INTRODUCTION

Nutrition plays an important role in the initiation, promotion and progression of cancer although the role of diet in cancer is complex and continues to be studied actively. Cancers are a diverse group of diseases, and their relationships with diet vary [1]. The most consistent findings for many cancers are protective effects of vegetables, and to a lesser extent fruits. High intakes of vegetables and fruits decrease the risks of lung, stomach, colon, esophagus and oral cavity cancers. Recent evidence also suggests protective effects for breast and prostate cancers. High fat intakes increase risk for prostate cancer, while high intakes of meat and/or saturated fat increase the risk of colon cancer. Obesity has been shown to be associated with breast and colorectal cancers; while it reflects a complex set of factors including nutrition, physical activity, and genetics, eating patterns appear to be major contributors. Alcohol, even in modest quantities, increases the risk of breast cancer, and high alcohol consumption increases risks of colon, liver, esophagus and oral cavity cancers. Much progress is being made in understanding the associations of diet with cancer, with a focus on identifying the components of fruits and vegetables that reduce risk.

Even as research into dietary causation of cancer continues, most professional and scientific organizations believe the evidence is sufficient to support official dietary guidance. Dietary guidelines for health promotion and cancer prevention recommend consumption of less animal fat; more fiber (20 to 30 g/day), fruits and vegetables (≥5 servings/day); prevention of obesity; and avoidance of excess alcohol intake [1, 2]. This advice is quite similar to what is recommended for reducing the incidence of other serious chronic illnesses. In 1999, the leading voluntary and scientific organizations
in the United States agreed upon a set of Unified Dietary Guidelines. The guidelines suggest that healthy eating plans include: a variety of foods; five or more servings of fruits and vegetables each day; most foods from plant sources, six or more servings of bread, pasta, and cereal grains daily; limited high-fat foods, especially from animal sources; and minimal levels of simple sugars and sodium.

During the past decade, there has been positive movement in several dietary intake and risk factor markers, as well as in the context and environment of eating. Population trends in sentinel Healthy People 2000 diet indicators show decreases in percent of calories from fat (36 percent to 34 percent) and saturated fat (13 percent to 12 percent) [3]. Concern about dietary fat has increased dramatically, more processed foods bear nutrition labels, a greater proportion of restaurants offer low-fat and low-calorie selections, and more worksites offer nutrition education and weight management programs. Further, the food and restaurant industry has developed products that better meet national recommendations for healthful eating. On the other hand, considerable challenges remain. The prevalence of overweight has increased among teens (15 percent to 21 percent) and adults (26 percent to 34 percent) [3]. Intake of fruits, vegetables, grains, and dietary fiber remain well below recommendations.

Eating habits are influenced by many biological, social, psychological, and cultural factors, and achieving successful dietary change is a great challenge. Much research on strategies to promote eating patterns that may prevent or control some cancers has been conducted over the past two decades. This research has addressed efforts to control cancer and also to prevent and control other chronic diseases and risk factors, especially cardiovascular disease, diabetes, and obesity [4, 5].

The current state of knowledge about strategies for dietary change reflects the varying conditions under which nutrition intervention research has been conducted, from clinical trials to population-wide prevention campaigns. In general, clinical trials have shown large effects in small groups of select, motivated participants. Population-wide strategies have reached many people and achieved smaller effects for large groups [6]. Often, similar strategies have been delivered through different channels, for example communities, worksites, schools, and healthcare settings; and by various types of providers. This chapter provides an up-to-date summary of what is known about selected strategies and settings and should not be considered a comprehensive review of all research on dietary change.