

## Some of the many Benefits of Swimming and Aquatic Therapy for those with ASD.

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The benefits of swimming and aquatic therapy are well documented and for those with Autism Spectrum Disorder (ASD), and are proven to be one of the most effective forms of therapy.

Water is an ideal environment for exercise and rehabilitation due to its constant temperature, buoyancy, density, pressure, and resistance. It helps to reduce body weight, relax the muscles, and decrease stress. These properties have been shown to help those with ASD regulate their excitement and anxiety levels.

**When engaging in specific well-directed water activities, improvements can be seen in the following domains (to name just a few):**

- *Motor function (including strength, coordination, balance and endurance)*
- *Sensory*
- *Social*
- *Communication*
- *Cognition*
- *Emotion*
- *Aquatic skills and water safety*

## Motor Function

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**Participating in aquatic programs that include water-based exercise and components of swimming exposes those with ASD to different exercises that can challenge their gross motor coordination as well as increase their muscular strength, balance, and endurance.**

These improvements in fitness have been shown to translate to benefits in other domains of life, such as allowing better participation in PE classes at school or playing games with others, and thereby improving quality of life.

In addition, participation in water-based programs have resulted in a high satisfaction rating among children and parents as they are fun, resulting in greater motivation to engage in regular physical activity.



## Sensory

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Sensory processing difficulties often present in those with ASD and they can be very distractible. Strong reactions to different textures and over or under reactions to different stimuli in the environment can have a detrimental effect on quality of life.



**When the water temperature, noise, and other distractions are taken into consideration, the hydrostatic pressure of the water can provide a soothing and calming effect as well as provide the necessary sensory input that many with ASD crave.**

As a result, the water can be used as a safe environment when implementing interventions designed to help with sensory challenges.

## Social

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**One of the most important benefits that have been found from aquatic therapy and swimming lessons is the changes in social behaviours and interactions.**

Improvement in social competence in peer relations, self-regulation, and antisocial behaviour have been observed following aquatic therapy and swimming programs.



When participating in group therapy or swimming lessons in the water, swimmers can learn how to engage with their peers, cooperate and take turns during play, keep physical boundaries, as well as share toys and equipment (to name just a few). Furthermore, clinicians have reported significant improvement in initiating and maintaining eye contact during and after aquatic therapy sessions.

With challenges in social behaviours can be one of the most difficult obstacles for parents and those with ASD to overcome, this is a promising form of therapy that can have lasting implications beyond the scope of the pool.

## Communication

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Difficulties relating to and communicating with other people is a common challenge for many people with ASD, as it forms part of the diagnostic criteria. They might be slower to develop language, have no language at all (using alternative communication methods), or have significant challenges speaking or understanding language.

**When participating in swimming and group aquatic programs, the opportunity to interact with others assists with the development of communication skills. Furthermore, activities such as blowing bubbles in the water helps to develop stronger oral motor skills that can assist with speech development.**

These increased opportunities not only help develop communication and oral motor skills but have a positive impact in the development of behaviour and learning.



## Cognition

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**For many people with ASD, the properties of the water help to moderate levels of excitement and anxiety which can help making it easier to concentrate and maintain attention.**

Individualised aquatic therapy programs that focus on play-based functional movement, can facilitate neurodevelopmental growth as well as help with impulse control and the ability to follow instructions.



Studies have also shown that participation in aquatic programs can improve classroom performance with better concentration, mental alertness, and responsiveness to teachers. Improvements in these areas can have a profound impact on quality of living and also on development through adolescence participation within the community as an adult.

## Emotion

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Individuals living with ASD will often come across additional barriers in learning a new skill, which can then lead to decreased confidence and self-esteem. This is why Autism Swim Approved instructors are taught how to teach in ways that are conducive to the ways in which the ASD brain notoriously processes information.



**The increased opportunity to play and interact socially during aquatic programs often leads to a sense of accomplishment, increased confidence, and improved self-esteem.**

In addition, the soothing effects of the water can help regulate emotions such as frustration and anxiety levels in many individuals with ASD.

## Aquatic Skills and Water Safety

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It is common for those with ASD to have a strong attraction to water. Unfortunately, this has contributed to drowning as being the leading cause of death among children with ASD. Learning to swim is a vital preventative measure and a foundational skill that everyone should know to be safer around and enjoy the aquatic environment.

**Fortunately, one of the primary benefits of swimming and aquatic therapy is the learning of water safety skills.**

Those enrolled in swimming lessons learn how to swim and develop aquatic skills which will grant them greater independence in the water. Some may even continue swimming as a form of regular exercise.

Participation in one to one swimming lessons and consistent instructor feedback has been found to improve important water and basic swimming skills.

**Key water safety skills for all include:**

- *Safe entry and exit practices*
- *Water familiarity (tolerance of water, ability to put eyes under water)*
- *Breath control (ability to hold breath, ability to blow bubbles under water)*
- *Front and back floating*
- *Propulsion to exit (ability to move self in the water in order to exit water bodies safely).*



When provided with the right tools by their Autism Swim Approved instructor, and placed in the right environment, those with ASD have been able to progress from refusal/non-cooperation on a task or completing it with full physical prompts towards performing the task spontaneously and independently after group instruction following a 4-month swimming program. This study highlights the importance of finding an appropriate Autism Swim Approved swim school/instructor and persevering with teaching these aquatic skill-sets.

There are many different interventions that can be used to help those with ASD. Swimming and therapy in water is one of the most effective forms of therapy for those with ASD, and can play an important role in improving function and enhancing overall quality of life. Despite these benefits, it is important to remember that those with ASD often present safety risks when they are in the pool due to their high propensity to become distracted, so it is vital that supervision is ensured when these children are in the water.

## References

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