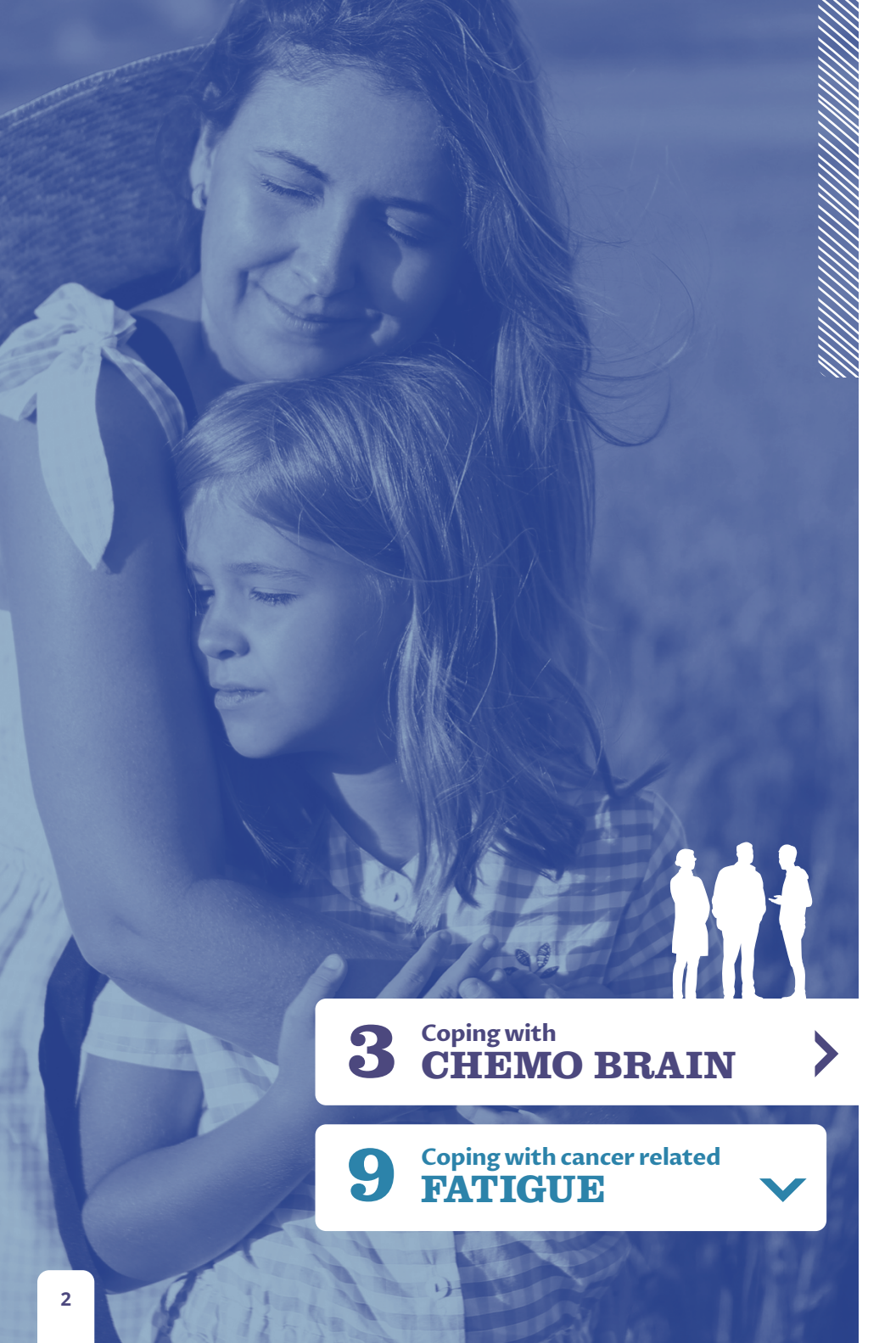




Understanding cancer related
**FATIGUE &
BRAIN FOG**





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CHEMO BRAIN



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FATIGUE





Coping with **CHEMO BRAIN**

Introduction to chemo brain

Some cancers and treatments can result in cognitive changes that affect thinking, learning, processing, or remembering information. These changes can affect many aspects of life such as the ability to work or even to do everyday tasks.

Most chemotherapy patients experience these effects to some degree. The effects are sometimes referred to as “chemo brain” or brain fog. Its exact cause isn’t always known.

Although these cognitive changes are commonly called “chemo brain”, it is unlikely that chemotherapy is the only cause of these problems. Cognitive changes can happen suddenly (acute onset) or slowly over time (gradual onset).

Some changes after cancer are very minor and will go away. Other cognitive changes may be more noticeable and may not be reversible.

If you suspect chemo brain, talk to your doctor to develop a plan to manage your symptoms.

Causes of chemo brain

Cognitive changes can occur at any point during your experience with cancer. These changes may also happen after completing cancer treatment or after taking certain medications.

The causes of cognitive problems related to cancer and its treatment are still being studied, and at this time there's no known way to prevent them.

Some possible causes of chemo brain may include:

- High dose chemotherapy and/or the use of immunotherapy to boost the immune system
- Radiation treatment to the head and neck
- Hormone therapy and other medications
- Cancer involving the brain as a result of a tumor or the treatment of a tumor
- Other conditions or symptoms related to cancer or cancer treatments
- Stress, anxiety, or depression
- Vitamin deficiencies

Cognitive changes after cancer treatment are sometimes referred to as “chemo brain” or brain fog. Its exact cause isn’t always known.





Symptoms and signs of chemo brain

The severity of the symptoms of chemo brain often depends on your age, stress level, history of depression or anxiety, coping abilities, and access to emotional and psychological resources. Some signs are acute and occur suddenly, while others may come about slowly over time.

Acute onset cognitive changes occur suddenly. This can happen during treatment with certain medications and chemotherapy agents, and may be reversible.

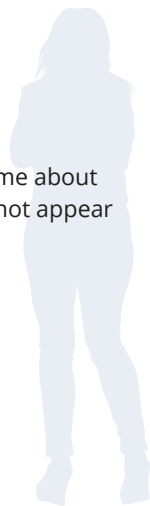
Symptoms of some acute changes include:

- Fluctuating alertness and orientation
- Difficulty concentrating
- Reduced level of consciousness
- Problems with comprehension or understanding
- Unusual sleep patterns
- Agitation
- Confusion
- Memory loss
- Quiet, inactive behavior, including sedation

Gradual onset cognitive changes, or chronic changes, come about slowly over time and may be long-lasting. Symptoms might not appear until active treatment for cancer is finished.

Symptoms include:

- Poor memory
- Difficulty with abstract thinking and/or multi-tasking
- Poor judgment and poor decision making
- Changes in personality
- Difficulty with problem solving and following directions
- Disorientation
- Difficulty setting priorities and completing tasks



Treatments for chemo brain

Whether cognitive changes will improve or be permanent depends on their cause. Acute cognitive changes that occur because of certain medicines often improve when you stop taking the medicine. Chronic changes are often not reversible but certain steps can be taken to help mitigate their effect on you.

Management of long-term cognitive problems may include:

- Cognitive rehabilitation and training, to help improve cognitive skills and find ways to cope with cognitive problems
- Occupational therapy and vocational rehabilitation, to help with the activities of daily living and job-related skills
- Medications, including stimulants, cognition-enhancing drugs commonly used to treat Alzheimer's disease, antidepressants, and opiate antagonists

Coping with chemo brain

Tell others Help manage chemo brain by telling your family, friends, and health care team about it. Let them know what you are going through. You may feel relieved once you tell people about the problems you sometimes have with your memory or thinking.

Tell your doctor If chemo brain is leading to issues at work or at home, talk with your doctor to try and pinpoint causes and what you can do to improve your symptoms. This is especially important for people with chemo brain that lasts more than a year and keeps causing trouble in their daily lives.



Chemo brain coping tips

Plan and organize

- Keep a checklist of daily reminders and to-dos.
- Use a pen and paper, calendar or your smartphone to jot down reminders and keep track of important dates.
- Place reminders around the house and workplace to jog your memory of important tasks.
- Prepare for the next day by setting out the things you will need the night before.
- Eliminate clutter and keep popular items, such as your phone, in a designated place.
- Store important information and emergency contacts in a notebook or smartphone to have on you at all times.
- Follow routines and don't try to multitask. Focusing on one thing at a time and keeping a schedule will help you feel more in control.

Mind and body

- Use tricks such as rhyming or singing to help you remember things.
- Get plenty of rest.
- Make physical activity a part of your daily routine. Yoga, swimming, and walking can all help increase mental alertness.
- Eat veggies. Studies have shown that eating more vegetables is linked to keeping brain power as people age.
- Exercise your brain with crosswords or puzzles, painting, playing a musical instrument, or learning a new hobby.

Talk

- Ask for help when you need it. Friends and loved ones can help with daily tasks.
- Don't be afraid to ask questions at your doctors' appointments. Ask a friend or family member to go with you so he or she can take notes and review them with you after the visit.
- Talk with your employer if you are having problems at work. Discuss potential ways your employer could support you, such as modifying your workload and deadlines.
- Join a support group. Remember you are not alone! Share your experience with others who have been through it too.





Coping with cancer related **FATIGUE**

Introduction to fatigue

More than 50 per cent of people who are diagnosed with cancer will experience cancer-related fatigue (CRF). It is often said to be the most common and distressing symptom reported by cancer survivors, due to its impact on daily functioning and daily quality of life.

CRF is characterized by excessive and persistent exhaustion that can interfere with daily activity and function. CRF often begins before cancer is diagnosed, may worsen during treatment, and can sometimes persist for months or even years after treatment ends. Fatigue is a subjective experience and the assessment of fatigue relies on the patient's self-report of its intensity and how much it interferes with daily life.

When effects of CRF are present, they can range in severity from mild to severe. Some effects may be short-term and intermittent, whereas others may linger for months to years after cancer and cancer treatment. It is important to talk with your medical team to plan treatment and follow-up care.



Causes of fatigue

Fatigue is a symptom that is associated with many blood cancers and blood cancer treatments. A person who receives chemotherapy or other anti-cancer drugs, radiation therapy, and/or stem cell transplantation generally experiences some degree of fatigue. Although CRF typically lessens in the months following treatment, it can become an ongoing problem.

The risk for developing cancer related fatigue may be influenced by your diagnosis, treatment, age, gender, and overall health.

While there is no standard treatment for CRF, the first step is often to identify and treat any underlying causes of CRF (for example, anemia or poor nutrition) and any other contributing health problems. The causes can be multi-factorial and the exact causes can be difficult to identify. Problems such as heart, liver or kidney disease, pain, depression and anxiety may intensify CRF.

Symptoms and signs of fatigue

Cancer-related fatigue may interfere with your ability to fulfill daily responsibilities and to enjoy life. It is a health problem that requires appropriate medical and self-management.

Some general symptoms of CRF may include:

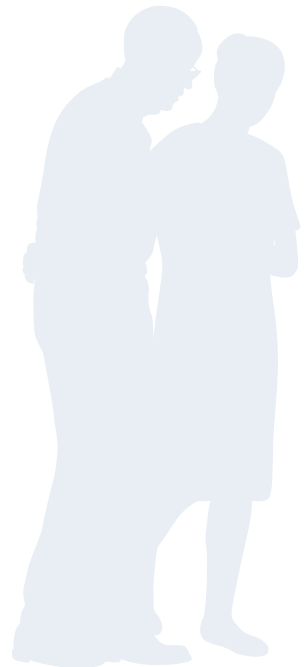
- Feeling very tired
- Feeling overwhelmed
- Physical weakness
- Changes in mood or motivation

Signs of physical fatigue that may be evident from a medical history and physical examination:

- Difficulty climbing stairs or walking short distances
- Shortness of breath
- Anemia
- Weight gain or loss
- Intolerance to cold
- Changes to hair or skin
- Sleep disturbance or insomnia
- Pain
- Muscle weakness
- Loss of sexual desire

Fatigue can also be reflected in mood, cognition and social changes:

- Feeling depressed or anxious
- Lack of motivation
- Negative thinking
- Inability to concentrate
- Clumsiness
- Loss of memory or mental alertness
- Withdrawal from social activities
- Unusual strain in relationships





Assessment and treatment for fatigue

Most side effects go away when treatment is over. However, some side effects can last after treatment ends.

Assessing fatigue can be a challenge for a number of reasons, and good communication with your healthcare team is key. Your doctor might prescribe medications or suggest other ways to help ease side effects.

Assessing CRF can be challenging because:

- Fatigue can fluctuate throughout the day and between treatments
- Distinguishing fatigue from other problems (for example, anemia, depression, anxiety) may be difficult
- Survivors or people in treatment sometimes believe fatigue is an inevitable part of cancer treatment and do not mention it to their doctor

Drugs that relieve certain treatment side effects, such as nausea or loss of appetite, may improve sleep and nutrition and, as a result, ease fatigue. However, a combination of drug and non-drug treatments is often recommended.

A number of traditional therapies are available that may help restore energy, such as:

- Movement
- Psychological support
- Nutritional and dietary assessment
- Stress management
- Improved sleep habits





Many people use complementary and alternative medicine (CAM) therapies to help cope with side effects of treatment:

- Support groups
- Mind-body medicine (meditation, yoga, acupuncture)
- Music therapy
- Manipulative and body-based practices (osteopathy, reflexology, massage therapy)
- Movement therapies (Pilates, Trager psychophysical integration)
- Whole medical systems (Chinese medicine, Ayurveda, homeopathy)

Talk with your healthcare team if you are interested in CAM therapies. Because many of these treatments are not rigorously tested, these therapies may be neither safe nor effective. Your doctor can give you more information.

Coping with fatigue

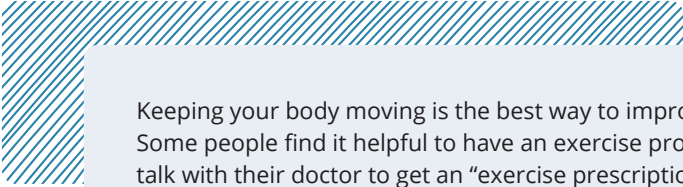
Tell others Help manage fatigue by telling family, friends, coworkers and your healthcare team about it. Let them know what you are going through. Ask for help. Seek out loved ones who can help you with routine tasks such as shopping, cooking, housekeeping, laundry, or driving.

Tell your doctor If fatigue causes difficulties at work, at home, or in social situations talk with your doctor to try and establish what you can do. This is especially important if you have fatigue that lasts more than a year and keeps causing issues in your daily life.

Take care of yourself Try some of these suggestions to deal with your fatigue:

- **Be flexible.** Don't measure your energy against how you felt before you were diagnosed. Set realistic goals.
- **Stay active.** Staying physically fit may help ease fatigue. Focus on activities that will help you gradually build strength but won't deplete your energy level.
- **Practice good nutrition.** People with cancer are at risk for malnutrition and other problems resulting from either the cancer or treatment side effects. Eat a balanced diet that provides sufficient calories, protein, vitamins, and minerals- especially iron.
- **Manage stress.** Stress can zap your energy. Try to relieve its effects with exercise, relaxation techniques, meditation, spiritual or religious practices, socializing and counselling.
- **Address sleep habits.**
- **Keep a journal.** Track your fatigue and review your journal entries with your doctor to determine possible causes, treatment, and coping strategies.
- **Stay positive.** Make a list of things that make you feel good. Include activities you can do right now and plan activities you can do in the future.
- **Seek support.** You are not alone, and many people find support groups to be a great comfort.
- **Delegate tasks.** Delegate tasks that drain energy in order to save energy for things that you enjoy doing or will benefit your care.



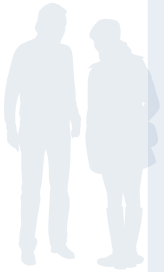


Keeping your body moving is the best way to improve energy. Some people find it helpful to have an exercise program, or to talk with their doctor to get an “exercise prescription”.

You may choose to join a formal exercise program, which may be offered through a local organization (for example, Alberta Cancer Exercise in Alberta or Wellspring in Alberta, Nova Scotia, Ontario and Prince Edward Island). Alternatively, you may choose to design a program for yourself. Having a program helps you to hold yourself accountable to following your exercise routine to help push through the fatigue.

Experts recommend that cancer survivors aim to complete 30 minute sessions of aerobic and resistance exercise three times per week.

For more information about physical activity services in your region, ask to speak with your local Community Services Manager at 1-833-222-4884.



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**Never hesitate
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we're here to help!**

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