Smoking and Cancer

Cigarette smoking and exposure to secondhand smoke cause an estimated average of 438,000 premature deaths each year in the United States. Of these premature deaths, about 40% are from cancer. Cigarette smoking is an important cause of cancers of the lung, oral cavity, larynx (voice box), pharynx (throat), esophagus, bladder, kidney and pancreas. A review by the International Agency for Research on Cancer found that, in addition to these cancers, smoking is a cause of cancer of the nasal cavities and nasal sinuses, stomach liver, cervix and myeloid leukemia.

**Lung cancer**

More people die from lung cancer than any other type of cancer. In the United States, about 90% of lung cancer deaths in men and about 80% of lung cancer deaths in women are due to smoking. People who smoke are 10 to 20 times more likely to get or die from lung cancer than people who do not smoke.

If people who smoke stop, even if they have been a smoker for many years, their chances of dying from lung cancer can lessen significantly.

**Oral cancer**

Approximately 34,000 new cases of oral cancer are diagnosed in the U.S. each year, and more than 8,000 people die yearly from this cancer. While the exact percentage of how many of these are caused directly by tobacco is still being determined, it is known that at least 75% of those diagnosed at 50 years of age and older are tobacco users.

**Bladder cancer**

Tobacco smoking is the principal preventable risk factor for bladder cancer in both men and women. Smokers are more than twice as likely to get bladder cancer as nonsmokers. Smoking causes about half of the deaths from bladder cancer among men and almost a third of bladder cancer deaths in women.

**Breast cancer**

Some studies have suggested that smoking increases the risk of breast cancer, however other studies have found no link. There is also some suggestion that secondhand smoke may increase risk for breast cancer, but at this time there is not enough sufficient evidence to confirm this.

**Cervical cancer**

Cancer of the cervix has been found to be associated with cigarette smoking in many case-control studies. Until recently, scientists had been unable to decide whether the relationship was causal or due to confounding factors such as the number of sexual partners. One study investigated whether environmental factors such as smoking, nutrition and oral contraceptive use were independent risk factors for cervical cancer and found that smoking was the second most significant environmental factor after human papilloma virus (HPV). There is now sufficient evidence to establish a causal association of squamous-cell cervical carcinoma with smoking.

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Kidney cancer
Kidney cancer has consistently been found to be more common in smokers than in non-smokers and there is now sufficient evidence to show that smoking is a risk factor for the two principal types of kidney cancer\(^6\).

Leukemia
The cause of leukemia is unknown, and many people who develop leukemia do not have any of the risk factors. However about 20\% of adult acute myeloid leukemia cases are linked to smoking\(^7\).

Liver cancer
Large case-control studies have demonstrated an association between smoking and risk of liver cancer. In many studies, the risk increases with duration of smoking or number of cigarettes smoked daily. The International Agency for Research on Cancer concludes that an association with smoking and liver cancer has also been demonstrated among non-drinkers\(^8\).

Esophageal and stomach cancers
Tobacco smoking is a major cause of cancer of the esophagus and the risk increases with the number of cigarettes smoked and duration of smoking. A recent study following more than 120,000 Dutch adults over the course of 16 years found that smoking increased the risk of the two main forms of stomach cancer, as well as the two forms of esophageal cancer by anywhere from 60 percent to 263 percent when compared to non-smokers\(^9\).

Pancreatic cancer
Cancer of the pancreas is a rapidly fatal disease. Cigarette smoking is a strong and consistent predictor of pancreatic cancer, and smokers have about twice as high a risk for this cancer as non-smokers\(^10\) (although the risk diminishes to that of a non-smoker ten years, on average, after cessation.)

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5 The health consequences of smoking – A report of the US Surgeon General 2004
7 Tobacco smoke and involuntary smoking. IARC Monographs on the evaluation of carcinogenic risks to humans. Volume 83. IARC 2004