



AUTISM SPECTRUM DISORDER

Children with Autism Spectrum Disorder (ASD) are usually less able to interact with the world as other children do. They typically have deficits in verbal and non-verbal communication, social awareness and interactions and imaginative play (variable interests and behaviours). As children with ASD often find it difficult to interact and/or communicate in social contexts, and often experience repetitive patterns of behaviours and interests, it can sometimes make it difficult to engage in healthy lifestyle interventions. Exercise can help manage the negative health implications of physical inactivity on overall health, and can also help manage a number of Autism-specific symptoms^{1,2}. Research supports the benefits related to motor development and physical fitness, as well as decreases in repetitive, stereotyped, and self-injurious behaviours, and improvements related to cognition¹⁻⁵. Exercise has been reported to contribute to, or enhance, treatment outcomes, help manage behaviours, improve academic performance, as well as provide holistic health benefits and minimise health risks associated with inactivity^{1,3,4,5}.

WHY IS EXERCISE IMPORTANT?

Research demonstrates that exercise interventions led to a **37% improvement in symptoms** of ASD, specifically behavioural and academic improvement¹. A study published in 2018 looking at the effect of exercise on children with ASD found that those exposed to the exercise intervention twice a week for 48 weeks showed an important decrease in their Autism-related symptoms². The benefits were particularly pronounced in **reductions in stereotypical behaviour patterns, and improvements in verbal and non-verbal social communication skills**. The same study also reported that **parent perceptions of their child's quality of life increased significantly** in comparison to the control group. Exercise interventions can vary dependant on the severity of ASD.

IMPROVEMENTS IN BEHAVIOUR

Moderate to vigorous exercise can show an effect on **decreasing repetitive behaviour** for children and adolescents with ASD⁶. Exercise is a desirable treatment to reduce self-stimulatory behaviour (SSB) as it is an inexpensive and can be an easy form of treatment, and the added health benefits of exercise may help improve the quality of living for children and adolescents with ASD. An Accredited Exercise Physiologist can assist in working with the child and family to find the best exercise and set an exercise plan that can be easily completed on a daily basis.

Exercise can be described as an antecedent approach, which can assist in preventing detrimental behaviours occurring, thus, reducing the motivation to perform the behaviour. This may have **beneficial effects beyond the exercise session** and may help to enhance positive behaviours and prevent the occurrence of problematic behaviours.

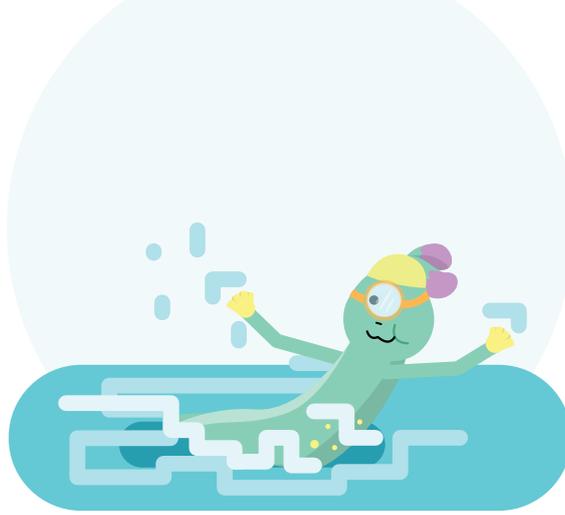
IMPROVEMENTS IN PHYSICAL HEALTH AND WELL BEING

The benefits of engaging individuals with ASD in an individually tailored exercise program include improvements in outcomes for aerobic fitness and muscle strength, coordination and motor planning, balance, and positive participation in physical activity⁷. Gross and fine motor skills can also be improved with exercise. This is important, as poor motor skills including difficulties with motor coordination and balance in youth with ASD may limit their activity choices^{8,9} and may lead to a less active lifestyle.

Working with an Accredited Exercise Physiologist can assist in planning an exercise program to improve physical activity participation, limit sedentary activities and lead to an active and healthy life.

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TYPES OF EXERCISE RECOMMENDED:

- Cardiovascular exercise and strength/resistance training (under supervision) every day for a total of 60 minutes (remember this can be broken up across the day).
- Start at 5-10 minutes of continuous activity, 1-2 days a week. Slowly increase the duration of activity to 10-30 minutes, 3-4 days a week. You can later increase it to 15-60 minutes for 5-7 days a week.
- Swimming and water play work well for children with large sensory needs.
- Focus on encouraging fundamental movement skills – running, catching, kicking, leaping, throwing, kicking, or jumping. Whilst this may seem like big steps for some, break each skill into little parts and focus on exaggerating movements.

RIGHT PROFESSIONAL

Accredited Exercise Physiologist (AEP)

If your child is living with Autism Spectrum Disorder, it's recommended you consult an Accredited Exercise Physiologist for a tailored exercise plan that is safe for your child's individual needs.

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