

Weight Management and Exercise for Cancer Survivors

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Obesity may contribute to development and recurrence of cancer, as well as cancer-related and all-cause mortality. This risk factor is also among the most preventable causes of cancer. This article describes current evidence-based guidelines for weight management and physical activity for cancer survivors. The authors also discuss practical interventions to help survivors undertake behavioral changes to manage their weight.

At a Glance

- Obesity is a risk factor for cancer development and recurrence.
- Cancer survivors should be encouraged to practice portion control and substitute foods, such as vegetables, fruits, and whole grains, for foods high in calories but of little nutritional value, such as desserts, soft drinks, potato chips, and fried foods.
- Cancer survivors should include a minimum of 150 minutes per week of aerobic exercise and two days per week of strength training.

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Obesity is a known risk factor for development of many cancers (e.g., postmenopausal breast, colon, esophageal, thyroid, gallbladder, endometrial, kidney, pancreas). It also may contribute to recurrence of cancer, as well as cancer-related and all-cause mortality (Dobbins, Decorby, & Choi, 2013; Fontham et al., 2009). The American Association for Cancer Research (AACR, 2014) reported that obesity is responsible for about 25% of incident cancers. A position statement by the American Society of Clinical Oncology (Ligibel et al., 2014) identified obesity as a health risk that can overtake tobacco as the leading preventable cause of cancer.

Various mechanisms have been proposed to explain the relationship between obesity and increased risk of can-

cer (National Cancer Institute [NCI], 2015). Fat cells produce hormones that can increase cancer risk. For example, the production of estrogen can increase the risk of breast and endometrial cancers. Obese individuals have increased levels of insulin and insulin-like growth factor, which may promote carcinogenesis. Obese individuals often have chronic, subacute inflammation, which has been associated with greater cancer risk. Fat cells produce hormones that may stimulate or inhibit cancer cell growth.

Evidence is also growing regarding the role of obesity in cancer recurrence and cancer-related mortality. Obesity is a known risk factor for the development of other comorbid illnesses, such as diabetes and heart disease, which are prevalent in cancer survivors (Ligibel et al., 2014).

Recommendations

Diet

Cancer survivors are often motivated to make positive health behavior changes after diagnosis and have questions regarding optimal diet and exercise regimens. The American Cancer Society Guidelines on Nutrition and Physical Activity for Cancer Survivors are summarized in Figure 1 (Rock et al., 2012). Although the primary guideline recommends that survivors achieve and maintain a healthy weight, it does not provide specific instruction on an optimal dietary pattern to achieve weight loss.

The American College of Cardiology, the American Heart Association, and the Obesity Society published guidelines for managing obesity in adults (American College of Cardiology/American Heart Association Task Force on Practice Guidelines, Obesity Expert Panel, 2014). These guidelines recommend 1,200–1,500 kcal per day for women and 1,500–1,800 kcal per day for men, or a 500–750 kcal per day energy deficit. They also recommend use of an evidence-based diet that restricts certain food types (e.g., high-carbohydrate foods, low-fiber foods, high-fat foods) to create an energy deficit by reduced food intake.

The common theme among these methods is creating an energy deficit to achieve weight loss. The actual method used should be individualized according to the patient's preference and adherence ability. These recommendations are based on an expert panel review of 17 trials (American College of Cardiology/American Heart Association Task Force, Obesity Expert Panel, 2014) that were rated as fair to good quality to answer the following question: "What is the comparative efficacy or effectiveness of diets of differing forms and structures