Smoking	<input type="checkbox"/> Current smoker	<input type="checkbox"/> Ex-smoker	<input type="checkbox"/> Never smoked
5. Alcohol	<input type="checkbox"/> Often have 3+ alcoholic drinks/day	<input type="checkbox"/> Have up to 1-2 alcoholic drinks/day	<input type="checkbox"/> Never drink alcoholic beverages
6. Physical activity	<input type="checkbox"/> Very little daily physical activity at work or during leisure time	<input type="checkbox"/> 30-minutes daily of physical activity outdoors at work or at leisure	<input type="checkbox"/> 1 hour or more of daily physical activity at work or at leisure
7. Weight/BMI	<input type="checkbox"/> Obese or overweight BMI greater than 25	<input type="checkbox"/> Underweight BMI <18.5	<input type="checkbox"/> Normal weight BMI 18.5-24.9
8. Vegetable & Fruit intake	<input type="checkbox"/> Eat as few vegetables and fruits as possible, other than potatoes	<input type="checkbox"/> Eat 2-3 fruits and vegetables daily, usually cooked or prepared	<input type="checkbox"/> Eat 5 or more servings of fruits and vegetables daily
9. Meat/Legume Consumption	<input type="checkbox"/> I eat more red meats, bacon, and cold cuts than legumes/beans	<input type="checkbox"/> I eat more poultry and fish than either red meat or legumes/beans	<input type="checkbox"/> I eat more legumes/beans than animal meats, poultry, fish
10. Fat Intake	<input type="checkbox"/> Usually cook with or eat animal fat as part of meat or in baked products	<input type="checkbox"/> Eat animal fats or vegetable oils without attention to which is used	<input type="checkbox"/> Regularly eat mostly vegetable oils in cooking and in baked products
11. Radiation / Ultraviolet	<input type="checkbox"/> Was earlier or am often sunburned	---	<input type="checkbox"/> Browned, but not sunburned
12. Occupational Exposure	<input type="checkbox"/> Heavy metals, cutting oils, benzene, polycyclic aromatic hydrocarbons etc.	<input type="checkbox"/> Regular pesticide or herbicide application. Blood contact	<input type="checkbox"/> Little exposure to chemicals at work, in the house, or at leisure
13. Previous Cancer	<input type="checkbox"/> Had cancer in the past	---	<input type="checkbox"/> Have never had cancer
14. Family History or Genetic Risks	<input type="checkbox"/> Parents, brothers, sisters, aunts, uncles, or cousins on maternal or paternal side have cancers	---	<input type="checkbox"/> Almost no one on either side of my family has cancer for several generations back
15. Unsafe Sex	<input type="checkbox"/> Had multiple sex partners. Had or continue to have unprotected sex	<input type="checkbox"/> No longer have unprotected sex or multiple sex partners	<input type="checkbox"/> Both partners have always been monogamous
RISK AREAS	Greatest Risk <input type="checkbox"/>	Some Risk <input type="checkbox"/>	Least Risk <input type="checkbox"/>

Cancer Risk and Prevention Guidelines

Scoring Your Risk Areas Counting the number of checked boxes in each column is OK, but you may be able to lower each check in Column A or Column B (except the first three).

- Checks in Column A indicate areas of **Greatest Risk**.
- Checks in Column B indicate areas of **Some Risk**.
- Checks in Column C indicate areas of **Least Risk**.

The more risks you have, the greater your potential impact on lowering them with lifestyle changes. Review the explanations and suggestions below to begin reducing your cancer risks.



Risk Factor Explanations

- [] **Gender** Men get cancer (incidence) and die of cancer (mortality) at a higher rate than women, largely due to smoking.
- [] **Race** African-Americans have the highest rates of getting or dying from cancer, Asians the lowest, Whites are between. Hispanic rates are similar to Whites below age 35 and somewhat higher than Asians at age 35 and over.
- [] **Age** Death rates are in the single digits below age 30 in most race categories (fewer below age 20 in Asians), but almost double with each successive decade. Incidence is lowest in all race categories between ages 5 and 10.
- [] **Smoking** A long history of tobacco research shows smoking to be the strongest medical risk factor for cancer. Quitting lowers risks measurably.
- [] **Alcohol** High intake of alcohol increases the risk for several cancers. Avoid or limit alcohol to lower risks.
- [] **Physical activity** Physical inactivity is associated with increased risk for several cancers. Activity may lower risk.
- [] **Weight/BMI** Excessive weight or underweight put a person at risk for cancer, but risk varies with the cancer.
- [] **Vegetable & Fruit Intake** Research on the diet-cancer connection is in its infancy, especially compared to tobacco research. Many areas remain unstudied. We have discovered that whole foods lower risk, and that many supplements increase risk. Stay tuned!
- [] **Meat/Legume Consumption** Red and processed meat has been shown to increase the risk of cancer with inadequate folate intake (from vegetables, oranges). Fish may be protective. Legumes (beans, peas) provide protein, folate, and many other nutrients that strengthen the body.
- [] **Fat Intake** Animal fat (carcass fat) increases cancer risk separately from the risk associated with red or processed meats. Milk fats do not have the same effect.
- [] **Radiation/Ultraviolet** Sunburned skin and artificial tans increase cancer risk, whereas tanning without burning is being found to be beneficial.
- [] **Occupational Exposure** Work with cutting oils, heavy metals, and carcinogenic chemicals increases a person's risk of cancer. Applying pesticides regularly is also a risk.
- [] **Previous Cancer** Therapy poses a risk, but sometimes the risk of the first cancer is greater than the risk of the second.

- [] **Family History/Genetic Risks** Regular exams and knowing your family history can help you be alert for early signs. Medical interventions are increasingly available.
- [] **Unsafe Sex** Like other personal history risks, keeping alert and not continuing unsafe practices can lower risks.

Take Action Against Cancer

Rates of new cancers at most sites vary widely among different population groups and in different regions of the world. The American Cancer Society lists 69 different cancers on its 2005 website, each with a different incidence and mortality rate.

The National Cancer Institute defines prevention as lowered cancer mortality through reduced incidence. In practice this means avoiding carcinogens (tobacco, many occupational exposures), using lifestyle and diet to modify cancer-causing factors or genetic predispositions, and using medical intervention to successfully treat pre-cancerous lesions (for example, colon polyps). The following recommendations for prevention summarize what we know for sure.

1. **Avoid tobacco and alcohol.** You can quit! Others have. Get help. Keep trying. Success will come.
2. **Be physically active each day.** The best activities are outdoors. Aim for an hour a day as often as possible. Get guidance from your doctor or a knowledgeable fitness trainer on how best to start an exercise program.
3. **Eat a "whole" diet daily.** Get 5+ servings of vegetables and fruits daily. Eat mostly whole grain cereals and breads. Avoid refined cereals, breads, and baked products as much as possible. Avoid beverages/foods without nutrients—choose fruit juices or vegetable juices. Include legumes or beans in as many meals as possible, preferably daily.
4. **Get regular medical check-ups.** The best lifestyle cannot prevent all cancer. Medical interventions may help.

Sources:

1. American Cancer Society Statistics, 2005; NCI guidelines, 2005.
2. Polednak AP. Trends in incidence rates for obesity-associated cancers in the U.S. *Cancer Detection and Prevention* 2003; 27(6):415-421.
3. Norat T, et al. Meat, fish, and colorectal cancer risk: the European Prospective Investigation into cancer and nutrition. *J Natl Cancer Inst.* 2005 Jun 15;97(12):906-16.
4. Nothlings U, et al. Meat and fat intake as risk factors for pancreatic cancer: the multiethnic cohort study. *J Natl Cancer Inst.* 2005 Oct 5;97(19):1458-65.
5. Mahabir S, et al. Physical activity and renal cell cancer risk in a cohort of male smokers. *Int J Cancer.* 2004 Feb 10;108(4):600-5
6. Macera CA. Past recreational physical activity and risk of breast cancer. *Clin J Sport Med.* 2005 Mar;15(2):115-6.
7. United States Cancer Statistics: 2001 Incidence and Mortality.