

Nutrition

Overview

Maintaining a healthy diet is important for everyone, but it is especially important for patients who are undergoing treatment for lymphoma or chronic lymphocytic leukemia/small lymphocytic lymphoma (CLL/SLL). While there is no specific diet for patients with lymphoma or CLL/SLL, staying hydrated and eating a balanced diet of fruits and vegetables, protein, and carbohydrates can help:

- Allow faster recovery from treatment
- Decrease the risk of infections
- Increase energy
- Improve healing ability
- Maintain a healthy weight
- Maintain strength
- Minimize side effects of treatment

Patients undergoing chemotherapy have a high risk of experiencing side effects, some of which can be severe. This can make eating and drinking difficult. A healthy diet is essential for helping the body heal from cancer and its recommended treatments. A registered dietitian can customize a meal and snack plan to meet patients' nutritional needs and help them modify the plan as needed.

Fruits and Vegetables

The fiber, vitamins, minerals, and other bioactive food components in fruits and vegetables are essential for healthy cell functioning. Many fruits and vegetables contain antioxidants, which help the body fight infection or disease, including cancer. However, a high amount of antioxidants may actually be harmful, as they can reduce the effectiveness and increase the toxicity of some chemotherapy agents and radiation therapy. Radiation and many chemotherapy drugs, including the alkylating agents cyclophosphamide (Cytosan) and nitrogen mustard, act by interfering with a process in cells called oxidation, and some laboratory research suggests that high levels of antioxidants such as vitamins A, C, and E block that oxidative process. For that reason, antioxidant vitamin supplements—and even antioxidant-rich drinks like green tea and pomegranate juice—could potentially reduce the effectiveness of chemotherapy and radiation therapy by protecting the tumor cells from oxidative damage caused by the treatments. Fruits and vegetables should be washed properly to prevent food-borne illness, which could cause serious problems in patients undergoing chemotherapy due to their increased risk of infection.

Protein

Lean meats, eggs, nuts, beans, and dairy are all good sources of protein, which can help the body fight infection, build strength, maintain energy, and promote healing.

Carbohydrates

Complex carbohydrates such as whole grains boost the body's energy stores by supplying B vitamins that can provide long-lasting energy. They also contain trace minerals and antioxidants, which can help the cells of the body function properly and fight infection. However, as noted previously, high levels of antioxidants may actually be harmful, as they can reduce the effectiveness and increase the toxicity of chemotherapy agents and radiation therapy.

Dairy Products

Dairy products (such as milk, hard cheeses, and yogurt) are good sources of calcium, vitamins, and carbohydrates. They are also a good source of protein, which helps the immune system fight infection, builds strength, and maintains the energy needed to function while living with lymphoma and undergoing treatment. In addition, full-fat dairy products such as whole milk and regular (not fat-free) yogurt can help counteract the weight loss that can occur with chemotherapy.

Snacks

Patients often have a significantly reduced appetite during chemotherapy. Snacks such as nuts, Greek yogurt, and smoothies can help patients get the extra protein and calories needed during this time. Smoothies made with fresh fruit, whole milk, vanilla yogurt, and nut butters are high in calories and protein. Adding yogurt, frozen yogurt, or ice cream to beverages can also help increase calorie counts, which is especially helpful for patients who are having a difficult time chewing or swallowing solid food.

Hydration

Dehydration is a serious condition that can result from the side effects of lymphoma treatment, such as diarrhea and vomiting. Increasing fluid intake to balance the amount of fluid lost is critical. If large amounts of fluids cannot be kept down, small but frequent sips of water or sucking on small pieces of ice may be helpful.

Foods to Avoid During Chemotherapy

Avoiding particular foods can help reduce the risk of infection during treatment. Unwashed raw vegetables or fruits and raw or undercooked meats, fish, or eggs can harbor bacteria. This is especially dangerous for patients with lymphoma because chemotherapy and stem cell transplants often lower white blood cell counts, making it difficult for the body to fight bacterial infections. In addition, soft cheeses (such as brie, feta, and blue) are ripened by mold, so they can increase the risk of food-borne illness, which can result in vomiting and dehydration.

To lower infection risk, wash fresh fruits and vegetables with soap, and avoid fruits and vegetables that cannot be properly scrubbed and washed like blackberries or raspberries. Also, keep the surfaces where food is prepared clean by washing with soap and water. Use one cutting board for raw meats or fish and a separate one for other foods, and clean them with soap and water or a diluted vinegar solution after use. Deli meats that are freshly sliced from the deli counter should be avoided by patients undergoing chemotherapy (unless reheated until steaming hot). Vacuum-packed, prepackaged deli meats are a better choice because they carry a lower risk of contamination compared with fresh-sliced deli meats. Lean cooked meats, like chicken, are an even better choice because heat kills the bacteria that can cause infection.

Spicy and acidic foods can irritate side effects such as mouth sores. Fried foods and those with strong smells can also trigger nausea, vomiting, and appetite loss. Conversely, bland foods like plain noodles with olive oil or butter, dry cereal, toast, and crackers can ease nausea. Avoid foods and carbonated drinks that can cause gas, as this will increase discomfort and cause a feeling of fullness. Patients should talk with their doctor before taking nutritional or herbal supplements, because some of these supplements could interfere with lymphoma treatments. Please view the Lymphoma Research Foundation's (LRF's) *Integrative Oncology* fact sheet at www.lymphoma.org/publications for more information on complementary therapy suggestions.

Some healthy food choices to consider during treatment for lymphoma include:

- Whole grain cereals and breads
- Pasteurized 100% fruit or vegetable juices (pasteurization reduces the risk of infection)
- Fresh and dried fruits
- Vegetables (crunchy vegetables such as carrots)
- Leafy green salads
- Lean cooked meats like chicken, turkey, lean pork, and fish

Some food choices to consider limiting during chemotherapy include:

- Sugary foods like regular sodas and desserts
- Red meat and processed lunch meats

During treatment, patients may not feel like eating, foods may not taste good, or nausea may make eating unpleasant. In order to get enough nutrition during these times, try the following:

- Eat several small meals throughout the day rather than three large ones
- Plan to eat at certain times of the day rather than waiting until you feel hungry
- Choose high-calorie, nutrient-rich foods like nuts, beans, avocados, seeds, puddings, and cooked cereals like oatmeal
- Keep your favorite foods nearby and snack often

Food choices can also help ease some of the discomforts commonly associated with lymphoma treatments. For constipation, try drinking plenty of water and eating high-fiber foods like beans, lentils, vegetables, and fresh or dried fruit. Bland foods like rice, bananas, and applesauce, and staying hydrated with plenty of water, can ease diarrhea. For dry mouth or difficulty swallowing, try foods that are soft or mostly liquid like soup, yogurt, or milk, or purée foods to make them easier to swallow. Finally, to prevent irritation of mouth sores, avoid spicy foods and acidic foods like citrus fruits, pineapples, tomatoes, and strawberries.

Patient and Caregiver Support Services

A lymphoma diagnosis often triggers a range of feelings and concerns. In addition, cancer treatment can cause physical discomfort. One-to-one peer support programs, such as LRF's *Lymphoma Support Network*, connects patients and caregivers with volunteers who have experience with lymphoma or CLL/SLL, similar treatments, or challenges, for mutual emotional support and encouragement. Patients and loved ones may find this useful whether the patient is newly diagnosed, in treatment, or in *remission* (disappearance of signs and symptoms).

Resources

LRF offers a wide range of resources that address treatment options, the latest research advances, and ways to cope with all aspects of lymphoma and CLL/SLL, including our award-winning mobile app. LRF also provides many educational activities, from in-person meetings to teleconferences and webcasts for people with lymphoma and CLL/SLL, as well as patient guides and e-Updates that provide the latest disease-specific news and treatment options. To learn more about any of these resources, visit our website at www.lymphoma.org, or contact the LRF Helpline at (800) 500-9976 or helpline@lymphoma.org.

Contact the
Lymphoma Research Foundation

Helpline: (800) 500-9976
helpline@lymphoma.org

Website: www.lymphoma.org

Email: LRF@lymphoma.org

Medical reviewer:

Michelle Bratton, RDN CSO
University of Arizona
Cancer Center

Supported
through
grants from:



Genentech
A Member of the Roche Group

Biogen

Partner: www.cookforyourlife.org

© 2017 Lymphoma Research Foundation

Getting the Facts is published by the Lymphoma Research Foundation (LRF) for the purpose of informing and educating readers. Facts and statistics were obtained using published information, including data from the Surveillance, Epidemiology, and End Results (SEER) Program. Because each person's body and response to treatment is different, no individual should self-diagnose or embark upon any course of medical treatment without first consulting with his or her physician. The medical reviewer, the medical reviewer's institution, and LRF are not responsible for the medical care or treatment of any individual.

Stay Connected
through our social
media

