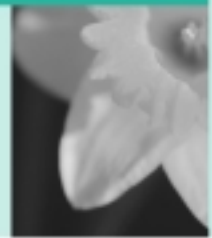


Causes of cancer



Cancer
Society



Understanding cancer

Cancer is not one, but many diseases. What causes one type of cancer does not necessarily cause another. Research into the causes of cancer is going on all the time to identify new carcinogens, or cancer-causing agents.

The causes of some cancers have been found through the work of epidemiologists. These scientists study how disease patterns vary from one group of individuals to another. They have noticed that some groups of people seem to have more, or less, cancer of some kinds than others. As a result of such research, we now know for certain some of the causes of at least some forms of cancer in humans.

Smoking

The most important cause of cancer is cigarette smoking. Smoking causes 25 percent of all cancer deaths in New Zealand. If you smoke, you are more likely to develop lung cancer and other cancers, such as cancers of the mouth, throat, oesophagus, bladder and pancreas. In 1998, 855 men and 526 women died of lung cancer in New Zealand. Most of these deaths caused by smoking could have been prevented.

The greater the number of cigarettes smoked each day, the greater the risk of dying from a smoking-related cancer. The risk decreases when you stop smoking. Usually the body can repair much or some of the damage caused by smoking.

The earlier people start smoking, the greater their risk of dying from lung cancer. About one in ten smokers will die from this type of cancer.

The sun

Sun exposure and sunburn are the main causes of melanoma and other skin cancers. Melanoma is the most serious form of skin cancer. Each year in New Zealand about 1600 people develop melanoma and about 200 die of the disease. The highest rates of melanoma occur where fair skinned people have a lifestyle involving:

- sunburn during childhood and adolescence,
- sunbathing, sunburn and tanning.

Nutrition

What we eat probably plays a part in at least one third of all cancers. It is thought to be important in either promoting the development of certain cancers, or helping protect against them.

Fruits, vegetables, breads and cereals may help protect against certain cancers. Although we do not know for sure, if we eat too much fatty food we may be more likely to develop some cancers. Eating too much fat often means also that we do not eat enough fruit and vegetables, and we are more likely to be overweight, both of which are linked to greater risk of some cancers.

Physical activity

Physical activity helps keep your body a healthy weight and protects you against some cancers, such as colon and breast cancer.

Alcohol

Drinking alcohol causes cancers of the mouth, throat, liver and oesophagus. The risk is greater if a person smokes as well. Some studies show that drinking is also linked with breast and bowel cancers.

Hazards at work

In the past, some people were exposed to high concentrations of carcinogens such as asbestos, benzene, formaldehyde and diesel exhaust in their workplace. Strict control measures have resulted in a sharp decline in the number of fatal cancers due to such workplace hazards.

Radiation

Large doses of radiation can cause cancer. The danger of this happening from medical X-rays is very small because the doses are usually low.

Viruses

There is no such thing as a cancer virus that you can catch like the flu, but some viruses may cause some cancers. The viruses affect the body's cells. For example, some cancers of the liver occur as a result of hepatitis B infection. The human papilloma virus (HPV) is thought to be one of the main causes of cancer of the cervix in women.

Unknown factors

Although we now know the causes of many kinds of cancer, we do not have a clear understanding of why some people develop a cancer and others do not. For example, not everyone who smokes develops lung cancer, and very few women with HPV infection will develop cancer of the cervix. Further research is needed to understand the many interacting factors which lead to cancer.

Suggested reading:

What You Need to Know About Cancer.
Scientific American Special Issue
W.H. Freeman & Co, 1997