



THRIVING
with RETT

AQUATIC THERAPY GUIDE

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My name is Ailene Tisser, and I am a Physical Therapist that specializes in Aquatic Therapy. I have over 25 year's experience as well as a huge passion for working with those that have Rett Syndrome. I am the co-founder of Swim Angelfish, along with my partner Cindy Freedman OT. Swim Angelfish includes three programs:

- 1 / **Angelfish Therapy:** a PT and OT Aquatic Therapy Program.
- 2 / **Swim Whisperers Swim School:** an Adaptive Swim Lesson Program for swimmers with special needs.
- 3 / **Swim Angelfish Certification Program:** an online training for Swim Instructors and Therapists around the world in the Swim Angelfish Methodology.

The reason I'm so passionate about the work I do in the water is that it allows me to address many different things all at the same time, using the therapeutic properties of the water to assist in achieving the swimmer's goal. It allows me to see results faster, and create an opportunity for families to have a recreational activity with their child or young adult with Rett Syndrome that is enjoyable and therapeutic.

The therapeutic properties of the water are so amazing for children and young adults with Rett. The buoyancy allows movements that are too hard to accomplish on



The buoyancy of water allows movements that are too hard to accomplish on land, in the gravity environment, to be more easily achieved.

land, in the gravity environment, to be more easily achieved. The viscosity of the water gives lots of awareness to the body as you move. Your skin is your largest organ, so the input of moving in water provides lots of feedback to your body. A lot of children with Rett Syndrome have a slower processing time, and the viscosity of the water helps slow down movements, for example, balance reactions, so that the children have time to process what is happening and respond with a motor action.

The hydrostatic pressure of the water is the deep pressure it provides around your body, which increases the deeper you go. If you can imagine, it feels like a big hug around your body, which is so calming and organizing. It also helps your brain release the neurochemical dopamine, which washes away adrenaline, and adds to the feeling of being calm in the water when you are neck deep.

Many Rett children hold their breath, and you can use aquatic therapy techniques using the hydrostatic pressure of the water to assist with taking a deeper breath. For example, when the trunk is submerged in the water, the rib cage, intercostal muscles, and diaphragm are being squeezed by the hydrostatic pressure. As you lift the rib cage out of

the water, there is no hydrostatic pressure, and it's easier to take a big inhalation without resistance. One technique for this is to hold your child on their back with their head against your chest as you lift their ribs up and out of the water as they inhale, then gently push their trunk into the water to assist with exhalation. It looks like a dolphin motion, as the chest comes up for inhalation with extension, and goes down into the water with flexion for exhalation.

The surface tension of the water is a property that is also very beneficial to the sensory system for children with Rett Syndrome. As you come in and out of the water, by bouncing up and down, you are breaking the elastic band at the water's surface, called the surface tension, and it gives a lot of sensory input, which is alerting and arousing to the sensory system.

Some Ideas for Aquatic Exercises for Your Swimmer with Rett Syndrome

- / Have your swimmer on their back as they lay against your chest and you support them on either side of the trunk. Slowly move to the side to side in a snaking motion as you lengthen each side of their trunk.
- / Have your swimmer sit on your knee; you can support your back against the side of the pool, and gently move side to side, wait as you move to the side for them to have the balance reaction of coming up into a sitting position. You can assist them at the lower trunk to come to an upright position.
- / Use two small dumbbells under your swimmers' arms. As you hold their hands down, they are getting the sensation of pushing their shoulders down on the dumbbells to stay upright. You can move around the pool in this upright position, and as you move backward, the water pushes on the front of their body, so they feel a nice stretch in the front of their hips. If their legs are too buoyant and float up, try wearing cotton socks in the pool to weight their legs down a bit.

/ Large fluid noodle from Costco is a very buoyant and soft thick pool noodle. This is great for putting under your swimmer's chest as you hold them and they work on extending their head and trunk. You can lay them sideways on it, so they work the lateral muscles of their neck and trunk, and then place it behind them, with their arms wrapped over it, so you stretch their chest and arm muscles.

/ Stretching in the water as you sit on the stairs in the pool is very beneficial. Especially if the water is warm, it allows the muscles to relax, and if you combine a

gentle rocking movement as you are stretching, you will see the muscle tone relax, and the muscle will stretch more easily.

/ Standing with support in the water is great. If the water is belly button level, that is only 50% body weight. If it's nipple level, it's only 25% body weight. This is a great place to use the cotton socks, or even cotton pants and a shirt since it will ground your swimmers' body so they can feel where they are in the water and control the buoyancy better.

Additional information:

For more information and free resources about Swim Angelfish, please go to our website swimangelfish.com. You can also email me at Ailene@swimangelfish.com We have a lot of resources on our YouTube channel <https://www.youtube.com/user/swimmingandautism> Please follow us on Facebook and Instagram at swim angelfish for videos and information about our program.

Some resources for equipment:

Sprintaquatics.com has a variety of barbells, dumbbells and small wrist weights (we like to use these on the ankles as well as the wrists)

Pfd-a.com has great adapted life jackets so you can enjoy lake and boating activities with a coast guard approved life jacket specially designed for swimmers with special needs.

Nekdoodle has a nice neck collar you can use in front or behind your swimmer to help support their head when needed.

Fluid noodle from Costco—large squishy noodle that is great for supporting your swimmer on their front, back, and side so they can exercise and stretch their muscles.

We are here to help and empower parents to find ways to help their child with Rett Syndrome not only enjoy the water but to work on their therapy goals, be safe, and as independent as possible. For further information or questions please feel free to contact me at ailene@swimangelfish.com