

Epidemiological evidence of the effects of behaviour and the environment on the risk of human cancer.

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Recent Results in Cancer Research. 1998;154:3-21 PMID: 10026990*

The incidence of cancer in middle and old age can, in principle, be reduced by 80%-90% and the risks worldwide could be halved, although the methods required are not always socially acceptable. The proportions of fatal cancers attributable to different causes are examined under 17 headings: smoking, alcohol, pharmaceutical products, infection (parasites, bacteria, viruses) electromagnetic radiation (ionizing, ultraviolet, lower frequency) occupation, industrial products, pollution (air, water, food), physical inactivity, reproductive hormones, and diet. Smoking is the most important factor. It contributes to the production of seven types of cancer in addition to the eight that were recognized by the International Agency for Research on Cancer in 1986 and is estimated to have been responsible for 38% of cancers in men and 6% in women in Germany in 1985. Firm estimates can also be made of the proportions of fatal cancers attributable to alcohol and ionizing radiation, and reasonable guesses can be made at the maximum effect of some of the other categories. Many of the factors act synergistically with one another, so that the risk of developing specific cancers can be modified in different ways. When all the avoidable causes are known, the sum of the proportions avoidable in different ways may add up to several hundred per cent.

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