

One Point of View on Diet and Cancer at the Turn of the Millennium

Amit Khaiar*

Department of Pharmacology, National Institute of Pharmaceutical Education and Research, Ahmedabad, India

Corresponding Author*

Amit Khaiar
Department of Pharmacology
National Institute of Pharmaceutical Education and Research
Ahmedabad, India
E-mail: amitkar@niperahm.res.in

Copyright: © 2021 Khaiar A. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Received 08 December 2021; **Accepted** 22 December 2021; **Published** 29 December 2021

Description

The fact that cancer incidence and mortality rates vary widely around the world was a crucial insight in cancer epidemiology during the previous century. Furthermore, cancer rates in people migrating from low-to high-incidence nations shift dramatically; in most cases, rates in the new location are approximated within one to three generations. These lines of evidence suggest that environmental and lifestyle variables, rather than hereditary factors, are the key drivers of cancer rates in high-risk places. These factors in theory, be addressed to lower cancer rates in high-risk areas. Apart from cigarettes, dietary fat has been the main focus of attention during the previous two decades. The high ecological relationships between national per capita fat intake and incidence of these main malignancies support the theory that dietary fat is mostly responsible for cancers of the colon, breast, and prostate in Western nations. Although worldwide comparisons are rich ground for the development of etiologic theories, they offer a perilous foundation for conclusions due to the significant possibility for confounding. Low-risk nations for breast cancer are predominantly underdeveloped areas and traditional Eastern civilizations, where practically every element of lifestyle differs significantly from that of prosperous Western countries. Differences in reproductive behaviours, physical activity, body composition, and a variety of dietary factors other than fat consumption are among them. As a result, more in-depth research is required to account for these factors. These will mostly certainly be case-control and prospective cohort studies, which will need to be evaluated in light of animal and mechanistic investigations.

Every dietary hypothesis linked to cancer should, be put to the test in numerous large randomised studies involving human populations. Due to the enormous number of persons necessary and the long and unpredictable follow-up time, this is likely to be difficult for even a small number of hypotheses.

The Women's Health Initiative fat-loss experiment, for example, will cost around \$1 billion when combined with hormone replacement treatment and calcium/vitamin D therapies. Even yet, it is unlikely to offer a clear response to the fat and breast cancer association since numerous dietary variables are being addressed at the same time, and even if fat was an etiologic element, a 10-year intervention period late in life may be insufficient. The previous studies discussed the broad approach by which they have epidemiologically explored food and cancer associations, as well as present a status update on some of the important concerns that have been addressed over the previous 20 years. In addition to cancer incidence, They shared critical data relating to non-cancer outcomes, namely coronary heart disease. These non-cancer outcomes can aid in the interpretation of cancer data, particularly when a link is shown between a variable and coronary heart disease and not cancer. The lack of a connection with cancer in this situation cannot be explained to a lack of diversity in the dietary component or the inability to assess it. Furthermore, coronary heart disease is significant in and of itself, and we all consume the same food in the end. As a result, any actual dietary selections should be taken in light of how these factors relate to cardiovascular disease and other serious illnesses, not just cancer. When interest in food as a significant driver of cancer began to grow in the late 1970s, there was a lot of scepticism regarding the feasibility of studying human diets in connection to disease risk. "Diets are uniform within communities," and "people can't recall what they ate," were two key issues highlighted. Indeed, if either of these requirements were true, doing relevant studies of food and cancer incidence within populations would be difficult. However, we had cause to assume that neither of these assumptions was valid at the time. First, even simple studies within communities revealed that people's food preferences varied greatly, implying that diets are unlikely to be homogenous. Second, epidemiologists examining food-borne epidemics have shown that people may recall what they ate even after a long period have passed since the crucial event. This experience, on the other hand, revealed that people could more easily answer questions about what they would normally eat rather than what they really ate at a certain moment on a specific day. Fortunately, regular diet, rather than a single meal or consumption for a single day, is likely to be the most important etiological factor in cancer occurrence.