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<http://www.cancer.net/navigating-cancer-care/side-effects/attention-thinking-or-memory-problems>

[Attention, Thinking, or Memory Problems](#) [1]

This section has been reviewed and approved by the [Cancer.Net Editorial Board](#) [2], 12/2015

Cognitive problems occur when a person has trouble processing information. This includes mental tasks related to attention span, thinking, and short-term memory.

Up to 75% of people with cancer experience cognitive problems during treatment. And 35% have issues that continue for months after finishing treatment. These problems vary in severity and often make it hard to complete daily activities. If you experience serious cognitive problems, talk with your health care team about managing those issues.

Signs and symptoms of cognitive problems

Managing symptoms of cognitive problems is an important part of cancer care and treatment. This is called [palliative care](#) [3]. Talk with your health care team about any symptoms you or the person you are caring for experience. This includes the following symptoms or changes:

- Trouble concentrating, focusing, or paying attention
- Mental fog or disorientation
- Difficulty with spatial orientation
- Memory loss or difficulty remembering things, especially names, dates, or phone numbers

- Problems with understanding
- Difficulties with judgment and reasoning
- Impaired math, organizational, and language skills. This includes tasks such as not being able to organize thoughts, find the right word, or balance a checkbook.
- Problems multitasking
- Processing information slower
- Behavioral and emotional changes, such as irrational behavior, mood swings, inappropriate anger or crying, and socially inappropriate behavior
- Severe confusion

The level of these symptoms often depends on the person's age, stress level, history of depression or anxiety, coping abilities, and access to emotional and psychologic resources.

Causes of cognitive problems

Cancer survivors commonly use the term "chemo brain" to describe difficulty thinking clearly after cancer treatment. But people who do not receive chemotherapy also report similar symptoms. Many factors can cause cognitive problems in addition to [chemotherapy](#) [4].

- Radiation treatment to the head and neck or total body irradiation
- Brain surgery, in which areas of the brain may be damaged or disrupted during a biopsy or the removal of a cancerous tumor
- Hormone therapy, immunotherapy, and other medications, which may include the following:
 - Anti-nausea medications

- Antibiotics
 - Pain medications
 - Immunosuppressants
 - Antidepressants
 - Anti-anxiety medications
 - Heart medications
 - Sleep disorder medications
- Infections, especially those of the brain and spinal cord, and infections that cause a high fever
 - Brain cancer
 - Other cancers that have spread to the brain
 - Other conditions or symptoms related to cancer or cancer treatments, including anemia, sleep problems, fatigue, high blood calcium, and electrolyte imbalances that can lead to dehydration or organ failure
 - Emotional responses, such as stress, [anxiety](#) [5], or [depression](#) [6]
 - Not having enough of specific vitamins and minerals, such as iron, vitamin B, or folic acid
 - Other brain or nervous system disorders unrelated to cancer

Managing cognitive problems

Cognitive problems from a treatable condition, such as anemia or an electrolyte imbalance,

usually resolve after the condition is treated. Likewise, problems caused by a medication should go away after stopping the medication. Problems related to cancer in the brain usually improve with treatment, but some symptoms may continue. Unfortunately, cognitive problems related to chemotherapy, radiation therapy, or other cancer treatments may be long term. Management of these lasting cognitive problems may include:

- Medications, including stimulants, cognition-enhancing drugs, antidepressants, and drugs that block the actions of narcotics, such as morphine
- Occupational therapy and vocational rehabilitation, to help people with the activities of daily living and job-related skills
- Cognitive rehabilitation and cognitive training, to help patients improve their cognitive skills and find ways to cope with cognitive problems.

Strategies for coping with cognitive problems

The following strategies may help you better cope with attention, thinking, and memory difficulties and help you stay mentally sharp:

- Keep a checklist of daily reminders. Put it in a convenient location, where you can look at it frequently. If necessary, keep another copy at work.
- Do one task at a time and avoid distractions.
- Carry around a small pad and a pen or pencil to easily write down notes and reminders. Or, download a note-making app on your smartphone and tablet.
- Use a calendar or daily organizer to keep track of upcoming appointments, activities, and important dates.
- Place sticky notes around the house and workplace to remind you of important tasks. You can also set reminders using your phone or email calendar.
- Use word play, such as rhyming, to help you remember things.

- Get plenty of rest.
- Make time for physical activity to increase mental alertness. Try walking, swimming, or gardening. Yoga or meditation can also help you relax and clear your mind.
- Conduct brain-strengthening mental activities, such as solving crosswords or puzzles, painting, playing a musical instrument, or learning a new hobby.
- Don't be afraid to ask your doctor questions, even if you feel like you are repeating yourself. Then keep track of the important facts you discuss with your doctor. You can use a special notebook, a voice recorder, the [Cancer.Net mobile app](#) [7], or an [ASCO Answers guide](#) [8]. If it is too overwhelming, ask a friend or family member to go to the appointment with you. He or she can take notes and review them with you afterward.
- Talk with your employer if you are having problems at work. Discuss ways your employer could support you, such as changing your workload or deadlines. Read more about [going back to work after cancer](#) [9].
- Prepare for the next day by setting out the things you will need the night before.
- Color code or label certain cabinets or drawers where you store things around your home.
- Put things, such as car keys, back in the same place every time so you can easily find them.
- Eliminate clutter.
- Store important phone numbers in your cell phone or display them next to your home phone. You can also carry an address book in case you forget to bring your cell phone when you go out.

Also, don't be afraid to ask your family and friends for help. And, talk with your doctor or other health care team members about [counseling](#) [10] and other resources.

Cognitive problems in children

Young children (age 5 and younger) are more likely to have long-term cognitive problems. These

cognitive problems can occur months or years after treatment ends and can continue into adulthood. The following treatments are more likely to cause cognitive problems:

- Radiation therapy directed at the head, neck, or spinal cord
- Total body radiation
- Chemotherapy delivered directly into the spine or the brain.

Some of the possible cognitive problems include:

- Decreased overall intelligence
- Learning disabilities
- Decreased attention span and attention deficit disorders
- Delayed development, including delayed social, emotional, and behavioral development
- Lower academic achievement, especially in reading, language, and math
- Decreased ability to understand language or to put thoughts together in a way that makes sense
- Decreased nonverbal and verbal memory skills

Your child may receive occupational therapy, speech therapy, behavior therapy, social skills training, cognitive rehabilitation, and/or medications for attention deficit disorders to help treat cognitive problems. Some children may need to learn new ways of learning in school or paying attention.

Additional in-school options such as specialized reading and mathematics instruction and special education programs are also helpful. Because early intervention seems to offer the most benefit, parents must be aware of possible cognitive problems. They should talk with their child's doctor, oncologist, or another member of the health care team as soon as they suspect a problem.

More Information

[Managing Emotions](#) [11]

[Survivorship](#) [12]

[Late Effects of Childhood Cancer](#) [13]

[Side Effects](#) [14]

Additional Resources

LIVESTRONG Foundation: [Cognitive Changes After Cancer Treatment](#) [15]

CancerCare: ["Doctor, Can We Talk About Chemobrain?"](#) [16]

Links

[1] <http://www.cancer.net/navigating-cancer-care/side-effects/attention-thinking-or-memory-problems>

[2] <http://www.cancer.net/about-us>

[3] <http://www.cancer.net/node/31921>

[4] <http://www.cancer.net/node/30673>

[5] <http://www.cancer.net/node/30336>

[6] <http://www.cancer.net/node/30346>

[7] <http://www.cancer.net/node/29951>

[8] <http://www.cancer.net/node/24>

[9] <http://www.cancer.net/node/24549>

[10] <http://www.cancer.net/node/24699>

[11] <http://www.cancer.net/node/25109>

[12] <http://www.cancer.net/node/22>

[13] <http://www.cancer.net/node/24571>

[14] <http://www.cancer.net/node/25238>

[15] <http://www.livestrong.org/we-can-help/finishing-treatment/cognitive-changes-after-cancer-treatment/>

[16] http://www.cancercare.org/publications/73-doctor_can_we_talk_about_chemobrain