Cancer treatments such as chemotherapy and other drug therapies as well as radiation to the brain can cause changes in cognitive (thinking) function. These changes may affect concentration, memory and the ability to multi-task. Many cancer patients experience cognitive effects of treatment to some degree. For most, these cognitive problems last only a short time and improve after treatment ends. Others, however, may have long-term cognitive changes.

SIGN AND SYMPTOMS OF COGNITIVE EFFECTS
Cognitive (thinking) issues are a real side effect of cancer treatment that can be frustrating and scary for cancer patients who experience them.

Most often, the changes that patients notice are so subtle that their family, friends and coworkers may not even notice. Other patients, however, have much greater memory or concentration problems that may be obvious to others. These changes can make people unable to go back to work or school, or reluctant to participate in social activities. For these people, it may require a lot of mental effort to do normal, everyday tasks.

Some cancer survivors call the cognitive (thinking) changes that can be a side effect of cancer treatment “chemo brain.”

Talk to your doctor if you have any of the following concerns:

- Memory problems, such as forgetting things that you usually have no trouble recalling
- Difficulty finding the right word
- Difficulty processing thoughts quickly
- Trouble understanding what people are saying
- Trouble concentrating and paying attention
- Difficulty following instructions
- Problems multi-tasking (less able to do more than one thing at a time)
- Difficulty learning and recalling new information

TIPS TO MANAGE COGNITIVE EFFECTS
Here are some things you can do to manage cognitive side effects:

- Use a calendar, daily organizer or mobile app to keep track of appointments, activities and important dates.
- Organize your home and work spaces by making sure everything has a place. Get rid of clutter.
- Do one task at a time. Avoid multi-tasking. Be patient with yourself and allow extra time to accomplish each task.
- Minimize distractions and put electronic devices (such as your cell phone) away when working.
- Exercise your brain by reading or doing crossword puzzles, or start a new hobby such as painting or journaling.
- Exercise your body. Ask your healthcare team for help with an appropriate exercise program.
- Eat well by including foods in your meals that promote healthy brain functioning. These foods include fish, dark leafy greens, fresh fruits and vegetables, and whole grains.
- Avoid alcohol and other substances that alter your mental state.
- Get plenty of sleep and rest. Try to go to bed and wake up at the same time each day. If you need to rest during the day, limit daytime naps to no more than 30 minutes.
- Manage stress. Take care of your mental health by finding ways to relax such as deep breathing or meditation. For more information on how stress affects you and tips to relax and deal with pressure, visit www.LLS.org/booklets to view Managing Stress.
- Ask for help. Be honest with family members and friends so they can understand and help you remember things and complete tasks.
- Consider telling your employer. Telling your employer about your health issues is your choice. However, if cognitive effects make it difficult to complete your work, you may want to talk to your supervisor about reasonable accommodations that may help you. These may include asking for additional time to finish projects or a work space in a quiet area with fewer distractions. Visit www.LLS.org/EmploymentRights to learn more.
TALK TO YOUR HEALTHCARE TEAM

If you experience issues with memory or concentration problems that affect your work or cause trouble in your daily life, tell your healthcare team. Your doctor will assess your symptoms and advise you about ways to manage or treat these problems.

Other factors can also contribute to cognitive changes and can be treated separately. These conditions include poor nutrition, dehydration, anxiety, depression, fatigue and insomnia. Tell your healthcare team if you have these conditions. Treating these may help improve your cognitive (thinking) function.

Keep a journal of your memory and concentration problems so that your doctor can better understand how thinking problems are affecting your daily life. Make a list of all medications, as well as any vitamins and herbal supplements that you are taking, to share with your healthcare team.

When going to the doctor, bring a caregiver, friend or family member along with you to take notes and offer support. You may want to audio record the information from the doctor and then listen to the recording later. Ask the doctor if you may record the conversation (most cell phones have a “record” function).

Your doctor may refer you to a neuropsychologist, a psychologist who is an expert in the way the brain works, to assess your symptoms and make recommendations to manage the difficulties you are experiencing. While there are no medications approved to treat cognitive effects, your doctor may consider medications approved for other conditions to treat your symptoms.

Survivors of childhood cancers may also experience cognitive effects from cancer treatment.

Questions To Ask Your Healthcare Team
- What are the cognitive effects of my treatment(s)?
- When are cognitive effects likely to happen?
- Are there any changes, signs or symptoms I should tell my healthcare team about right away?
- What is likely causing my symptoms? Are there other medical problems that could be causing my symptoms?
- How long do symptoms typically last?
- What can I do to ease cognitive effects?
- Will I be able to work with cognitive effects?
- Can you refer me to a neuropsychologist or other specialist?

GET ONE-ON-ONE SUPPORT.
The Leukemia & Lymphoma Society team consists of master’s level oncology social workers, nurses and health educators who are available by phone Monday–Friday, 9 a.m. to 9 p.m. (ET).

INFORMATION SPECIALISTS
- Call 800.955.4572
- Visit www.LLS.org/InformationSpecialists

CLINICAL TRIAL NURSE NAVIGATORS
- Call 800.955.4572
- Visit www.LLS.org/CTSC

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Darci L. Zblewski, APRN, CNP
Division of Hematology, Myeloid Group
Mayo Clinic, Rochester, MN

To learn more visit, www.LLS.org/booklets to view Side-Effect Management: Learning Effects of Childhood Cancer Treatment.