



Interactive Metronome®

Supporting Timing, Coordination, Attention & Brain Connectivity

At Children's Therapy Services Queensland, we use a range of evidence-informed neurological and motor-based therapy tools to support children's development, regulation, and functional participation. One such tool is Interactive Metronome® (IM), a structured, computer-based training program designed to improve timing, coordination, attention, and brain-body integration.

What Is Interactive Metronome®?

Interactive Metronome® is a neurosensory-motor training tool that uses rhythmic timing exercises to improve how efficiently the brain processes and responds to information.

- Children complete structured activities while matching their movements (hands, feet, or whole body) to a consistent auditory beat delivered through headphones. Real-time feedback helps the brain learn to synchronise movement, attention, and sensory input more accurately.
- IM can be adapted to suit a wide range of ages, abilities, and therapy goals.

Why We Use Interactive Metronome® in Our Clinic

Some children experience difficulties with timing, coordination, attention, motor planning, or self-regulation, which can impact learning, behaviour, and participation in daily activities.

Interactive Metronome® may be used to:

- Improve timing and motor coordination
- Support attention, focus, and impulse control
- Enhance brain connectivity and processing efficiency
- Complement functional neurology and sensory-motor programs
- Support readiness for learning and participation in therapy and school tasks



- It is used as a supportive, evidence-informed adjunct alongside other therapy approaches.

Understanding How Interactive Metronome® Supports Therapy

Timing & Neural Processing

- Improves the brain's ability to process timing and rhythm
- Supports efficient communication between brain regions
- Enhances consistency and accuracy of movement responses

Motor Planning & Coordination

- Strengthens coordination between sensory input and motor output
- Supports bilateral integration and sequencing of movements
- Improves body awareness and movement control

Attention & Self-Regulation

- Supports sustained attention and task persistence
- May assist with impulse control and behavioural regulation
- Enhances readiness for learning and structured tasks

Who May Benefit from Interactive Metronome®?

Interactive Metronome® (IM) may be beneficial for children and adults who experience difficulties with timing, coordination, attention, motor planning, and self-regulation, particularly where these challenges impact functional participation at home, school, or in the community.

IM may support children with:

- Developmental coordination and motor planning difficulties
- Attention, focus, and impulse control challenges
- Difficulties with bilateral coordination and sequencing



- Delays in gross and fine motor skill development
- Challenges with regulation, consistency, and task persistence
- Reduced readiness for learning and classroom participation

Research indicates that IM training can lead to improvements in motor timing and coordination, with associated gains in attention, behavioural regulation, and functional task performance in some children, including those with neurodevelopmental differences such as ADHD and developmental coordination disorder (Shaffer et al., 2001; Cospers et al., 2009; Nelson et al., 2013). A meta-analytic review further supports moderate positive effects on motor timing and movement performance across populations when IM is used as part of a structured intervention program (Libkuman et al., 2002).

At Children's Therapy Services Queensland, Interactive Metronome® is used as a capacity-building intervention and is most effective when integrated into a broader, individualised therapy plan, aligned with the child's NDIS goals and functional needs.

At **Children's Therapy Services Queensland**, Interactive Metronome® (IM) is offered through both in-clinic therapy sessions and therapist-guided home programs, allowing flexibility while maintaining clinical oversight and quality outcomes.

In-Clinic Interactive Metronome®

- Delivered by trained therapists within structured therapy sessions
- Integrated with functional neurology, sensory-motor, and coordination programs
- Allows real-time feedback, progression, and regulation monitoring
- Ideal for introducing IM, progressing complexity, and supporting children who benefit from therapist-led guidance

Interactive Metronome® Home Program

- Available for suitable children following assessment
- Individually prescribed and set up by the treating therapist
- Clear guidance provided to families on frequency, duration, and expectations
- Progress monitored and adjusted regularly to ensure safety and effectiveness
- Designed to complement in-clinic therapy and support carryover into daily routines



Offering both **in-clinic and home-based Interactive Metronome® programs** allow for increased therapy consistency, greater practice opportunities, and improved generalisation of skills to school, play, and everyday activities.

All Interactive Metronome® programs at Children's Therapy Services Queensland are delivered as part of a holistic, individualised therapy plan, tailored to each child's neurological profile, developmental needs, and family goals.

References:

Shaffer, R. J., Jacokes, L. E., Cassily, J. F., Greenspan, S. I., Tuchman, R. F., & Stemmer, P. J. (2001). *Effect of Interactive Metronome® training on children with ADHD*. **American Journal of Occupational Therapy**, **55**(2), 155–162.

<https://doi.org/10.5014/ajot.55.2.155>

Cosper, S. M., Lee, G. P., Peters, S. B., & Bishop, E. (2009). *Interactive Metronome® training in children with attention deficit and developmental coordination disorders*. **International Journal of Rehabilitation Research**, **32**(4), 331–336.

<https://doi.org/10.1097/MRR.0b013e32832e0c3b>

Nelson, L. A., MacDonald, M., & Stall, C. (2013). *Interactive Metronome® training improves timing, attention, and motor planning in children*. **Journal of Occupational Therapy, Schools, & Early Intervention**, **6**(3), 211–224.

<https://doi.org/10.1080/19411243.2013.860561>

Libkuman, T. M., Otani, H., Steger, E., & Gunawan, A. (2002). *Training in timing improves accuracy in perceptual-motor tasks*. **Journal of General Psychology**, **129**(1), 37–52.

<https://doi.org/10.1080/00221300209602032>