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**Current Concepts in Nutrition, Vol. 6:  
Nutrition and Cancer**

Edited by Myron Winick

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The three aspects of the relationship between food intake and cancer reviewed in this book are the significance of nutrition in the causation of cancer, the effect of cancer on nutritional requirements, and the role of nutritional factors in the prevention of the disease.

There are clearly many reasons why cancer sufferers may become cachectic, for instance there may be inappetence, difficulty in swallowing, or poor absorption. Stress or the inappropriate secretion of hormones by cancer cells may lead to increased catabolism, or there may be loss of plasma proteins through secretion into the gut or from ulcers. The fact that cachexia may be reversed by effective treatment does not prove

that it is a specific entity. Theologides stresses the significance of the production of peptides and other small molecules by cancers as a result of the derepression of genetic information. These, he suggests, may modify the activity of host enzymes and thereby introduce chaos and inefficiency into the complex pattern of biochemical reactions involved in food utilization.

Dickerson and Basu found low concentrations of vitamin A, beta carotene, and cholesterol in patients with cancers of the alimentary tract, and thiamine deficiency in 26 per cent of those with advanced cancer. They also found lowered leukocyte ascorbic acid concentrations but raised hydroxyproline levels in breast-cancer subjects with osseous metastases. In such patients high doses of ascorbic acid reduced collagen degradation and relieved bone pain. Walderman, Broder, and Strober discuss protein-losing enteropathies associated with carcinomas of the stomach, carcinoid tumours, lymphosarcomas, and Hodgkin's disease.

High incidences of colon and breast cancer have been correlated with diets high in fat and animal protein, while Africans who have diets high in fibre exhibit low incidences of appendicitis, diverticulitis, and cancer of the colon. Wynder and Reddy's research leads them to recommend a diet that is lower in calories, fat, and cholesterol than the present American diet in order to reduce the risk of cardiovascular disease and several types of cancer including cancer of the colon. Clayson reminds us of classic animal experiments that showed that although dietary restriction reduces the incidences of tumours, the excessive intake of calories associated with hyperthyroidism is not correlated with increased cancer risk.

This short and easy-to-read book reminds us that (apart from chemical carcinogens) overnutrition, dietary imbalance, and dietary deficiencies are important determinants of cancer risks.

Francis J C Roe