

Understanding Changes in Thinking and Memory

A guide for people affected by cancer

This fact sheet has been prepared to help you understand more about the changes in thinking and memory that some people experience after a cancer diagnosis or cancer treatment. It provides ideas about how to manage your day-to-day tasks and improve your thinking and memory.

Thinking and memory changes caused by cancer

Many people diagnosed with cancer notice changes in the way they think and remember information. This is called cancer-related cognitive impairment, but people may also call it “cancer fog”, “chemo brain” or “brain fog”. Even people who have never had chemotherapy can experience this.

While changes in how the brain works (cognitive function) can be a normal part of getting older, cancer-related cognitive impairment is different. It can also happen quite suddenly. If you notice any changes, speak to your doctor.

Changes you may notice

Often the changes to thinking and memory will be small, but even small changes can be challenging, and affect day-to-day tasks.

You may find it hard to:

- think clearly
- focus or pay attention
- remember names, dates or words
- do more than one thing at a time (multitask)
- process information, including following directions, problem-solving or learning new skills.

You may also:

- have mental “fogginess”
- feel disorganised
- be unable to keep up with conversations
- feel very tired or exhausted
- have trouble starting things or finding the motivation you used to have.

Problems with thinking and memory can happen at any stage. You may notice changes before treatment starts, during treatment or after treatment has finished.

“What used to take me 5 minutes, now takes me 20 or 30. I’ve also found it difficult to go back to my old job. It’s frustrating. I’ve had to adopt ways of getting around it.” NAVEENA

Why do these changes happen?

The exact causes of thinking and memory changes after a cancer diagnosis are unknown. The changes might happen because of:

- cancer treatments
- side effects, such as trouble sleeping, fatigue, pain, low blood counts and hormone changes
- medicines for surgery or to manage treatment side effects, including anaesthetics, steroids, pain medicines and anti-nausea drugs
- your emotions, such as feeling overwhelmed, depressed or anxious
- inflammation caused by the cancer
- in some cases, a brain tumour, which can affect how the brain works.

Who is affected?

Thinking and memory changes are common for people who have cancer. According to one study, it can affect up to 3 in 4 people during treatment, about 1 in 3 people before treatment and 1 in 3 after treatment.

How long does it last?

Changes to thinking and memory problems are usually short term (6–12 months). Most people start to notice improvements after cancer treatment ends. For some people, problems may continue for years.

Changes may come and go, and may be worse when you are tired, stressed or unwell. If problems keep affecting your daily life, talk to your doctor.

“Be kind to yourself and utilise whatever resources you can. Don’t be ashamed of asking for help because it’s not your fault.” NAVEENA

How you might feel

It can be challenging to experience changes in thinking or memory, even if the changes are small. You may not feel like yourself, which can affect your relationships with family, friends and colleagues.

Changes in your thinking or memory can have a big impact on managing at home, working or studying, or during social activities. This may make you feel upset, scared or frustrated. You might feel you have to put in extra mental effort and energy.

It may be reassuring to know that many people experience changes, and for most people it gets better with time. Even if the changes are long term, help is available (see *Managing changes* above right).

Be gentle with yourself and allow time to recover. You may find it helpful to speak about how you are feeling with a family member, friend or professional counsellor. You can call Cancer Council 13 11 20 to talk to an experienced health professional about your concerns. They may also be able to connect you with someone who has had a similar cancer experience.

Managing changes

There are things you can do to cope with cognitive problems, improve your wellbeing and manage daily life.

Keep a diary of the differences you notice, including the time of day and what you were doing. This can make it easier to plan your day and may be useful when you talk with your health care team.

See the next page for a list of practical ways you can adjust your daily routine, involve other people, maintain a healthy lifestyle, and improve your thinking and memory.

Brain training

If you’re having a lot of problems with thinking or remembering things, your health care team might suggest cognitive rehabilitation. This is a type of brain training that can help with these problems.

Cognitive rehabilitation uses special brain exercises to improve memory, focus and thinking skills. You can do this with a neuropsychologist (a psychologist who looks at brain function) or an occupational therapist who has training in this area. You may need to pay for cognitive rehabilitation yourself.

An occupational therapist can also teach you tips and strategies to make everyday tasks easier. You can ask your health care team how to find one, or search online for occupational therapy services near you.

Online brain training options

You might find online brain training programs helpful. These are websites or apps that provide short brain exercises, which you can do regularly. The exercises can include things like memory games, puzzles or problem-solving challenges.

Most programs let you try them for free for a short time. After that, you usually need to pay to keep using them. When looking online, you could try searching for terms like “online brain training”, “memory games app”, or “cognitive training program”. You can also ask your health care team to recommend a program.

Ways to manage change

The following suggestions may help you with managing changes in thinking and memory.

Adjust your daily routine



- Write things down – keep a to-do list or take notes.
- Use a diary or smartphone features, such as reminders, alarms and lists.
- Set times each day to check your to-do lists and reminders.
- Focus on one thing at a time (try not to multitask).
- Avoid distractions. For example, let your phone go to voicemail and listen when you're ready.
- Pick a specific place to put objects such as your keys, rings or phone, so they are easier to find.
- Ask your pharmacist about a medicine organiser or blister pack (e.g. Webster-pak).
- Pace yourself and include rest breaks to recharge after mentally demanding tasks.
- Do focused tasks when you feel fresher.

Involve other people



- If you feel comfortable, tell family, friends and colleagues what is going on – this can prevent misunderstandings.
- Speak to your employer about how they can support you at work, or make changes that can help.
- Take a support person to appointments or treatment. They can help to remember what is said.
- Ask family and friends to help with everyday tasks. The Gather My Crew app can help you organise who does what.
- Health professionals can help you manage symptoms. Talk to your treatment team or GP about referral to a neuropsychologist, clinical psychologist or occupational therapist. You may be able to access support through the hospital system or get a Medicare rebate.

Maintain a healthy lifestyle



- Eat healthy, nutritious foods, including lots of fruits and vegetables.
- Aim to get at least 7-8 hours of sleep each night, and rest when tired.
- Do some physical exercise or stretching. A mix of aerobic and strength training exercises may help improve your symptoms.
- A physiotherapist or exercise physiologist can help you find safe ways to make exercise part of your everyday routine.
- Cut down on activities that cause you stress.
- Use meditation or relaxation to help manage stress and worries. You can listen to Cancer Council's *Finding Calm During Cancer* podcast for meditation and relaxation exercises.

Improve your thinking and memory



- When talking with someone, listen closely and then repeat back what they said to help it stick in your mind.
- Give meaning to things you want to remember (e.g. to remember someone called Robyn, picture a robin bird above their head).
- Break big bits of information into smaller, easier parts (e.g. to remember the number 2507000, think of 2507 as "Christmas in July" and 000 as the emergency number).
- Keep your brain active with crosswords, puzzles or playing along with TV game shows.
- Learn something new, like a language, musical instrument, or other skill. This helps your brain build new connections and strengthen old ones.
- Do something creative, like drawing, painting, or making crafts.



Cancer Council's podcast series *The Thing About Cancer* features interviews with experts on a range of topics. In the "Brain Fog and Cancer" episode, host Julie McCrossin talks with a medical oncologist who has been studying this issue. Visit cancercouncil.com.au/podcasts.

Questions to ask your doctor

This checklist may be helpful when thinking about questions to ask your doctor.

- I have noticed changes to my thinking and memory. How can I tell if it's related to the cancer or cancer treatment?
- How long are the changes in thinking and memory likely to last?
- What are some simple ways to improve my thinking and memory?
- I'm finding the changes in my thinking and memory hard to cope with. Who can I talk to about how I am feeling?
- Can you refer me to a neuropsychologist, clinical psychologist or occupational therapist who understands cancer-related cognitive impairment? Would I be able to get a Medicare rebate to help cover the cost?
- Would cognitive rehabilitation be an option for me?
- Can you suggest any online brain training programs I could try?
- Are there any complementary therapies that might help me?

“I just felt edgy all the time. And I thought, ‘Oh is that depression? Is it stress?’ But I think it was just that the required concentration to do what would be very normal tasks was exhausting because you used so much more energy to do the same task.” ANNE

Where to get help and information

Call Cancer Council 13 11 20 for more information about thinking and memory changes. Our experienced health professionals can listen to your concerns, put you in touch with services and send you our free booklets. You can also visit your local Cancer Council website.

ACT	actcancer.org
NSW	cancercouncil.com.au
NT	cancer.org.au/nt
QLD	cancerqld.org.au
SA	cancersa.org.au
TAS	cancer.org.au/tas
VIC	cancervic.org.au
WA	cancerwa.asn.au
Australia	cancer.org.au

Other useful websites

These websites are also good sources of information and support.

American Cancer Society	cancer.org
Cancer Research UK	cancerresearchuk.org
ChemoCare (US)	chemocare.com
eviQ Cancer Treatments Online	eviq.org.au
Macmillan Cancer Support (UK)	macmillan.org.uk

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Note to reader

Always consult your doctor about matters that affect your health. This fact sheet is intended as a general introduction and is not a substitute for professional medical, legal or financial advice.

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Cancer Council acknowledges Traditional Custodians of Country throughout Australia and recognises the continuing connection to lands, waters and communities. We pay our respects to Aboriginal and Torres Strait Islander cultures and to Elders past and present.

