

Chronic Traumatic Encephalopathy (CTE)

Chronic Traumatic Encephalopathy (CTE) is a neurodegenerative disease that has been linked to repeated head injuries, which can take the form of concussion (mild traumatic brain injury) and/or hits to the head that do not result in concussion symptoms, called sub-concussive or non-concussive hits.

Repeated head injuries often occur from participation in contact sports but can also occur in non-sporting situations (e.g. military service, family and domestic violence). Though there is still much we don't know about CTE, research into this condition is ongoing and our understanding will improve with time.

Who is at risk of CTE?

CTE has been identified in individuals with a known history of repeated head injuries. This includes athletes who have participated in contact or non-contact sports, as well as women who have suffered head trauma from family, domestic and interpersonal violence. CTE may occur from repeated head injuries from violent assault, explosions or blast trauma, or frequent falls that lead to head impacts.

Not everyone who has experienced repeated head injuries will go on to develop CTE. A single or low number of head impacts is unlikely to be a problem.

Signs and Symptoms that may be associated with CTE

CTE can result in a wide range of signs (things that you can see) and symptoms (things that a person says they are experiencing) that can affect a person's thinking, mood, and behaviour. CTE signs and symptoms can appear gradually and many years (10+ years) after the repeated head injuries have occurred.

Thinking	Mood	Behaviour
<ul style="list-style-type: none">• Memory loss• Confusion• Concentration/attention difficulties• Brain fog with headache or head pressure• Difficulty learning new things• Impaired judgement• Loss of sense of direction• Difficulty with driving• Changes in sleeping patterns• Loss of awareness of having difficulties	<ul style="list-style-type: none">• Irritability• Emotional lability (mood swings)• Depression or suicidal thinking• Anxiety• Panic• Impulsivity• Loss of empathy	<ul style="list-style-type: none">• Episodes or rage, including road rage• Agitation• Loss of motivation• Reduces social activity• Wandering• Slowness, or Parkinson's disease-like changes

Diagnosing CTE

CTE can only be diagnosed after death through brain tissue analysis.

There is currently no test for diagnosing CTE while a person is living.

If you have any concerns about CTE, it is a good idea to seek advice. Speaking to your general practitioner (GP) is a good place to start. A check-up with your doctor may help to identify any other conditions resulting from head injury, such as persistent post-concussion symptoms and post-concussion headache. Your GP can also help to arrange any referrals for further investigation that may be required.

It's important to recognise that there are other conditions that can mimic CTE and factors that can impact a person's cognition. Examples include Dementia, Alzheimer's or other neurological conditions, alcohol use disorder, depression, post-traumatic stress disorder (PTSD), sleep disorders, long-term smoking, stroke, and migraine. You may wish to discuss these when you first see your doctor.

Management

There is currently no cure for CTE. However, it may be possible to manage potential CTE symptoms with a range of medications and other forms of therapy. Your GP and specialist medical team will advise on which ones are the best for you.

Regular check-ins with your GP and medical specialists will help assess symptom stability and monitor progress over time and can provide advice on what support services may be available to you and your family/carers.

More information

Connectivity Traumatic Brain Injury Australia is an Australia-wide not-for-profit organisation working to raise awareness of concussion and traumatic brain injury in the community. For more information on concussion, you can speak to your doctor, healthcare professional, or visit the Connectivity website at www.connectivity.org.au



DISCLAIMER: This flyer and the Connectivity website does not offer medical advice for individuals. If you are concerned about CTE, please seek medical advice.