

The Case for

PLAY

Play is a biological necessity, essential for healthy growth and development.

Play is a fundamental component of healthy child development, serving as a critical mechanism for brain maturation and physical growth. Traditionally, play has been seen as a physical activity with little benefit to a child other than bringing joy. Advances in research now identify play as a critical catalyst for healthy brain development and sensory pathways and supports mental health and wellbeing. It is not optional but essential for healthy development.

1. Play promotes brain development and neural connectivity

Research says...

- Play is one of seven foundational brain circuits that are primary emotions we are born with, pre-wired in our midbrain. (Panksepp, 2010)
- Play leads to changes at the molecular (epigenetic), cellular (neuronal connectivity), and behavioural levels that promote learning and adaptive behaviour. (American Academy of Paediatrics, 2018)
- Play promotes neuroplasticity and strengthens prefrontal cortex development, crucial for executive functions. (Pellis & Pellis, 2009)
- Optimal brain development depends on healthy play experiences in early life, with play promoting synaptic connections and neuroplasticity during critical developmental periods. (Panksepp, J., 2010).
- Physical play increases BDNF (Brain-Derived Neurotrophic Factor) expression, which activates neuroplasticity pathways essential for learning and memory. (Sleiman, S.F., et al. 2016)
- Play activates mirror neuron systems essential for empathy, imitation, and understanding others' intentions and emotions. (Bergen, D., 2002)

2. Play supports sensory development

Research says...

- Play activates the vestibular system providing essential information about head movement and gravity, supporting spatial cognition and oculomotor function development. (Wiener-Vacher, S.R., et al. 2013)
- Proprioceptive activities in play enhance body awareness and spatial processing by providing muscle and joint position feedback to developing sensory pathways. (Schaaf, R.C. & Mailloux, Z. 2015)
- Risky outdoor play is positively associated with increased physical activity and social health, while being negatively associated with sedentary behaviours in children. (Brussoni, M., et al. 2015)



3. Play is a protective factor and enhances mental health

Research says...

- Free play experiences support emotional regulation by strengthening neural pathways between the amygdala and prefrontal cortex. (American Academy of Paediatrics 2018)
- Play reduces cortisol levels and activates the parasympathetic nervous system. (Pellis, S.M. & Pellis, V.C. 2013)
- Children who spend more time playing adventurously outdoors have fewer internalising problems (anxiety and depression) and demonstrate more positive mental health outcomes. (Dodd, H.F., et al. 2021).
- Unstructured play in green or open spaces correlates with enhanced physical health, improved mental well-being, and healthier peer interactions among school-aged children. (Brussoni, M., et al. 2017)
- Risky play provides children with exhilarating positive emotions exposing them to previously feared stimuli, leading to improved coping skills and mastery of fears. (Sandseter, E.B.H., & Kennair, L.E.O. 2011).
- Play offers ample physical, emotional, cognitive, and social benefits, allowing children and adolescents to develop motor skills and experiment with emotional responses in safe environments. (Nijhof et al, 2018)

Latest Position Papers and Key Documents to Read

1. "The Power of Play: A Paediatric Role in Enhancing Development in Young Children" (American Academy of Paediatrics (AAP) 2018, reaffirmed January 2025)
A clinical report providing comprehensive overview of play's developmental benefits
Free download:
<https://publications.aap.org/pediatrics/article/142/3/e20182058/38649/The-Power-of-Play-A-Pediatric-Role-in-Enhancing>
2. "Healthy Play, Better Coping: The importance of play for the development of children in health and disease" Nijhof, S. L., et al. (2018)
Neuroscience & Biobehavioral Reviews, 95, 421-429.
<https://pubmed.ncbi.nlm.nih.gov/30273634/>
3. "State of Play 2025 " (Play Australia 2025)
Provides crucial insights into the barriers to play in Australia, case studies demonstrating innovative Australian practice to address barriers and recommendations for future action.
Free download:
https://www.playaustralia.org.au/sites/default/files/State%20of%20Play_final.pdf

Recommended Reading:

1. "The Playful Brain: Venturing to the Limits of Neuroscience"
by Sergio M. Pellis and Vivien C. Pellis
2. "Play: How it Shapes the Brain, Opens the Imagination, and Invigorates the Soul"
by Stuart Brown & C. Vaughan



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For more information and support contact Play Australia. E: info@playaustralia.org.au

Play Australia is the peak national advocacy organisation for PLAY in Australia.

Established in 1913, we support play by way of inspiration, advice, access to information and professional services. Our mission is to build a healthy Australia through the power of play.