



A Systematic Review of Eating Patterns and Cancer

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Introduction

The link between dietary patterns that include numerous food components and breast cancer risk is unclear. Our goal was to undertake a systematic evaluation of the relationship between dietary habits and the risk of breast cancer. Diets were defined using a priori and posteriori techniques to assess connections between dietary patterns and breast cancer risk in the original papers, which were published between January 2013 and May 2017. The alignment of dietary patterns with the American Cancer Society dietary guidelines was graded posteriori using a new scoring matrix. Seventeen case-controls and nested case-control studies found 15 healthy and 10 unhealthy eating patterns, as well as seven dietary indicators that were defined a priori. Saturated fat, red and processed meats, and vegetables were consistently identified in breast cancer preventive patterns, whereas saturated fat and red and processed meats were consistently found in breast cancer risk patterns. The findings imply that eating a diet rich in vegetables and low in saturated fat, red and processed meats may reduce the incidence of breast cancer.

For decades, scientists have hypothesised that diet had a significant impact on the chance of developing cancer. Cancer rates vary substantially amongst populations, according to epidemiological research dating back to the 1960s, and cancer rates in migrants migrating from low to high risk countries might match or even exceed the rates in the host community. These findings suggested the presence of significant environmental cancer causes, and further studies found substantial links between various forms of cancer and dietary factors; for example, countries with high meat consumption had high incidences of colon cancer. Furthermore, animal research revealed that altering nutrition might affect cancer rates, with solid evidence that decreasing energy intake reduces cancer development overall [1].

Oesophageal cancer can occur anywhere in the oesophagus, which is also known as the gullet or food pipe. The oesophagus is the tube that joins your mouth and stomach. The severity of oesophageal cancer is determined by its location in the oesophagus, its size, whether it has spread, and your overall health [2].

Stomach cancer occurs when cancer cells grow in the stomach's inner lining. These cells have the potential to develop into a tumour. The disease, also known as stomach cancer, normally progresses slowly over several years. People in their late 60s and early 80s are most likely to get stomach cancer [3].

The colon is the last section of the digestive system. Colon cancer is more common in older people, although it can strike anyone at any age. It usually starts as polyps, which are tiny, noncancerous (benign) clusters of cells that grow on the inside of the colon. Some of these polyps can turn into colon cancer over time [4].

The liver is a football-sized organ located in the top right corner of the stomach. Symptoms of liver cancer are uncommon in the early stages. Later on, you may notice weight loss, stomach pain, vomiting, and yellowed skin. Treatment options range from liver resection to transplantation to chemotherapy and, in certain cases, radiation [5].

Breast cancer is a disorder in which the cells in the breast get

uncontrollably large. There are various types of breast cancer. The type of breast cancer is determined by which cells in the breast become cancerous. Breast cancer can start in a variety of places in the breast [6].

Prostate cancer is the world's fourth most frequent cancer. Age, family history, black ethnicity, and genetic characteristics are the only known risk factors. Obesity is thought to raise the risk of more aggressive prostate cancer.

Nutritional research is tough to come by. We've summarised the few well-established clear relationships between nutrition and cancer below, but future study may reveal more key risk factors, such as specific food components or larger dietary patterns, such as so-called plant-based diets. To advance, the next generation of research will need to enhance estimates of long-term exposure by adopting methods such as regular eating records, which are now possible using web-based surveys. Biomarkers of dietary intake and nutritional status can be used more extensively, and new biomarkers might be found through metabolomics, for example, but they will need to be validated and interpreted in the light of possible confounding and reverse causation. For some exposures, both for intake and nutritional status, Mendelian randomisation will help to clarify causality and randomised trials will be needed to test specific hypotheses. It will also be important to attempt to coordinate systematic analyses of all the data available worldwide, to reduce the risk of publication bias. For public health and policy, the top priority should be tackling the known major diet related risk factors for cancer, particularly obesity and alcohol.

Acknowledgement

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Conflict of Interest

None

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