

# Cancer-Related Brain Fog



## **Information about cancer-related brain fog for people with cancer and their caregivers**

Also called 'Chemo-Fog', 'Chemo-Brain', 'Cancer-Related Cognitive Dysfunction'



## **What is cancer-related brain fog?**

People treated for cancer notice changes in their thinking and cognitive abilities during or after treatment. This is known as cancer-related brain fog. It is sometimes called chemo-brain, cancer-induced brain fog, or a similar term.

The rest of this brochure will explain symptoms and possible causes of cancer-related brain fog and describe some self-management strategies to help you improve your symptoms.

Symptoms of cancer-related brain fog can include difficulty with:

- Maintaining attention, focusing on a task, or concentrating
- Remembering things
- Multi-tasking
- Keeping your train of thought while talking
- Finding the right words during a conversation
- Working with numbers
- Taking longer to do tasks than before
- Recalling details like names and dates

Although everyone's experience can be different, it is very common to feel frustrated. For some people, symptoms start at the time of diagnosis, but most often people notice symptoms during treatment.

Cognitive functioning usually improves after treatment is over, but for a subset of people, symptoms may persist long after treatment is over (months to years).

## **Causes of cancer-related brain fog**

Symptoms can be caused or made worse by many factors:

- Diagnosis of cancer
- Cancer treatments
- Low blood counts or anemia
- Infection
- Dehydration
- Stress, depression and/or anxiety
- Hormone changes (such as menopause)
- Hormone treatments
- Fatigue
- Pain
- Lack of proper nutrition
- Rapid weight loss
- Sleep problems, including sleep apnea
- Hearing loss
- Drugs for sleep or pain

The precise causes of cancer-related brain fog are poorly understood. Causes may be different for different people and may change over time.

Cancer-related brain fog is not dementia or Alzheimer's disease. Other medical conditions may mimic cancer-related brain fog. It is important to tell your healthcare team if you are experiencing symptoms of cancer-related brain fog.

There are currently no medical treatments for cancer-related brain fog. However, symptoms may be managed with changes in behaviour and by adopting different strategies.

## How can I manage my symptoms?

There are things you can do to help lessen day-to-day difficulties that come with cancer-related brain fog, including the use of **memory aids** and **devices**.

- ✓ **Use timers** – Use the oven or stove clock or kitchen appliances with built-in timers and safety features like automatic shut off when cooking. Consider wearing a watch with an alarm or use the alarm feature on your cell phone to set daytime reminders.
- ✓ **Use calendars** – Keep a small calendar and pen with you at all times to record appointments. Many cell phones have a calendar function.
- ✓ **Track meals, sleep, and activities** to help you figure out if there are patterns that affect your attention and memory. Many smart phones have applications to keep track when you eat, sleep or exercise.
- ✓ **Write things down** – Write out questions for your healthcare team and record answers right away. Write things down when the information is detailed or complicated. Make “To-Do” lists and check off items as you complete them.
- ✓ **Involve family and friends** – Bring someone to appointments; use them as memory partners and ask them to give you reminders. You may not always need them, but they can help just in case.



- ✓ **Make notes** – Use simple reminders like sticky notes in obvious places. This will reinforce information and help you to remember things.



- ✓ **Electronic reminders** – Cell phones, digital watches, e-readers and other electronic devices can be programmed to provide reminders or alerts. If you own a smart-phone, you can record conversations and create voice memos. You can also try sending yourself an e-mail, voicemail or text reminder. Text messages and cell phone calendars can be used to help keep track of important information and key events.
- ✓ **Take a picture** – Use your smart phone to take a picture of what you need to remember, such as the sign showing where your car is parked.

- ✓ **Use GPS, maps, or directions** – Navigation systems can help you to reach your destination without any confusion.



## Organize your environment and your day.

- ✓ Keep a **calendar or organizer** to visualize your day. Make a habit of checking it regularly.
- ✓ **Create regular routines** to make it less likely that you will forget something, such as taking your medicine at the same time each day.
- ✓ **Organize and declutter your space.** Make sure you return things to their proper place when you are finished. Keep keys, wallet, cell phone and other frequently needed items in certain places.

- ✓ Use a **pill organizer/dosette** to organize your medications for the week. Pill boxes can be found in your local pharmacy. Some pharmacies can set this up for you.



- ✓ Use **office organizers** for mail and documents (such as folders, envelopes, trays, clips and labels).



## How can I sharpen my mental ability?

Use **strategies** to process information deeply and become an active learner.

- ✓ **Repetition**, Repetition, Repetition! Repeat important things silently or out loud. Don't feel embarrassed to ask people to repeat what they say to you.
- ✓ **Screen out** information that you don't need and concentrate on what you need to know.
- ✓ **Group** different things into a category by finding something they have in common or how they are similar. For example, if you forget your grocery list try to recall items by thinking about all the dairy items you might need, such as cheese, milk, and yogurt.

- ✓ **Summarize** your day in a diary before you go to sleep at night. Include details you want to remember about neutral or pleasant events. For example, try to write down the plot of a movie you watched that day or a conversation you had with a friend. Write the facts and include details.



- ✓ **Practice** focusing your attention and concentration. Focus on an object and try to recall as many details as you can with your eyes closed.
- ✓ **Personalize** new information and relate it to yourself or relate it to things you already know. This will help you to remember it later.
- ✓ **Avoid multitasking** by focusing and completing one task before starting another, when possible. If you start a new task before finishing what you are doing, set a time or alarm or make a note to remind you to return to the unfinished task later.

**Lifestyle** can impact thinking abilities. What is good for the heart is good for the brain!

- ✓ **Physical exercise** helps the body, mind and brain. It improves cognitive functioning and helps overall mood.
- ✓ **Eat healthy foods.** A balanced diet of fresh fruits, vegetables, whole grains, and protein are necessary in maintaining physical and mental well-being. Each individual has different dietary needs. To find more information about your specific dietary needs, speak with your physician.



- ✓ **Stay hydrated.** Drink plenty of fluids, especially water.
- ✓ **Get enough sleep.** Being well-rested will make it easier to concentrate, learn, and remember. Practice good sleep habits, such as waking up at the same time each day. Avoid electronic screens at least 1 hour before bedtime.
  - See the HelpGuide website [www.helpguide.org/home-pages/sleep.htm](http://www.helpguide.org/home-pages/sleep.htm) for tips.
  - Talk to your doctor if you are having problems with sleep.
- ✓ **Socialize.** Get involved in group activities that you may have been a part of before your cancer treatment, or try something new, like joining a support group or volunteering.



**Challenge** yourself. Activities that make you think can improve concentration. This may include card games, puzzles, reading, or writing letters. Try to learn a new skill or improve upon one you already enjoy.

## How can I reduce mental fatigue?

Mental Fatigue is a feeling of being mentally tired, and causes trouble in paying attention or maintaining focus on a task. It can occur during different points of the cancer process. Research has found that certain activities may help to reduce mental fatigue by being restorative.

**Restorative experiences** are those that can rest your mind and bring back mental energy.

- Do activities that you find pleasing like:
  - ✓ Take a walk or sit outside.
  - ✓ Practice meditation or yoga.
  - ✓ Listen to music or sounds of nature (such as rustling of leaves or bird calls).
  - ✓ Watch wildlife or other natural scenes.

- **Restorative activities** should:

- ✓ Be enjoyable and attention-grabbing.
- ✓ Take place in a peaceful or natural setting, or somewhere that allows the mind to rest but not sleep.
- ✓ Involve a change from everyday activities and take your mind off of other concerns.



There are other ways to reduce mental fatigue:

**Reduce stress** – Stress causes mental fatigue and engaging in stress reducing activities can boost mental energy (see activities listed above). Practice regular “breath” breaks –Take a few slow and deep breaths, especially when you are feeling tense.

**Reduce noise** – Noisy distraction can hinder concentration and make it difficult to focus. Try to minimize background noise when possible. For example, turn the television off when reading.

**Reduce mess** – A messy and cluttered environment makes it more difficult to find things and makes it more difficult to relax, both physically and mentally. Put things away where they belong. Get rid of things you do not use, want, or need.

### **Stay motivated and be positive:**

- ✓ Do activities that you enjoy.
- ✓ Feeling sad or anxious can worsen memory problems.
- ✓ Stay interested in the world around you. It's easier to learn and remember things if you are interested in them.
- ✓ Learn to laugh. Cancer-related brain fog is not funny, but being hard on yourself for forgetting does not help it. Acknowledge your forgetfulness and carry on with your day.
- ✓ Seek help from a health professional if you have problems with depression, anxiety, or insomnia.

### **Talk to your doctor**

Let your doctor or nurse know if you are concerned about changes in your thinking abilities:

- They should be able to test for things that could be contributing to cognitive changes.
- They can also refer you to a specialist such as a dietitian, a counselor for relaxation support, or an education or support group that discusses cancer-related brain fog.

Your doctor is likely to ask you a number of questions:

- Being ready to answer them may allow more time later to cover points you want to address.
- It might be helpful to write down any symptoms, when you noticed them, and for how long the symptom(s) lasted.

You may also want to ask your doctor if there are any tests that can help rule out other causes of cognitive decline.

- These might include blood tests, brain imaging tests, or sleep study tests.
- Your doctor can help you decide if any of these tests would make sense to do in your particular situation.

## Additional resources



### Websites:

- Princess Margaret Cancer Classes online  
Go to [pmcancerclasses.ca](http://pmcancerclasses.ca) and search for “Cancer related brain fog”
- The American Cancer Society  
[www.cancer.org](http://www.cancer.org)  
Search for ‘chemo-brain’ or ‘brain fog’
- CancerCare  
[www.cancercare.org/tagged/chemobrain](http://www.cancercare.org/tagged/chemobrain)
- LiveStrong  
[www.livestrong.org/we-can-help/finishing-treatment/cognitive-changes-after-cancer-treatment](http://www.livestrong.org/we-can-help/finishing-treatment/cognitive-changes-after-cancer-treatment)

- OncoLink  
[www.oncolink.org/coping/article.cfm?c=5&s=79&ss=196&id=1051](http://www.oncolink.org/coping/article.cfm?c=5&s=79&ss=196&id=1051)
- The Mayo Clinic  
[www.mayoclinic.com](http://www.mayoclinic.com)  
Search for 'chemo-brain'



## Books:

- **Your Brain After Chemo: A Practical Guide to Lifting the Fog and Getting Back Your Focus**  
by Dan Silverman (2010)
- **ChemoBrain: How Cancer Therapies Can Affect Your Mind**  
by Ellen Clegg (2009)



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