

Understanding Lymphoma and Nutrition

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, vegetables, whole grains and other sources of 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 tolerate its recommended treatments. Cancer type, current treatment, and side effects must be considered when determining the best diet for the patient. 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 number of antioxidants may actually be harmful, as they can reduce the effectiveness and increase the toxicity of some chemotherapy agents and radiation therapy. Some laboratory research suggests that high levels of antioxidants such as vitamins A, C, and E may protect cancer from the oxidative damage caused by radiation therapy and chemotherapy. 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. 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, nut butters, beans, lentils, and dairy are all good sources of protein, which can help the body fight infection, build strength, maintain energy, and promote healing. Patients with cancer usually need more protein than normal, especially after surgery, during chemotherapy, or radiation therapy.

CARBOHYDRATES

Complex carbohydrates such as whole grains boost the body's energy stores by supplying B vitamins and providing long-lasting energy. They also contain trace minerals and antioxidants, which can help the cells of the body function properly and fight infection.

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.

OMEGA-3 FATTY ACIDS

Omega-3 fatty acids are essential fatty acids. This means that the body can't make a sufficient quantity on its own, so we must get them from the foods we eat. A diet that contains plenty of omega-3 fatty acids can reduce inflammation in the body. Omega-3s can reduce chronic inflammation which has been associated with promoting cancer, heart disease, and other chronic illnesses.

Omega-3 fatty acids can be found in the following foods:

- Deep cold-water fish such as salmon, albacore tuna, mackerel, and sardines
- Organic eggs
- Walnuts
- Chia, flax, and hemp seeds
- Plant oils such as canola and flaxseed oil

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. While eight cups of water a day is a recommendation most people are familiar with, most individuals need even more, especially to prevent dehydration. 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.

VITAMINS AND MINERALS

A balanced diet with a sufficient number of calories and protein will typically provide enough vitamins and minerals, but this may prove difficult to accomplish when you are being treated for cancer. Advise your doctor if you have had limited food intake for several weeks or more and discuss with your doctor before taking any vitamins or dietary supplements.



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 well by rubbing under running water, 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 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 greens (in salads or smoothies)
- Lean cooked meats like chicken, turkey, 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.

LRF'S HELPLINE AND LYMPHOMA SUPPORT NETWORK

A lymphoma diagnosis often triggers a range of feelings and concerns. In addition, cancer treatment can cause physical discomfort. The LRF Helpline staff members are available to answer your general questions about a lymphoma diagnosis and treatment information, as well as provide individual support and referrals to you and your loved ones. Callers may request the services of a language interpreter. A part of the Helpline is LRF's one-to-one peer support programs, Lymphoma Support Network. This program connects patients and caregivers with volunteers who have experience with lymphomas, similar treatments, or challenges, for mutual emotional support and encouragement. You may find this useful whether you or a loved one is newly diagnosed, in treatment, or in remission.

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LRF FOCUS ON LYMPHOMA MOBILE APP

Focus on Lymphoma is the first app to provide patients and their caregivers with tailored content based on lymphoma subtype, and actionable tools to better manage diagnosis and treatment. Comprehensive lymphoma management, conveniently in one secure and easy-to-navigate app, no matter where you are on the care continuum. Get the right information, first, with resources from the entire Lymphoma Research Foundation content library, use unique tracking and reminder tools, and connect with a community of specialists and patients. To learn more this resource, visit our website at lymphoma.org/mobileapp, or contact the LRF Helpline at 800-500-9976 or helpline@lymphoma.org.

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, including our in-person meetings, webinars for people with lymphoma, 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 Helpline at (800) 500-9976 or helpline@lymphoma.org.

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