

## Three Reasons the Hot Tub is not for Swimmers

Of all of the articles that I have written and supplied for the PRO Report, I feel that this may be the most controversial. I see swimmers of all ages enjoying the hot tub every day before and after practice. **Sitting in the hot tub is poor preparation for effective practice, contributes to dehydration, and is ineffective for recovery.** The point of this article IS NOT to rain on everyone's parade. Rather, I want to raise some concerns regarding overuse and misuse of a hot tub.

First let me clear up a common misconception. The term "warm-up" does not simply refer to warming your body up. One's body temperature will rise during warm up, but this is more of a coincidental effect.

During a proper warm up, the heart rate should be raised and the muscles should be activated. The elevated heart rate ensures that enough blood is being circulated to properly fuel and remove waste from your body during exercise. Activating your muscles prepares the body for intense muscular performance as well as lubricating your joints for full, healthy range of motion.

Now here's the question: does sitting in a hot tub accomplish these critical points of warm up? NO! Your heart rate is not raised because all you are doing is sitting. The only way you could be more passive is if you lay down in the hot tub. Your muscles are not activated. Rather they become loose, flaccid, and lethargic. This more closely resembles your physical state during sleep than it does exercise. Imagine being woken up from a nap and being made to swim a 200 butterfly! Doesn't sound like a lot of fun, does it? Sitting in the hot tub ill-prepares you for the workout or race that you are about to perform.

A poor warm up can be detrimental to your performance, but even more harmful is a state of dehydration. Dehydration can be one of the most subtle yet impactful contributors to a poor race or practice.

First a brief anecdote:

When I was in high school, a friend on my club team decided to do an easy experiment for one practice. He decided to weigh himself before and after practice to see how much weight he lost during a typical 2-hour practice. This

friend was about 5'9" and roughly 130lbs. In other words, he was not that big. He probably had less than 5% body fat. Very lean!

After the workout he found that he had lost close to 1.5lbs! Like I said, he did not have a lot of fat to burn off. The vast majority of the weight loss that he experienced was lost in the form of sweat. Even more staggering is the fact that he took in water several times during practice from the poolside water fountain, meaning that the actual loss of fluids was most likely over 1.5lbs!

Back to the point now, human beings sweat as a cooling mechanism. When we are out of the water, the sweat evaporating off of our skin cools the body and prevents overheating, heat exhaustion and even heat stroke.

When in the water, the body works the same way; only swimmers do not often realize how much fluid they are losing in the form of sweat. You are immersed in liquid and consequently do not sense the sweat leaving your body like you would if you were on dry land. Consequently, you can become very dehydrated without ever realizing it.

Imagine, if you will, you have just finished a long, hard workout. You are most likely in a state of mild state of dehydration, already. You then plop yourself down in the hot tub. Your core temperature rises. Your muscles go limp. Your face becomes flushed. All the while you are sweating and you don't even realize it. The same principle is true if when sitting in the hot tub before practice. You are simply losing fluids before practice. Those are precious fluids that MUST be replaced in order for you to operate at peak performance.

If you do not realize you are losing those fluids, you are not very likely to replace them. You then dig yourself into hole, a constant state of dehydration. In this state we cannot perform in the moment and even more detrimental, you cannot recover quickly enough between practices. The inability to recover between workouts has an exponentially negative effect on your training and racing.

This concept of recovery is the third reason hot tubs should be avoided before, during and after exercise. Recovery, like warm up has several specific goals. The first of which is to remove waste (most commonly lactic acid), which can cause soreness, fatigue, and inflammation. Waste removal is most effectively

accomplished through “Active Recovery.” Active Recovery simply refers low intensity exercise immediately following a race or a challenging workout. The concept goes like this:

- When you exercise your body creates lactic acid in the muscles
- During period of intense exercise, lactic acid cannot be removed as quickly as it is produced
- Following the race or workout, the built up lactic acid remains in your muscles
- Active Recovery (low intensity exercise) creates little to no lactic acid and if lactic acid is created the body can remove it faster than it is produced
- During Active Recovery the sustained circulation of blood removes the built up lactic acid from the muscles

The critical factor of Active Recovery is effective is the sustained heart rate. This circulates the blood that will remove lactic acid from the muscles.

Another goal of the warm down is to gradually lower your body’s core temperature. As previously discussed, as you core temperature rises your body begins sweat, which in turn can lead to dehydration. I have already talked about this concept so I will simply reiterate the point and move to the next.

Most injuries suffered by swimmers do not have a dramatic cause. In football a defender tackles you. In baseball or softball you get hit by a pitch. These types of injuries have a clear cause-and-effect.

Most swimming injuries are cause by overuse, coupled with improper technique. **Let me be clear, proper technique will prevent almost all basic overuse injuries.** When an overuse injury is suffered it most obviously manifests itself in the form of tendonitis, which in turn is most commonly found in the shoulders.

The suffix “itis” means inflamed. Hence, tendonitis simply means inflammation of the tendon, just like appendicitis refers to inflammation of the appendix. One of the most common remedies for tendonitis, and inflammation in general, is the application of ice.

There are two commons ways to apply ice: placing ice (bags of frozen peas or corn also work well) to the affected area or by taking ice bath in water 59 degrees Fahrenheit or colder. None of the pools at the PRO Sports Club are cold enough

to be effective in reducing inflammation. The closest is the adult lap pool. The pool's temperature fluctuates between 80 and 82 degrees Fahrenheit. The hot tub is significantly warmer. Again, I want to be clear. I AM NOT SAYING that sitting in the hot tub will cause inflammation. However, it does nothing to aid the reduction of inflammation.

Now we must ask the same question I posed earlier in the article: does sitting in a hot tub accomplish the goals of warming down? Again, the answer is a resounding, NO!

Sitting in the hot tub is passive recovery. The lactic acid settles in the muscles, increasing your soreness and decreasing your ability to perform and recover. The temperature of the hot tub sustains or even raises your core temperature, contributing to dehydration. Lastly, the temperature of the hot tub is ineffective in reducing inflammation, soreness, or fatigue.

The hot tub is not some awful thing that should be avoided at all cost. I am writing this article as it relates to athletes before and after their races and training sessions. There is a time and a place for the hot tub. If you are serious about your swimming, though, that time is not before or after a workout.

*References articles:*

[Active Recovery](#)

[After Exercise](#)

[Ice Baths](#)