



Confusion about concussion: What do parents know?

Poll report

Dr Anthea Rhodes

Poll 31, November 2023



Report highlights

- One in three parents (34%) report they have no or very little knowledge about concussion.
- Most parents know common symptoms of concussion, but many are not aware of signs related to emotional wellbeing such as feeling anxious (49%) or irritable (61%).
- 29% hold the misbelief concussion only occurs if someone loses consciousness, and half (54%) are not aware that there are treatments for concussion.
- A quarter of parents (28%) falsely believe that a child cannot get a concussion if they are wearing a helmet.

What is concussion?

A concussion is a type of brain injury caused by a bump, blow or knock to the head, or by a hit to the body that causes the head and brain to move rapidly back and forth. The movement of the brain within the skull can result in an injury to the brain cells.¹



How common is concussion?

According to parents, more than a quarter (27%) of children have reportedly experienced a knock, blow or injury to the head, with 14% having had at least one concussion diagnosed by a health professional. Diagnosis of concussion was slightly more common among boys (16%) than girls (11%), and similar across children under five years (12%), primary school (15%) and older children (teens) (13%).

Where does concussion occur?

Among those children who had reportedly been diagnosed with one or more concussions, two thirds of the concussions (64%) occurred at school or a related organised event (including sport), kindergarten or childcare. Over a quarter of concussions (29%) occurred at home and 15% occurred elsewhere. While concussion can occur as a result of any knock, blow or injury to the head, one in four parents (25%) hold the misbelief that concussion only occurs in contact sports. Younger children were more likely to have experienced concussion at home: 45% of concussions among children aged 5 years or younger occurred at home compared to just 16% of concussions in children aged 12 years or older. Almost half of the concussions experienced by children aged 12 years or older (48%) occurred at school or an organised school event. Almost two thirds of all diagnosed concussions (64%) occurred while participating in organised sport.

Can parents spot the signs of concussion?

Parents were asked to rate their level of knowledge about concussion, with more than a third of parents saying they had 'no' (7%) or 'very little' (28%) knowledge about concussion. Just over half indicated they had 'some' knowledge (53%) and 12% had 'a lot' of

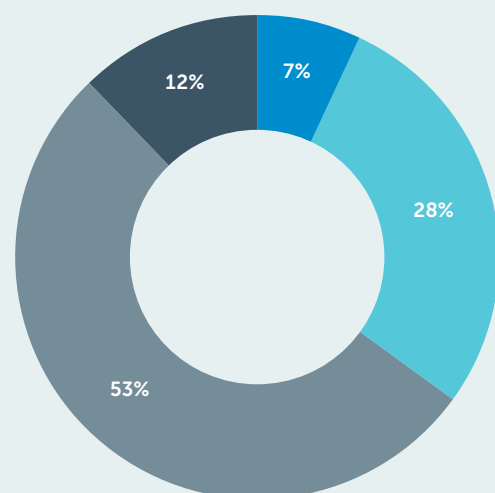
knowledge (see *Figure 1*). Proportions of self-reported knowledge were similar across demographics, including age of child, age and sex of parent, country of birth, language spoken at home, and socioeconomic status.

Parents were also asked to rate their level of confidence in recognising the signs of concussion. One in five parents (22%) report they are not at all confident in recognising the signs of concussion, with two thirds (63%) saying they are 'somewhat confident'. Fifteen per cent report they are very confident recognising the signs of concussion.

Parents were asked about a wide range of signs and symptoms that may indicate possible concussion.

Overall, parents were more likely to know about the physical signs of concussion than non-physical signs. Secondary signs and symptoms of concussion can be delayed in onset, yet one in three parents (33%) were unaware that some secondary signs of concussion can appear a week or longer after a head knock. Children may develop a number of different symptoms in the weeks after a head injury, and many of these require medical attention.

Parents' level of knowledge about concussion in children



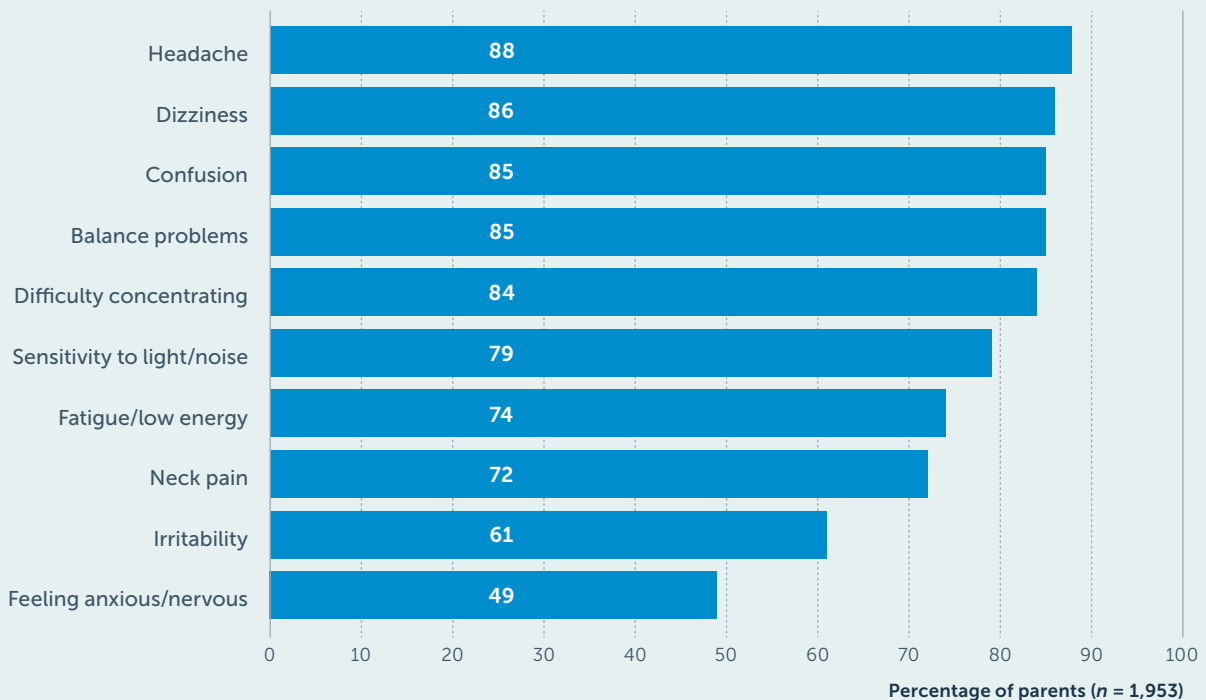
■ No knowledge ■ Some knowledge
■ Very little knowledge ■ A lot of knowledge

Percentage of parents (n = 1,953)

Note: All proportions are weighted by parents' age, sex, number of children, state of residence, socioeconomic and Indigenous status

Figure 1.

Proportion of parents who identified signs of possible concussion



Note: All proportions are weighted by parents' age, sex, number of children, state of residence, socioeconomic and Indigenous status

Figure 2.

Physical signs and symptoms

Parents were likely to know some of the more common physical signs of concussion, including headache (88%) and dizziness (86%). They were less likely to know some of the other physical signs, including fatigue/low energy (74%) and neck pain (72%).

One in five parents (21%) were unaware that sensitivity to light and/or noise is a sign of possible concussion. One in six did not know that nausea and vomiting (14%) and dizziness (14%) can be signs of concussion (see *Figure 2*).

Non-physical signs and symptoms

One in five parents were not aware that difficulty concentrating (16%) or confusion (15%) are signs of a possible concussion.

Signs related to mood and emotion were the least well known. Around half weren't aware that feeling anxious or nervous (49%) or irritable (61%) can be signs of a possible concussion (see *Figure 2*).

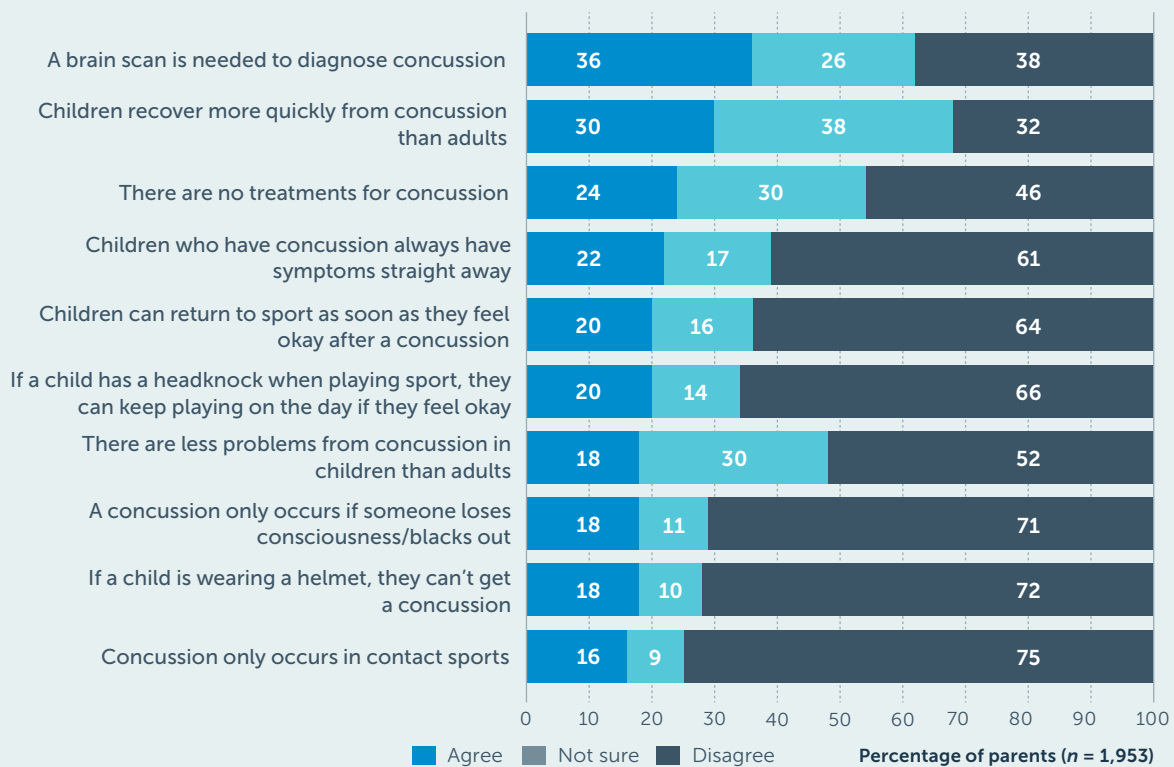
Commonly held misbeliefs about concussion

While most parents (83%) know that concussion is a type of brain injury, many hold misbeliefs about the prevention, diagnosis and management of concussion (see *Figure 3* on the following page).

Preventing concussion

There are many ways to help reduce the risk of a concussion or other serious brain injuries both on and off the sports field. More than one in four parents (28%) falsely believe that a child cannot get a concussion if they are wearing a helmet. Helmets are good for protecting against brain injuries but they are not effective against all types of head impact. Different impacts cause different head movements and this can result in different types of injury. A child can still get a concussion when wearing a helmet.

Misbeliefs held by parents about concussion in children



Note: All proportions are weighted by parents' age, sex, number of children, state of residence, socioeconomic and Indigenous status

Figure 3.

Responding to concussion

One in three parents (34%) are not aware that a child who has a head knock when playing sport should not keep playing even if they say they feel okay. Children and adolescents should stop playing right away if they get a head injury, even if it seems mild. They will need plenty of rest for at least 24–48 hours.

Diagnosing concussion

Only one in three parents (38%) know that a brain scan is not needed to diagnose concussion. In some cases a brain scan may be needed to rule out any other injuries or problems, but it is not needed to diagnose concussion. There is no scan or blood test that can diagnose concussion.

Treatment and recovery

Half of parents (54%) are not aware that there are treatments for concussion. One in three parents (30%) also falsely believe that children recover more quickly from concussion than adults, with 48% believing that there may be fewer problems from concussion in children than adults. Most children recover well after a mild head injury or concussion, usually over several

days, although it can take up to four weeks in some. Effective treatment plans include adequate rest, pain relief and graduated return to school and sport.

Seeking care for concussion in children

Parents were asked whether they would know if their child needed to see a doctor, and where to access health care, in the event that their child fell and had a possible concussion. About one in ten parents reported being 'not at all confident' in determining whether their child would need to see a doctor and 56% of parents reported being 'somewhat confident' with one in three very confident. About half of parents reported being very confident in knowing where to access health care for their child in the event of a likely concussion, with 43% somewhat confident and 6% not at all confident. Although there is no scan or blood test to diagnose concussion, the majority of parents (62%) do not know that a brain scan is not needed to diagnose concussion, with one in three (36%) of the belief that a scan is always required.

Implications

The results of this poll confirm that concussion is common across children of all ages and can occur anywhere. Younger children are most likely to experience a concussion at home and older children at school, particularly during sporting activities. Despite how common it is, one third of Australian parents have low levels of knowledge and confidence about how to recognise, safely respond to and manage concussion in children.

Misunderstandings about the signs of concussion may mean that concussion in children is under-recognised and undertreated. Most concussions do not result in loss of consciousness and some symptoms may not occur until hours or even days after the precipitating event. It is important that children and young people are fully recovered from concussion before they return to their normal daily activities. If they return too soon, they are at an increased risk of a subsequent concussion. Parents and caregivers have a key role to play in minimising the risk of repeat concussions in children by ensuring early and adequate recognition and treatment.

The findings of this Poll suggest that the majority of concussions occur at school, or during school related activities including sport – particularly for older children. While many sporting organisations have engaged in efforts to educate coaches, players and parents about concussion, and have concussion policies, to date in Australia this has been less of a focus in schools. Schools and early learning environments should be supported to have clear, evidence-based plans and policies in place to respond safely and adequately to concussions when they occur. Efforts should also be made to ensure both home and school environments are optimised in terms of safety to prevent concussions where possible. Many sporting authorities have introduced rules and regulations in relation to physical contact and tackling to reduce the risk of concussion in children and teens. There are wide ranging physical and mental health benefits from playing sport, so it is important to strike a balance between safety and risk, and support children to return to physical activity and sport as soon as it is safe to do so.

Educating Australian parents about what concussion is, how to recognise the signs and where to seek help is critical in ensuring children have the best possible outcomes. In particular, we need to address the commonly held misbelief that there is no treatment for concussion. Children with symptoms for more than two weeks should see a health professional for medical advice. Effective treatments include graduated return to activity and exercise, and support with physiotherapy and psychology when needed. We need to educate and empower parents to seek appropriate health care for their child in the event that they experience a concussion to support a rapid and full recovery.

One in three
parents (34%) report
they have no or very
little knowledge
about concussion.



Data source and methods



This report presents findings from a nationally representative household survey conducted exclusively by the Online Research Unit for The Royal Children's Hospital, Melbourne. The survey was administered from 19–27, September 2023, to a randomly selected population stratified by age, sex and state of residence, nationally representative of Australian parents aged 18 and older ($n = 1,953$). Among Online Research Unit panel members contacted and eligible to participate the completion rate was 92%. Parents provided data on concussion for a collective total of 3,260 children aged between one month to 17 years. Parents also provided information on their attitudes and knowledge about concussion. The estimates were subsequently weighted to reflect the distribution of the Australian population using figures from the Australian Bureau of Statistics.

References



1. *What is a Concussion?* Centers for Disease Control and Prevention, National Center for Injury Prevention and Control
www.cdc.gov/headsup/basics/concussion_what.html

For a full list of references contact rch.poll@rch.org.au

Suggested citation



The Royal Children's Hospital National Child Health Poll. (2023). *Confusion about concussion: What do parents know?* Poll Number 31. The Royal Children's Hospital Melbourne, Parkville, Victoria.

Authors



This report was written by:

Dr Anthea Rhodes (RCH Poll Director),
Dr Mary-Anne Measey (Research Associate) and
Ms Alannah Rudkin (Biostatistician)

with the support of the [RCH Poll Project Team](#)

The RCH Poll team acknowledges Professor Franz Babl, Professor Vicki Anderson, Dr Alison Wray and Ms Vanessa Rausa for their input into the study survey development and writing of this report.