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Modern Aquatic Therapy and a New Clientele

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Looking back to the earliest civilizations, our ancestors used baths for more than simply washing and recreation. Even in the time of Hippocrates, immersion in various water temperatures was deemed valuable in the medical treatment of most illnesses — this practice continued into the rule of the Roman Empire. Unfortunately, once Rome’s influence in the world dissipated, so too did the use of water immersion in the medical mindset.

However, Europe continued to hold a remnant of adherence to the principles of immersion, and medical spas continue to play an important role in health and wellness there to this day. It was Father Sebastian Kneipp (one of the founders of the Naturopathic Medicine Movement) who revitalized the world’s recognition of the medical benefits of water in the late 1800s. Around this time, many American medical colleges and aquatic establishments had a strong focus on this aspect of healing with what was called “the water cure.”

Aquatic Therapy in America: A Brief History

The American acceptance of aquatics as a medical modality has ebbed and flowed over time. Even though cold-water treatments were known to be beneficial to patients with cerebral palsy and spastic conditions in the early 1900s, most medical applications involved topical use rather than immersion, and pools were mostly used for recreation during that time. Poliomyelitis in America emerged through a series of epidemics beginning in the 1920s, and became more prevalent

in the 1930s and 1940s. After contracting polio in 1921, President Franklin Delano Roosevelt discovered the near-miraculous effects of warm-water immersion, became a huge advocate of aquatic therapy and, eventually, purchased a spa in Warm Springs, Georgia. His active advocacy resulted in government assistance and organizations that developed programming for corrective swimming pools and therapeutic tanks. In the 1940s following World War II, aquatic therapy served a useful need for injured soldiers. Aquatic rehab was so effective that the government intervened to appropriate many American pools and spas for military rehab use. However, with the development of the polio vaccine and advances in medicine and technology, pool use was again largely relegated to recreation, and professionals were no longer trained in aquatic therapy. Hospitals filled in their pools and American medical use of aquatics reentered the Dark Ages.

The tide turned once again as the space race of the 1960s caused an overwhelming interest in formal research into the physiological effects of immersion, which was the only Earth-bound equivalent of weightlessness. Not only were medical changes noted with the effects of buoyancy and weightlessness, but the physical properties of water also produced significant physiologic changes in the renal, cardiac, respiratory and neuromuscular systems of the human body, many with potential medical benefit. Today, this study of the physiological effects of simple immersion on the human body is called medical hydrology.



Integrating Aquatics Into Healthcare

Despite its aquatic history, today's American medical model appears to struggle with the integration of aquatics into the healthcare system. There are a number of specific aquatic therapy facilities and aquatic exercise classes in the United States today. However, because Western medicine since the early 20th century has prioritized disease cure over disease prevention and wellness promotion, the use of aquatics has remained deep in the background. Medical awareness of the health-promoting effects of immersion and aquatic exercise continues to remain limited at best.

Despite the enormous amounts of funding put into pharmacological research for Alzheimer's disease and dementia, at this point in time, medications have failed to produce significant tangible results in prevention, reversal or even slowing of the progression of this debilitating problem. Conversely, since the 1950s, physical exercise has proven helpful in preventing, slowing and even reversing cognitive decline. For many seniors, however, land-based exercise can often present a challenge due to pain and restricted mobility. Aquatic activity can minimize these obstacles and provide an avenue for exercise that is often impossible (or impractical) on land. Recent research recognizing the benefits of aquatic therapy in Alzheimer's disease has become the impetus for more research into the potential cognitive benefits associated with aquatic activity for individuals with dementia.

It has been discovered that chest-level immersion alone results in statistically significant increases in cerebral blood flow, which may lead to improvements in cognitive function. When the body is immersed in water, our brains release a steady stream of natural hormones like endorphins, oxytocin and dopamine. Chemicals called neurotrophins are re-



leased, facilitating nerve regeneration and reconnection. Long-term care facilities that have initiated aquatic programs for their residents with dementia have noted reports of smiles, laughter, conversation, playfulness and a sense of physical independence and freedom that participating individuals did not experience on land. Family members come to sit on the deck or even get into the pool as well as to watch their loved ones enjoy the pool with the wellness staff. For the time in the pool and a couple of hours following, many participants seem to come alive and become themselves again. Teaching people to tune into the sensory experiences of the water and learn to access for themselves this natural medicine chest can be incredibly empowering.

As the emerging trend of long-term care communities getting residents into pools grows, family members are becoming more and more interested in using fewer medications and more holistic approaches to wellness for their loved ones who suffer with dementia. Bringing people with cognitive impairments into the pool is one way to improve their quality of life as well as that of their family members. As aquatic professionals, we should encourage our community partners to get the elderly and those with cognitive

impairments into the pool, and partner with aquatics therapists, long-term care facilities and medical professionals to ensure citizens with cognitive impairments, both young and old, are being served.

Due to a lack of pools available in many long-term care settings, it is probable that new aquatic program needs will create an influx of seniors, caregivers and therapists to America's public pools and recreation centers. A number of park agencies and public pools are already beginning to increase their offerings of aquatics programming for senior citizens. It is also essential that more aquatic therapists have a far deeper understanding of pool chemistry so as to better and more safely serve their patient populations, and the Aquatic Facility Operator (AFO) certification serves that purpose. Working together, aquatic professionals, therapists and community partners can form the leading edge of this movement and overcome the prevailing view of the pool as solely a recreational environment. 🌿

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