

Staying Healthy through Diet and Physical Activity

Good nutrition and regular exercise offer many benefits to childhood cancer survivors. These include:

- Promoting healing of tissues and organs damaged by cancer and its treatment
- Building strength and endurance
- Reducing the risk of certain types of adult cancers and other diseases
- Decreasing stress and providing a feeling of well-being

Impact of Childhood Cancer on Nutrition and Physical Activity

The effects of childhood cancer on nutrition and physical activity will be different for each survivor. Cancer affects nutrition in a number of ways. Some survivors may have difficulty gaining weight, while others may have problems with gaining too much weight. Physical activity is an important factor in maintaining a healthy body weight. There are many factors that can influence a survivor's ability to be physically active; however, childhood cancer and its treatment should not be used as an excuse for not eating a healthy diet or staying physically active. Many survivors, just like many people who have never experienced cancer, have poor health habits. Now is a good time to begin making healthy choices about diet and exercise. These choices can have a positive effect on your health for many years to come.

Developing a Healthy Nutrition Plan

Suggestions for a healthy diet include:

- Choose a variety of foods from all the food groups. Use the "Steps to a Healthier You" interactive customized guide at www.mypyramid.gov to help develop a well-balanced diet and activity plan.
- Eat five or more servings a day of fruits and vegetables, including citrus fruits and dark-green and deep-yellow vegetables.
- When drinking juice, choose 100% fruit or vegetable juice, and limit to about 4 ounces per day.
- Eat plenty of high-fiber foods, such as whole grain breads, rice, pasta and cereals.
- Limit refined carbohydrates, including pastries, sweetened cereals, soft drinks and sugars.
- Decrease the amount of fat in your meals by baking, broiling or boiling foods.



- Limit intake of red meat and substitute fish, poultry, or beans. When you eat meat, select leaner and smaller portions.
- Limit fried and high-fat foods, such as french fries, snack chips, cheeseburgers, and pizza
- Choose low-fat milk and dairy products.
- Avoid salt-cured, smoked, charbroiled, and pickled foods.
- Adults should limit alcoholic drinks to less than two a day for men and one for women.

If you need to lose weight, consult with your health care team and a nutritionist to develop a nutrition plan. Herbal or dietary supplements should be discussed to determine if they are truly healthy. There are several questions you should ask yourself to make sure your nutrition plan will be effective.

- Do you have a realistic, achievable weight goal?
- Does your plan include foods that you will enjoy eating for the rest of your life, not just a few weeks or months?
- Does your plan include a variety of foods?
- Are foods on your plan easily available at your supermarket?
- Does your plan fit into your lifestyle, daily schedule and budget?
- Does your plan include lifestyle changes that will help you maintain your weight loss?

Developing a Healthy Exercise Plan

Check with your healthcare team before starting an exercise plan or taking part in new sports and recreational activities. Your healthcare provider can make you aware of the activities that you can safely take part in and those you should avoid.

When choosing an exercise plan, ask yourself these questions:

- Do you have reasonable goals based on your present strength and endurance?
- Is the activity safe for you to perform?
- Does the plan fit into your lifestyle and schedule?
- Does the activity require special equipment or protective gear and will your budget cover the expense?
- Do you need to make changes in the sport or activity based on a special need?
- Do you enjoy doing the sport or activity?

Here are a few helpful suggestions when implementing your exercise plan:

- Start out slow. Don't try activities that are too strenuous or put you at risk for muscle strain.

- Begin your exercise plan with a warm-up program and end with a cool-down activity, such as stretching and slow easy movements.
- Use correct posture when exercising.
- Exercise until you are tired, but not in pain.
- Identify the muscles you want to strengthen and choose exercises that work on those muscles.
- Alternate exercises to work different muscles and different parts of your body.
- To avoid injury, use the right equipment and shoes.
- Avoid running, jogging, or aerobic dancing on hard surfaces such as asphalt or concrete.
- Increase your workout by no more than 10 percent per week.

The National Cancer Institute recommends at least **moderate physical activity (brisk walking, bicycling, vacuuming, gardening) for at least 30 minutes per day on most days of the week**. If you don't have the time for a 30-minute session all at once, you can break it up into three different sessions of 10 minutes each. The American Cancer Society recommends that **children and adolescents should engage in at least 60 minutes per day of moderate to vigorous physical activity (running, aerobics, heavy yard work) at least 5 days per week**. Here are some practical suggestions to try to work physical activity into your daily schedule.

- Park a good distance from your place of work and walk the extra distance each day
- Set aside 30 minutes a day to take a brisk walk
- Take the stairs instead of the elevator
- If you have a sit-down job, get up and stretch your muscles every hour and take a walk during your lunch or break
- Ride a bike to work or for running errands
- If you have a dog, take him/her on a brisk walk every day
- Plant a garden, wash your car, mow the lawn, paint furniture, clean out the garage and catch up on all those chores you have been meaning to do – instead of watching TV or playing on the computer
- Watch TV or read the newspaper while on a stationary bike or treadmill.
- Plan active family outings, instead of attending a movie
- Exercise with a friend you enjoy spending time with
- Join a sports team

Physical Activity for Survivors with Special Needs

Survivors who have special needs can take part in most activities, but the help of a physical or occupational therapist may be needed to adapt the activity for success.

A social worker may be able to help find insurance coverage or other resources for special equipment. Specialized programs for individuals with special needs, organizations and other resources are often available through your healthcare center, in your local community, and at www.ncpad.org.

Adapted by Sharon Frierdich, RN, MS, CPNP, Pediatric Hematology/Oncology, University of Wisconsin Children's Hospital, Madison, WI, from "Staying Physically Healthy, Play Safely, Play Well," St. Jude Children's Research Hospital, used with permission.

Reviewed by Kevin Oeffinger MD, Missy Layfield, Octavio Zavala, and Marcia Leonard RN, PNP.

Additional health information for childhood cancer survivors is available at www.survivorshipguidelines.org

Note: Throughout this *Health Links* series, the term "childhood cancer" is used to designate pediatric cancers that may occur during childhood, adolescence, or young adulthood. *Health Links* are designed to provide health information for survivors of pediatric cancer, regardless of whether the cancer occurred during childhood, adolescence, or young adulthood.

Disclaimer and Notice of Proprietary Rights

Introduction to Late Effects Guidelines and Health Links: The "Long-Term Follow-Up Guidelines for Survivors of Childhood, Adolescent, and Young Adult Cancers" and accompanying "Health Links" were developed by the Children's Oncology Group as a collaborative effort of the Late Effects Committee and Nursing Discipline.

For Informational Purposes Only: The information and contents of each document or series of documents made available from by the Children's Oncology Group relating to late effects of cancer treatment and care or containing the title "Long-Term Follow-Up Guidelines for Survivors of Childhood, Adolescent, and Young Adult Cancers" or the title "Health Link", whether available in print or electronic format (including any digital format, e-mail transmission, or download from the website), shall be known hereinafter as "Informational Content". All Informational Content is for informational purposes only. The Informational Content is not intended to substitute for medical advice, medical care, diagnosis or treatment obtained from a physician or health care provider.

To cancer patients (if children, their parents or legal guardians): Please seek the advice of a physician or other qualified health provider with any questions you may have regarding a medical condition and do not rely on the Informational Content. The Children's Oncology Group is a research organization and does not provide individualized medical care or treatment.

To physicians and other healthcare providers: The Informational Content is not intended to replace your independent clinical judgment, medical advice, or to exclude other legitimate criteria for screening, health counseling, or intervention for specific complications of childhood cancer treatment. Neither is the Informational Content intended to exclude other reasonable alternative follow-up procedures. The Informational Content is provided as a courtesy, but not intended as a sole source of guidance in the evaluation of childhood cancer survivors. The Children's Oncology Group recognizes that specific patient care decisions are the prerogative of the patient, family, and healthcare provider.

No endorsement of any specific tests, products, or procedures is made by Informational Content, the Children's Oncology Group, or affiliated party or member of the Children's Oncology Group.

No Claim to Accuracy or Completeness: While the Children's Oncology Group has made every attempt to assure that the Informational Content is accurate and complete as of the date of publication, no warranty or representation, express or implied, is made as to the accuracy, reliability, completeness, relevance, or timeliness of such Informational Content.

No Liability on Part of Children's Oncology Group and Related Parties/ Agreement to Indemnify and Hold Harmless the Children's Oncology Group and Related Parties: No liability is assumed by the Children's Oncology Group or any affiliated party or member thereof for damage resulting from the use, review, or access of the Informational Content. You agree to the following terms of indemnification: (i) "Indemnified Parties" include authors and contributors to the Informational Content, all officers, directors, representatives, employees, agents, and members of the Children's Oncology Group and affiliated organizations; (ii) by using, reviewing, or accessing the Informational Content, you agree, at your own expense, to indemnify, defend and hold harmless Indemnified Parties from any and all losses, liabilities, or damages (including attorneys' fees and costs) resulting from any and all claims, causes of action, suits, proceedings, or demands related to or arising out of use, review or access of the Informational Content.

Proprietary Rights: The Informational Content is subject to protection under the copyright law and other intellectual property law in the United States and worldwide. The Children's Oncology Group retains exclusive copyright and other right, title, and interest to the Informational Content and claims all intellectual property rights available under law. You hereby agree to help the Children's Oncology Group secure all copyright and intellectual property rights for the benefit of the Children's Oncology Group by taking additional action at a later time, action which could include signing consents and legal documents and limiting dissemination or reproduction of Informational Content.