

2. Physical health

Preventing falls

Why falls can be a problem for people ageing with traumatic brain injury

As you age, your balance can sometimes get a bit worse, which can make you more likely to fall. Falling can cause another brain injury – in fact, it’s the leading cause of brain injuries in older people. Falls can also lead to other injuries like broken bones.

Good balance needs strong muscles, good vision, a working inner ear (called the vestibular system), feeling in the skin, muscles, and joints (this is called proprioception), good thinking skills, and being able to plan movements and coordinate them. If there’s a problem with any of these things, it can make it harder to keep your balance and make falls more likely to happen.

You might often feel dizzy or lightheaded as a result of your brain injury, which can also make you more likely to fall. Balance problems can also be caused by some medications or health problems like low blood pressure. Sometimes, you might still have muscle weakness from your original injury, or you might take risks you shouldn’t, which can increase the chance of falling.

How to lower your risk of falling

Here are some tips to help you avoid falling:

- Stay active to make your muscles stronger and balance better
- Wear shoes that won’t slip off easily
- Make sure your floors are safe, like using non-slip rugs
- Use a non-slip mat in the shower or bathtub
- Get your vision checked
- Put lights in places where it’s hard to see, like on walkways and stairs
- Consider getting help with home maintenance activities. Using ladders comes with a higher risk of falling for people over 50 years of age.⁸

Here are some exercises that might help. If you’re just starting, hold onto something steady like a chair or the wall:

- Stand on one leg for a bit, like when you’re waiting for the kettle to boil
- “Rock” your feet, rise up onto your toes then rock back on your heels
- Walk heel to toe like you’re on a tightrope
- Do lunges by stepping one foot forward, bending your knee, then standing up again, and switching legs
- Walk and talk at the same time

Signs you might be at risk of falling

- Feeling wobbly when you walk
- Feeling dizzy, like the room is spinning, even if it’s only for a short time
- Feeling lightheaded
- Feeling like you’re moving when you’re standing or sitting still
- Losing your balance a little
- Having blurry vision

Where to get help

If you notice any of these signs, it’s a good idea to talk to your GP. They can check things like your vision or blood pressure and look at the medicines you’re taking. They might also send you to a physiotherapist, who can help with balance issues and give you exercises to make you stronger. There might be classes in your community that teach balance and exercise skills too. An occupational therapist can help by giving you tools to make your home safer and by checking for things that might make you trip.



Vision

Why vision can be a problem for people ageing with traumatic brain injury

A brain injury can harm the parts of the brain that handle vision, causing changes in how you see things even when your eyesight is working normally. These changes, called “neurological vision impairment”, can bring problems like trouble focusing or moving the eyes, issues with peripheral vision and judging distances, seeing double, or having trouble seeing clearly or telling things apart. You might also have trouble with understanding space, like ignoring one side of what you see.

As you get older, these vision changes might get worse, or new problems might appear. Common changes include having trouble seeing things close up, finding it hard to tell colours apart, like mistaking blue for black, or needing more time for eyes to adjust when the light changes. More serious issues could be things like cataracts, macular degeneration, or glaucoma.

Being able to see well is really important for daily activities, and losing vision can be really frustrating. It can also be dangerous and make you more likely to fall and hurt yourself or have a car accident.

Ways to protect your vision as you age

There are things you can do to protect your vision as you get older, like wearing sunglasses to shield your eyes from the sun, staying healthy by not smoking, eating well, being active, and keeping an eye on your blood pressure and diabetes if you have it. If you spend a lot of time looking at a computer or something close up, try taking breaks to look far away for a bit to rest your eyes.

How to know if you should get your vision checked

Here are some signs that you might need to have your vision checked:

- Trouble focusing on things or reading
- Finding it hard to see or drive at night
- Difficulty seeing things far away
- Seeing things blurry, fuzzy, or double
- Feeling tired eyes or getting headaches often, especially when looking at screens

Where to get help

Many vision problems that come with age can be fixed with glasses, contact lenses, or better lighting. As you get older, it’s important to have your eyes checked regularly by an optometrist, or a doctor. If needed, they might send you to a neurologist or eye specialist (depending on what’s causing the problem). An occupational therapist might also help by teaching you ways to deal with vision issues and giving you tasks to help improve your vision.

Other resources

- Consultations with an optometrist are Medicare subsidised each year if you are over 65.
- Vision Australia is the leading national provider of personalised technology, services and information for anyone experiencing or supporting those with vision loss. It also provides specialised services for older adults which are covered by Aged Care funding:
<https://visionaustralia.org>
Ph: 1300 84 74 66



Hearing loss

Why hearing loss can be a problem for people ageing with traumatic brain injury

As you get older, it's common to experience some hearing loss. About one in every three adults over 65 has some degree of difficulty hearing.⁹ This usually happens because of changes in the inner or middle ear, or along the pathways to the brain that handle hearing. It can also be due to things like being exposed to loud noises over time or because of genetics. You might not notice mild hearing loss at first, but as you get older, it can become more obvious.

Hearing loss that comes with age might be made worse by the original brain injury, especially if the injury affected the part of the brain that processes sound (the temporal lobes). Sometimes, if there was a blow to the side of the head, it could have damaged the mechanisms in the ear that help with hearing.

It's really important to deal with any hearing loss as soon as possible because it can cause unexpected problems. Studies show that hearing loss not only makes it harder to communicate with others, but it can also lead to being socially isolated, which can make you feel lonely, depressed, or anxious. Hearing loss has also been linked to problems with balance, difficulty moving around, and even dementia.^{10, 11}

How to know if your hearing is not as good as it used to be

Here are some signs to watch out for:

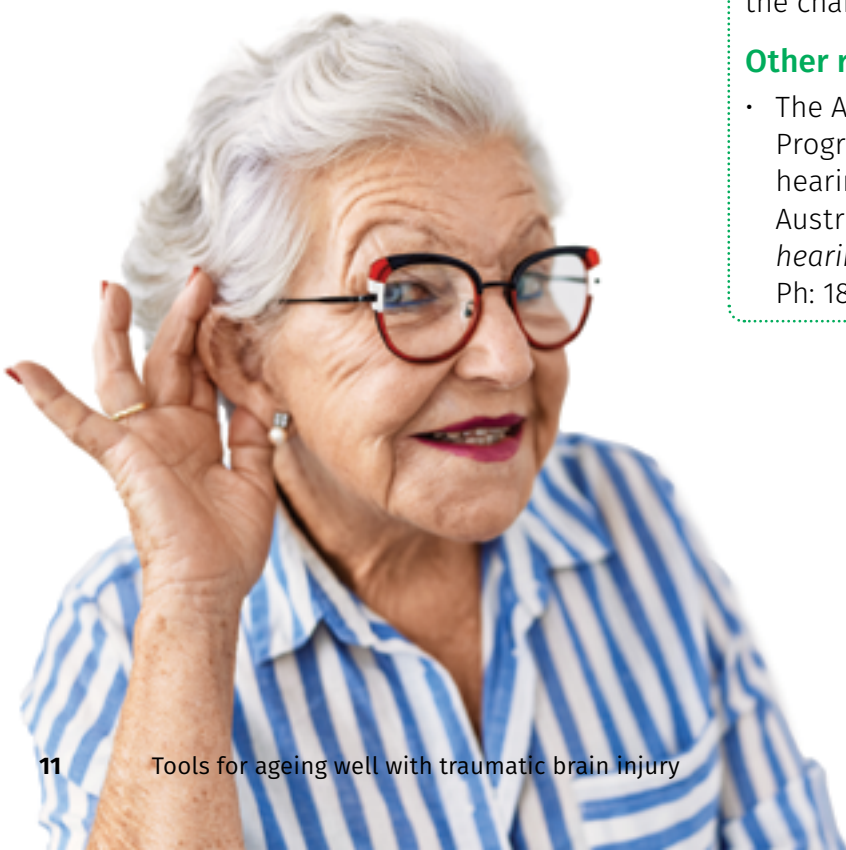
- Trouble hearing in busy or noisy places, or when multiple people are talking at once
- Others telling you that you've turned up the volume on the TV or radio too loud
- Difficulty hearing during phone calls
- Frequently asking others to speak louder, slower, or clearer
- Feeling bothered by loud sounds
- Hearing speech and other sounds as muffled
- Finding it hard to understand high pitch or frequency (like children's and women's voices)
- Being bothered by background noise
- Avoiding certain social situations
- Hearing ringing in your ears (tinnitus)

Where to get help

If you think your hearing might not be as good as it used to be, start by talking to your doctor. They can refer you to specialists like an ear, nose, and throat doctor (ENT) or an audiologist. They'll check your hearing and figure out what's causing the problem and how severe it is. Then, they'll suggest ways to help, like using special devices or treatments, and they'll work with you to come up with a plan to manage the changes you're going through.

Other resources

- The Australian Government Hearing Services Program provides subsidised high-quality hearing services and devices to eligible Australians: <https://health.gov.au/our-work/hearing-services-program>
Ph: 1800 500 726



Pain

Pain after traumatic brain injury

Some people will have long-lasting pain after a brain injury. Depending on how your brain was injured you may have different kinds of pain. Many older people without brain injury also have more pain in older age from things like injuries or arthritis. It is important to remember that no matter the cause, if you are in pain, you can get help to manage it.

Everyone experiences pain differently so there is no one size fits all way to treat it. There are many pharmacological (medication) and non-pharmacological (no medication) options that you can talk to your health professionals about and new treatment options become available over time. Your health professionals will help you to find ways to manage your pain that work for you.

Here are some common types of pain you may experience after brain injury

- Headache
- Migraine
- Neck and shoulder pain
- Back pain
- Musculoskeletal pain (for example pain from injuries like fractures, sprains, or strains)
- Nerve pain (neuropathic pain)

How to manage pain

- Talk to your health professionals about a pain management plan
- Take your medication as prescribed
- Try mind and body techniques like meditation or breathing. There are apps that can help you learn how (see page 58 for a list of apps)
- Keep a pain diary to help you find out if there are things that trigger your pain (for example, do some foods trigger a migraine or do some exercises trigger muscle or joint pain; see page 49 for a pain diary)

Where to get help

Start by talking to your GP or your rehabilitation specialist if you are seeing one. They can help to refer you to the right specialist for your type of pain. For example, a physiotherapist with experience in brain injury can treat muscle or joint injuries. A neuropsychologist with experience in brain injury can treat migraines. There are many medications that can help to manage migraines. A psychologist can help you to build coping skills and address anxiety or depressed mood caused by your pain.



Digestion

Why digestion can be a problem for people ageing with traumatic brain injury

Your brain and your stomach talk to each other through something called the brain-gut axis. Your digestive system talks with your brain to help keep your digestion healthy and your gut balanced (gut homeostasis). When your gut balance is off, it can lead to intestinal dysfunction and digestive issues.



A brain injury can negatively impact your gut microbiome and immune system. It might also change your body's nutritional needs.¹² Depression and cognitive impairment are common after a brain injury and are also linked to problems with how your brain and gut talk to each other.¹³

As you age your gut microbiome may undergo small changes and you may also notice that you feel full after eating only a small amount of food.¹³ Also your sense of smell and/or taste can change, making food seem less appealing.¹⁴

Digestive problems you may experience as a result of ageing with a brain injury

- Food intolerance
- Stomach ulcers
- Gastritis (inflammation of the stomach lining)
- Dysmotility (impaired muscles or nerves of the digestive system)
- Impaired gut barrier function (“leaky gut” or increased intestinal permeability)

How to promote healthy digestion as you age with brain injury

Some foods can upset your digestion. Try to avoid excessive amounts of:

- Dairy products
- Greasy or fatty foods
- Spices
- Caffeine
- Alcohol

Try keeping a food diary to help see which foods upset your digestion.

- See *page 52* for a food diary you can use to keep track of what you eat each day.

Eating a balanced diet with essential nutrients can support recovery after a brain injury and also promote a healthy gut and immune system as you age.

- See *page 25* for a nutritional guide for people who are ageing with a brain injury.

Drink plenty of water to stay hydrated and help digestion.

Where to get help

Start by talking to your GP or rehabilitation physician. If your symptoms are severe, they can refer you to a gastrointestinal specialist.

A nutritional therapist (dietician) can provide tailored nutrition therapy for you.

Eating and swallowing

Why eating and swallowing can be a problem for people ageing with traumatic brain injury

It's common to have swallowing difficulties (oropharyngeal dysphagia) after a brain injury because the brain controls the muscles that you need to chew and swallow. While this usually gets better after six months, it may then become more challenging again with age because of less saliva and weaker tongue muscles.¹⁵

Signs you may be having trouble eating and swallowing

- Changes in eating habits
- Increase or decrease in appetite
- Trouble chewing
- Coughing or choking with meals
- Recurrent chest infections
- Weight loss
- Problems with your metabolism (like increased blood pressure, high blood sugar, abnormal cholesterol levels)
- Uncoordinated eating (like an inability to perform certain movements involving facial muscles)
- Inability processing smells and taste

How to address eating and swallowing difficulties

- You may need to eat different foods – ones that you find easier to swallow. A dietician can help you to find out which foods are easier to swallow.
- You may benefit from a tailored treatment program to address your feeding and swallowing difficulties.

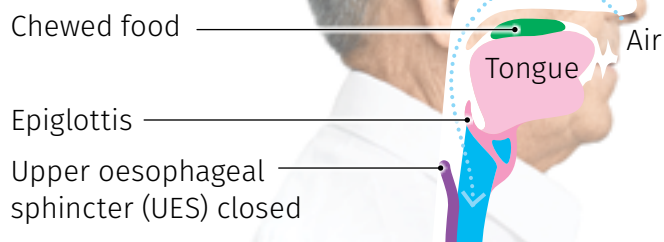
Where to get help

A specialised speech pathologist can help you with eating and swallowing difficulty.

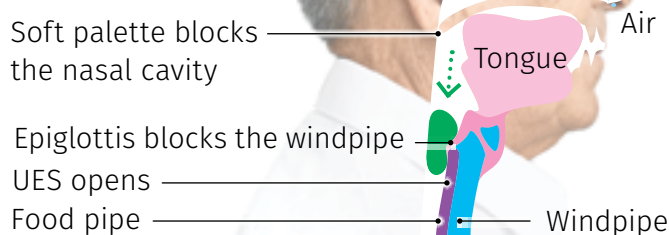
A dietitian can help you make changes to your diet if needed.

Eating and swallowing food involves several stages:

1. Food is chewed into a ball to prepare for swallowing



2. Food is pushed through the top of the throat (pharynx)



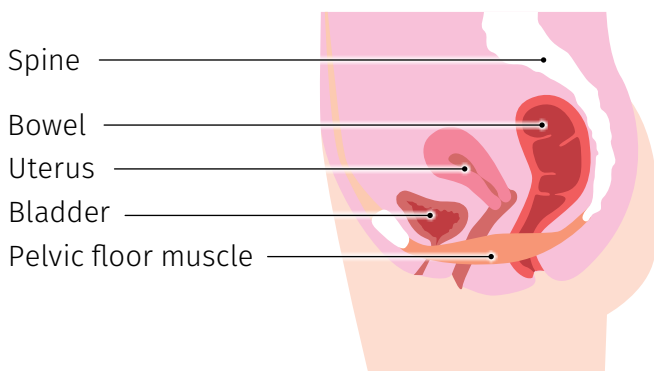
3. Food is passed through your throat (oesophagus)



Bowel and bladder

Bowel and bladder function in people ageing with traumatic brain injury

A brain injury may disrupt communication between the brain and the bowel and/or bladder. As you age, the muscles that support your bowel and bladder may also weaken. This may increase the risk of incontinence for older adults with a brain injury. Incontinence is a loss (or reduction) of voluntary control over your bowel and/or bladder. It is important to note that many older people without brain injury also have incontinence in older age.



There are three main types of bowel incontinence

- **Urge incontinence** is caused by a loss of control of the muscles that you use to pass stool (poop). This leads to you feeling a sudden need to go to the toilet but finding it hard to make it in time. This is the most common type of bowel incontinence.
- **Passive incontinence** is caused by the rectum (the muscle that holds your stool) being stretched as much as it can and your body not knowing you need to go. This leads to you passing stool without knowing it.
- **Post-defecatory soiling** is caused by the muscles that hold your stool (sphincter muscles) not closing fully after a bowel movement (pooping) or the bowel not fully emptying. With this type of incontinence you may have bowel leakage after you go to the toilet.

There are five main types of bladder incontinence

- **Functional incontinence** is caused by mobility issues or cognitive impairments (attention issues such as not noticing you need to go until it is too late) that make it hard for you to get to the toilet in time.
- **Stress incontinence** is caused by weakened pelvic floor muscles and leads to leakage during activities, such as when you cough, sneeze, or laugh.
- **Overflow incontinence** is caused by weakened muscles or damaged nerves and stops you from fully emptying your bladder. This leads to leakage when your bladder is overly full.
- **Urge incontinence** (overactive bladder) is caused by the bladder having contractions or spasms. This leads to leakage even when your bladder is not full. If you have an overactive bladder, you may feel urgency to urinate causing you to hurry to the bathroom.
- **Reflex incontinence** is considered the most severe form of incontinence as your bladder will automatically empty itself when it is full without warning or feeling the urge to urinate.

What is important for people to know as they age with a brain injury?

[Having] awareness that things will change, and then being aware enough to actually identify the changes or to seek help with things that change.

Tony, lived experience of traumatic brain injury



How to manage bowel and bladder incontinence as you age with a brain injury

- There are retraining and muscle strengthening exercises you can do to help you control the urge to release your bowel and bladder.
 - You can consult a physiotherapist for a tailored exercise plan.
- There are changes you can make to your diet and fluid intake to support healthy bowel and bladder function.
 - Eat foods with plenty of fibre to try to prevent constipation.
 - Stay hydrated to avoid bladder infections and help your bladder to learn to hold more fluid.
 - Limit caffeine and alcohol as they may irritate your bladder.
- It is also important to plan ahead before you go out by:
 - Emptying your bowel and bladder before you leave your house.
 - Making sure you know where the public bathrooms are located.
- Many older people use continence aids
 - These are absorbent pads or garments. These are available from chemists and supermarkets.

Where to get help

You may need help to re-establish control over your bowel and bladder. Talk to your GP. If your problem is severe or ongoing, they can refer you to a continence nurse or a urologist or gastroenterologist.

Resources

- The Toilet Map shows you the location of public and private bathrooms across Australia: <https://toiletmap.gov.au>

