

Aquatics for Individuals with Severe Multiple Disabilities: Implications for therapeutic Aquatics

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An individual with a disability faces many challenges in life. These challenges are compounded when more than one disability is present in the same individual. We already know aquatics can greatly enrich the lives of almost anyone with a disability. But, what are the implications of aquatics for individuals with more than a single disability? What can aquatics mean for an individual with multiple disabilities?

The term multiple disabilities refers to the presence of two or more conditions, each representing a different disability category. This might include the more common disabilities affecting cognition, learning, and/or emotional stability, as well as the low incidence disabilities of vision impairment, auditory impairment, other health impairments and/or physical disability. For example, an individual who is a quadriplegic and has a cognitive disability is considered multiply disabled, as is an individual who is blind and a hemiplegic.

Severity of multiple disabilities can range from mild to profound. If the disabilities in question have little to no effect on the individual's ability to carry out life's tasks, then the category mild is applied. If functional ability is impaired in at least two different areas of daily functioning, the level of disability is considered to be moderate. If the individual requires special education and/or training and cannot participate in the regular aspects of daily life, the disabilities are considered severe. At the far end of the spectrum are the profoundly disabled, individuals who need custodial care for their entire lives.

While an individual with multiple disabilities may need specialized services throughout his or her entire lifespan, the quality of life for that individual will partially depend on the level of independent functioning that individual can achieve. Very simple tasks such as transferring from a wheelchair to a bed or a toilet seat or assisting in the dressing process become major events when an individual has a severe multiple disability. For this individual therapeutic aquatics can be of great benefit and is well worth the effort involved in providing therapeutic activity.

Goal Setting

Therapeutic aquatic goals should be directly related to functional skills necessary for quality of life. These might include, but are not limited to—

- Improved leg strength to facilitate weight bearing for transfer and for lower extremity dressing.
- Improved arm and leg flexibility to facilitate dressing.
- Improved grasp and release, as well as hand-eye coordination to facilitate self-feeding.

- Increased relaxation to allow for better positioning during seated tasks and to reduce unwanted muscle contractures.
- Better head control and core strength to facilitate balance and the respiratory process.
- Increased physical activity to improve cardiorespiratory function and facilitate weight control.
- Stimulation of voluntary motor activity to improve and facilitate independent physical functioning, as well as mental processing.
- Facilitation of social interaction to support positive self-image through engagement with others.
- Improvement of speaking and eating skills through greater breath control and voluntary oral motor control.
- Improved focus of attention to enhance awareness of environment and sharpen cognitive engagement

Therapeutic Activities

Appropriate activities depend upon specific goals. Activity selection also depends greatly on the age, height, and weight, as well as on the strengths and abilities of the individual. Due to the presence of multiple disabilities, the individual often needs hands-on assistance while in the aquatic environment. While flotation equipment can provide some support, there is no safety substitute for on-going, one-on-one close proximity assistance. For the most part, an individual with a severe multiple disability will need a great deal of time, years perhaps, to become functionally safe and independent in the aquatic environment. However, this does not mean aquatic participation can not be engaging, vigorous, and stimulating.

Potential activities include, but are not limited to –

- Aquamassage
- Aquatic exercise
- Posture and alignment activities
- Balance and gait activities
- Breath control drills and breathing activities
- Games
- Halliwick method activities
- Pre-swim water orientation
- Relaxation training
- Supported locomotor activities
- Vestibular stimulation
- Water learning
- Watsu

In addition, activities of daily living directly related to aquatic participation which can also be reinforced during a therapeutic aquatic program include –

- Dressing / changing clothes
- Communication skills
- Listening and following directions
- Providing directions to personal care assistants
- Putting on braces and/or appliances and prosthetics
- Washing body
- Washing hair

Professional Staff Preparation

None of the benefits of therapeutic aquatics for individuals with severe multiple disabilities can be achieved without detailed planning by the aquatic professional. Specific areas of preparation include acquiring knowledge related, in no particular order, to –

- Safe handling and positioning in the aquatic environment.
- The effect of movement the aquatic environment on specific disability manifestations.
- Facilitation of voluntary movement for an individual with severe limitations in cognition, mental processing, and/or voluntary motor control.
- Use of physical and oral cues to improve motor performance.
- Behavior management.
- Task analysis and motor development progressions.
- Assessment.
- Reduction of abnormal reflex patterns.
- Increasing relaxation and reducing contractures.
- Use of alternative communication systems.
- Managing incontinence and/or bowel and bladder appliances.
- Age specific recommendations, as well as contraindications.
- Medical issues associated with multiple disabilities.

Quality of Life

For the individual with severe multiple disabilities, the ability either to assist a caregiver or to do even a small part of a task on his or her own builds self-confidence and strengthens a sense of independence. When an individual with disabilities is able to assist while being dressed or is able to dress him or herself (with even one item of clothing), that person is easier to care for.

The easier an individual is to care for, the more likely that individual can live at home or in a group home. Being able to stand to transfer from a wheelchair to the toilet, bed, or chair means that individual can do so independently, thus reducing the need for heavy lifting physical work by a caregiver. That level of independence also means greater privacy for the more embarrassing of life's daily functions.

Improved oral motor function means eating is more efficient and digestion is facilitated by greater chewing. That same oral motor function can improve speech and overall communication. Being able to express one's self is a great contributor to independence as well as self-respect and social engagement.

Fine motor skills, attained through not only practice on land activities, but also learned through water games, ~~also~~ facilitate dressing and feeding. Hair care, teeth brushing, washing the body and shampooing the hair all required use of hands and arms. Many of these skills can be sharpened in the aquatic environment.

Last, but certainly not least, are the benefits of improvement and maintenance of physical fitness. Wellness throughout the life span depends in some measure on being as physically fit as possible. No matter what the level of functional ability, wellness is important not only to issues of daily care, but also to enjoyment of daily activities. Aquatic participation, at any level, can improve flexibility, endurance, cardiorespiratory function, and strength, while helping reduce body fat – all components of being physically fit.

It takes a great deal of planning and effort to provide therapeutic aquatics for an individual with a severe multiple disability. Progress is often exceedingly slow. Goals are very hard to attain. But, an on-going therapeutic aquatic program can make a great deal of difference in quality of life. That's the over-riding BIG goal, a goal well worth the planning and effort investment.