

Childhood cerebral palsy and mental health

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Overview

This fact sheet provides basic information about the links between cerebral palsy and mental health difficulties in children. It can be used as an accompaniment to the [Understanding child mental health and chronic physical conditions](#) e-learning course, which highlights the links between chronic illnesses/conditions in childhood and associated mental health difficulties.

This fact sheet covers general information about cerebral palsy, as well as details such as prevalence in Australia and the implications of the illness for children, including mental health impacts. Some content also pertains to adults.

Key points include:

- Cerebral palsy is an umbrella term for a range of disorders of movement and posture, caused by injury to the developing brain.
- One in 700 children are diagnosed with cerebral palsy each year in Australia; it is the most common physical disability in childhood.
- Cerebral palsy can impact children's mobility, communication and appearance, and can have a significant impact on children's quality of life and mental health. The disorder can also reduce life expectancy.
- Support from family and health professionals can help children manage their cerebral palsy, enhance their quality of life and improve their mental health and wellbeing.



What is cerebral palsy?

Cerebral palsy is defined as a disorder of movement and posture (Cerebral Palsy Alliance, n.d.). It is a neurological disorder caused by brain injury or malformation, that occurs while the child's brain is under development. Until recently most children with cerebral palsy were diagnosed between the ages of 12–24 months – but recent advances have facilitated earlier diagnosis or identification as 'high risk' from 0–5 months (Australian and New Zealand Cerebral Palsy Strategy Collaboration, 2020).

Cerebral palsy is an umbrella term for a number of different disorders. The main types of cerebral palsy include spastic cerebral palsy, dyskinetic cerebral palsy, and ataxic cerebral palsy (Australian and New Zealand Cerebral Palsy Strategy Collaboration, 2020). Cerebral palsy is categorised as quadriplegia (all four limbs are affected), diplegia/bilateral (both legs are affected), or hemiplegia/bilateral (one side of the body is affected) (Cerebral Palsy Alliance, n.d.).

What is the prevalence of cerebral palsy in Australia?

One in 700 children in Australia are diagnosed with cerebral palsy each year; it is the most common physical disability in childhood (Australian and New Zealand Cerebral Palsy Strategy Collaboration, 2020). Spastic cerebral palsy is the most common type of cerebral palsy:

- 85–91% of people with cerebral palsy in Australia have spastic cerebral palsy
- 4–6% have dyskinetic cerebral palsy; and
- 4–6% have ataxic cerebral palsy (McIntyre et al., 2018).

Cerebral palsy in Australia

In 2018 it was estimated that there were 35,522 people with cerebral palsy in Australia (Deloitte Access Economics, 2019).

The impacts of cerebral palsy are wide ranging, with severity varying across individuals. The Gross Motor Function Classification System (GMFCS) is a widely used tool to assess the severity or functional limitation of cerebral palsy in an individual, with a Level 1 classification being the mildest form of functional limitation, and Level 5 being the most severe. In 2018, of the estimated 35,522 people living with cerebral palsy in Australia, 62% were classified as GMFCS Level 1–2, and 38% at Level 3–5 (McIntyre et al., 2018). In Australia in 2018, 57% of children with cerebral palsy were male, and 43% were female (McIntyre et al., 2018).

The incidence of cerebral palsy appears to be higher among males than females, though the severity of impairment does not appear to differ significantly between males and females within each type of cerebral palsy (Romeo et al., 2016).

What are the implications of cerebral palsy for the child?

Cerebral palsy is non-progressive but damage to the brain is permanent (Royal Children's Hospital, n.d.). Children with cerebral palsy may experience reduced quality of life compared to children without cerebral palsy, particularly in the physical domain (Makris, Dorstyn, & Crettenden, 2021; Tan et al., 2014).

Cerebral palsy may cause chronic pain (Lindsay, 2016) and can result in difficulties with:

- fine and gross motor skills
- communication
- hearing
- saliva control
- bladder and bowel control
- spinal and hip abnormalities
- sleep; and
- behaviour.

Epilepsy, intellectual impairment, and visual impairment are common co-occurring conditions (McIntyre et al., 2018). Children with cerebral palsy are more likely to have attention deficit disorder and attention deficit hyperactivity disorders (Bjorgaas, Hysing, & Elgen, 2012). Physical impairments and speech/communication difficulties associated with cerebral palsy can lead to challenges with:

- undertaking daily tasks
- participating in activities; and
- engaging with community (Australian and New Zealand Cerebral Palsy Strategy, 2020; Makris et al., 2021).

Most children with cerebral palsy will live into adulthood, though life expectancy reduces as the severity of the impairment increases (Blair, Langdon, McIntyre, Lawrence, & Watson, 2019).

What are the mental health impacts of cerebral palsy?

As well as potential physical implications, cerebral palsy can affect emotional wellbeing (Makris et al., 2021). It has also been found that 35% of children with cerebral palsy experience mental health symptoms, with clinically abnormal scores observed on the emotion, conduct, hyperactivity and peer problem subscales of the Strengths and Difficulties Questionnaire (Downs et al., 2017). By comparison, a large Australian population study found that 14% of children without disability experienced these mental health symptoms (Downs et al., 2017).

Children with cerebral palsy are more likely to experience psychiatric disorders such as:

- oppositional defiance disorder
- generalised anxiety disorder; and
- obsessive-compulsive disorder (Bjorgaas et al., 2012).

It has also been found that children with cerebral palsy who experience mental health symptoms at seven years old, are more likely to develop a psychiatric disorder at 11 years (Bjorgaas, Elgen, & Hysing, 2020).



Contributing factors impacting on the mental health of children with cerebral palsy

The type of cerebral palsy and level of physical impairment do not seem to significantly influence the risk of developing a psychiatric disorder (Bjorgaas et al., 2012; Weber et al., 2015). However, children with cerebral palsy with communication problems are more at risk of developing psychiatric disorders (Bjorgaas, et al., 2012), as are children with cerebral palsy with an intellectual disability (Bjorgaas et al., 2012; Parkes et al, 2008).

Relationships with friends and family can be an essential support in managing cerebral palsy. Conversely, children with cerebral palsy have reported that overprotective parenting styles and lack of peer support are barriers to participation and inclusion at school and in the community (Lindsay, 2016). Some children report that overprotective parenting styles prevent them from developing the skills required for independent living (Lindsay, 2016). Difficulty with friendships, including a lack of support and rejection/exclusion by peers, is associated with anxiety and behavioural problems in children with cerebral palsy (Makris et al., 2021). Lack of environmental accessibility – on public transport, at school, and/or in the broader community – impacts on the ability of children with cerebral palsy to participate in their community and socialise (Lindsay, 2016).

Children with cerebral palsy are also more likely to be the victims of bullying (Whitney, Peterson, & Warschausky, 2019; Lindsay & McPherson, 2012). Bullying is widely understood to have a detrimental effect on the mental health and wellbeing of children (Headspace, n.d.; Robinson, 2020), and has been linked to mental health disorders in children with cerebral palsy (Whitney et al., 2019). Young people with cerebral palsy commonly report feelings of stress, anxiety and depression in relation to bullying from peers, or social isolation linked to bodily differences (Lindsay, 2016).

What impact does cerebral palsy have on families?

Parents of children with cerebral palsy experience higher levels of depression, anxiety and stress than parents of children without cerebral palsy, and are more likely to have poorer quality of life than the general population (Pousada et al., 2013). Behavioural or emotional issues in children with cerebral palsy are related to reduced wellbeing and higher levels of stress in parents. Other factors that predict increased stress or poor mental health among parents include cognitive impairment of the child with cerebral palsy, low parenting self-efficacy, and problems with stress management (Pousada et al., 2013). The evidence suggests that parental quality of life and mental health is not related to the severity of the child's disability (Pousada et al., 2013).

Conclusion

Cerebral palsy can have significant implications for children's overall development and wellbeing, including ongoing mental health concerns. Early identification of these concerns and access to professional services including allied health practitioners and social workers, offers the potential to alleviate the challenges for children and their families. Further information about the impact of chronic conditions on mental health can be found within the [*Understanding child mental health and chronic physical conditions*](#) e-learning course.

Where can I go for further information on cerebral palsy?

[Cerebral Palsy Alliance](#)

Provides information on services across ACT, NSW and Queensland. Good source of general information about cerebral palsy and information on NDIS supports.

[Cerebral Palsy Australia](#)

National cerebral palsy peak body website. Includes a link to the 2020 Australian and New Zealand Cerebral Palsy Strategy.

[National Disability Insurance Scheme \(NDIS\)](#)

Information about the NDIS, supports available, and planning and application process for NDIS supports.

[Australasian Academy of Cerebral Palsy and Developmental Medicine](#)

Links to videos, podcasts, papers, fact sheets and other resources for health professionals to promote best practice clinical care for children and adults with cerebral palsy and developmental conditions.

What are some other supports for children and families?

[Beyond Blue](#)

Beyond Blue provides information and support to help everyone in Australia to achieve their best possible mental health. The service supports those experiencing depression, anxiety or going through a difficult time. The phone service 1300 224 636 operates 24/7, while the website offers online chats, email support and online forums.

[GP and psychologist](#)

Families can consult with their local health professional to get access to specialised support.

[Healthdirect Australia](#)

Healthdirect is a national, government-owned, not-for-profit organisation supporting Australians in managing their own health and wellbeing through a range of virtual health services. Health advice is available on 1800 022 222.

[Kids Helpline](#)

Kids Helpline is a free, private and confidential 24/7 phone and online counselling service for children aged 5–12 years and young adults aged 18–25. Qualified counsellors are available via phone on 1800 551 800 or via WebChat or email.

[Lifeline](#)

Lifeline is a national charity providing all Australians experiencing emotional distress with access to 24-hour crisis support and suicide prevention services. Available via phone on 13 11 14.

[Parentline](#)

Parentline is a confidential telephone service providing professional counselling and support in Queensland and the Northern Territory. Available via phone on 1300 301 300.

[Raising Children Network](#)

Raising Children Network is a comprehensive and trusted online resource for parenting information. A website includes information on children's health and wellbeing across the ages. It includes videos, fact sheets and downloadable toolkits on child development, behavioural problems and health issues.

References

- Australian and New Zealand Cerebral Palsy Strategy Collaboration. (2020). *Australian & NZ Cerebral Palsy Strategy 2020*. [Available here](#).
- Blair, E., Langdon, K., McIntyre, S., Lawrence, D., & Watson, L. (2019). Survival and mortality in cerebral palsy: Observations to the sixth decade from a data linkage study of a total population register and National Death Index. *BMC Neurology*, 19(1), 111. [Available here](#).
- Bjorgaas, H. M., Hysing, M., & Elgen, I. (2012). Psychiatric disorders among children with cerebral palsy at school starting age. *Research in Developmental Disabilities*, 33(4), 1287–1293. [Available here](#).
- Bjorgaas, H. M., Elgen, I., & Hysing, M. (2020). Trajectories of psychiatric disorders in a cohort of children with cerebral palsy across four years. *Disability and Health Journal*, 14(1), 100992. [Available here](#).
- Cerebral Palsy Alliance. (n.d.). *About cerebral palsy*. Sydney: Cerebral Palsy Alliance. [Available here](#).
- Deloitte Access Economics. (2019). *The cost of cerebral palsy in Australia in 2018*. Sydney: Deloitte. [Available here](#).
- Downs, J., Blackmore, A. M., Epstein, A., Skoss, R., Langdon, K., Jacoby, P. ... Glasson, E. J. (2017). The prevalence of mental health disorders and symptoms in children and adolescents with cerebral palsy: A systematic review and meta-analysis. *Developmental Medicine and Child Neurology*, 60(1), 303. [Available here](#).
- Headspace. (n.d.). *Understanding bullying*. Melbourne: Headspace. [Available here](#).
- Lindsay, S. (2016). Child and youth experiences and perspectives of cerebral palsy: A systematic review. *Child Care, Health and Development*, 42(2), 153–75. [Available here](#).
- Lindsay, S., & McPherson, A. C. (2012). Experiences of social exclusion and bullying at school among children and youth with cerebral palsy. *Disability and Rehabilitation*, 34(2), 101–109. [Available here](#).
- Makris, T., Dorstyn, D., & Crettenden, A. (2021). Quality of life in children and adolescents with cerebral palsy: A systematic review with meta-analysis. *Disability and Rehabilitation*, 43(3), 299–308. [Available here](#).
- McIntyre, S., Badawi, N., Balde, I., Goldsmith, S., Karlsson, P., Novak, I. ... Love, S. (2018). *Australian Cerebral Palsy Register Report 2018*. Sydney: Cerebral Palsy Alliance. [Available here](#).
- Parkes, J., White-Koning, M., Dickinson H. O., Thyen, U., Arnaud, C., Beckung, E. ... Colver, A. (2008). Psychological problems in children with cerebral palsy: A cross-sectional European study. *Journal of Child Psychology and Psychiatry*, 49(4), 405–413. [Available here](#).
- Pousada, M., & Guillamón, N., Hernández-Encuentra, E., Muñoz, E., Redolar, D., Boixadós, M., & Gómez-Zúñiga, B. (2013). Impact of caring for a child with cerebral palsy on the quality of life of parents: A systematic review of the literature. *Journal of Developmental and Physical Disabilities*, 25(5), 545–577. [Available here](#).
- Robinson, E. (2020). *Identifying and responding to bullying in the pre-teen years: The role of primary health care practitioners*. Adelaide: Emerging Minds. [Available here](#).
- Romeo, D. M., Sini, F., Brogna, C., Albamonte, E., Ricci, D., & Mercuri, E. (2016). Sex differences in cerebral palsy on neuromotor outcome: A critical review. *Developmental Medicine and Child Neurology*, 58(8), 809–813. [Available here](#).
- Royal Children's Hospital. (n.d.). *Cerebral palsy*. Melbourne: Royal Children's Hospital. [Available here](#).
- Tan, S. S., Meeteren, J., Ketelaar, M., Schuengel, C., Reinders-Messelink, H. A., Raat, H. ... Roebroek, M. E. (2014). Long-term trajectories of health-related quality of life in individuals with cerebral palsy: A multicentre longitudinal study. *Archives of Physical Medicine and Rehabilitation*, 95, 2029–2039. [Available here](#).
- Weber P., Bolli, P., Heimgartner, N., Merlo, P., Zehnder, T., & Kätterer, C. (2015). Behavioral and emotional problems in children and adults with cerebral palsy. *European Journal of Paediatric Neurology*, 20(2), 270–274. [Available here](#).
- Whitney, D. G., Peterson, M. D., & Warschausky, S. A. (2019). Mental health disorders, participation, and bullying in children with cerebral palsy. *Developmental Medicine and Child Neurology*, 61(8), 937–942. [Available here](#).