# Hot and Cold Plunge Pools: Offering Active Recovery Techniques that Catalyze Regeneration.

Finding ways to recover faster between training sessions has become the new frontier in athletics. As Lance Walker, Director of Performance at Michael Johnson Performance states: "Getting your neuromuscular and endocrine systems regenerated can steepen the dose-response relationship to the training. Passive recovery is certainly important, but 'active' recovery techniques using HydroWorx are catalyzing our regeneration time-lines."

After a hard work out, hot and cold plunge pools can have a soothing effect. The natural properties of water stimulate circulation and work to reduce inflammation.

### The Benefits of Cold Plunge Therapy:

PolarPlunge pool therapy is used by athletic trainers and physical therapists to enhance muscle recovery by reducing metabolic rate, inflammation, circulation, muscle spasms and pain. With cold therapy, vasoconstriction also takes effect narrowing the blood vessels resulting in reduced swelling. In a PolarPlunge pool the water is kept at a therapeutic 50°F to help control joint inflammation and to stimulate the release of endorphins. Science also shows that the cold water causes the release of cytokines and other body chemicals that helps boost immunity.

#### The Benefits of Hot Plunge Therapy:

ThermalPlunge pool therapy heats muscle and tissue to increase circulation and restore blood flow to the body. The warmth of the water promotes a transient reduction in joint stiffness, pain and muscle spasms. It can also help to reduce inflammation. The typical temperature of a hot pool ranges from 94° - 104°F to relax tight muscles and stimulate the release of endorphins. HydroWorx ThermalPlunge pool models also come with an attachable massage hose to offer a deep penetrating massage to sore areas of the body, further enhancing muscle recovery.





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#### **Contrasting Hot & Cold Pool Therapy Yields Tremendous Regeneration Benefits**

According to the Institute for Integrative Healthcare Studies, the use of contrasting temperatures---also known as contrast therapy---has been used as a healing tool for thousands of years. The contrast between heat and cold is believed to exert a physiological effect on your body's pain gate mechanism.

The use of contrast plunge pools at Michael Johnson Performance has shown tremendous performance regeneration benefits above and beyond just the use of cold pool therapy alone for their athletes. "The contrasting is very time efficient", states Walker, "taking less than 10 minutes to fully complete a 2:1 or 1:1 cycle of hot:cold immersion with massage. With contrasting, the CNS/ANS is recovering faster and more completely. The athletes are back the next session with higher functioning levels of neuromuscular firing and a reduction in "wasted" training sessions due to staleness or effects of overtraining--which is usually a result of 'under recovering'."



Dr. Curt Draeger of Gold Medal Motion in Antigo, Wisconsin also believes in the regenerative powers the HydroWorx pool's powerful jet system can offer to "muscle strip" his patients. Dr. Draeger uses a technique he calls 'muscle stripping' to penetrate extremely deep into the overworked muscle tissue of Olympic decathletes. "We have found the HydroWorx jet system with deep tissue massage has become an integral part of our treatment center" explains Draeger. "This process allows us to strip the muscle as deep as we can go in order to get the muscle ready, not only to decrease lactic acid, but to elongate the muscle fibers." Muscle stripping exhibits greatly reduced muscle soreness and enhanced muscle recovery in his athletes.

If you are searching for ways to reduce soreness and enhance muscle recovery in your athletes, water therapy could be the solution you've been looking for. The clinicians at MJP certainly believe it has given their athletes an edge. "Performing active recovery exercises in the HydroWorx pool on 'regen days' has allowed our athletes to actively flush the body, add additional caloric 'burn' to the weekly microcycle, and incorporate some joint motion in deloaded states. We truly believe that 'motion is lotion' and in these regen pool days our athletes can move through complete joint and tissue ranges without the negative effects of load/concentric force production, or eccentric tissue microtrauma."

For more information on hot and cold pool products, visit hydroworx.com.