

## **Three Burning Questions About Lactic Acid**

### **Answered by Exercise Physiologist Horacio Pizzanelli**

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**Have you ever exercised to the point of feeling a burning sensation in your muscles?** If so, blame it on lactic acid. When exercising at high intensities we start to build up lactate, aka lactic acid, in our muscles. If we pace ourselves we can tolerate some discomfort and carry on. But if we continue to push it, lactic acid builds up faster than we can get rid of it, limiting our performance and potentially leading to intense muscle burn. This is one of the reasons why professional athletes often play in time controlled amounts- so that they don't surpass their maximum capabilities. After a short rest, like a shift change in hockey, their muscles clear the lactic acid and are ready for another shift.

**Why do we sometimes see high-performance athletes riding a stationary bike between shifts?** Contrary to traditional belief, it's not necessary to be active during the recovery period. In fact, if we are too active we can slow down our bodies' ability to clear the lactate. When you see NFL stars on the sidelines peddling on a bike, it's not because they need to clear the lactate but because they need keep their heart rate up and remain ready to play.

**Have you ever been sore after a big workout?** You can't blame lactic acid for this one, though most people do. Even though lactic acid clears the body around the same time as the discomfort fades, the pain is actually coming from our muscle fibres. Intense exercise causes our muscle fibres to swell and press into one another. This is called Delayed Onset Muscle Soreness, or DOMS for short. The most efficient and effective recovery for DOMS is cold therapy- the dreaded post-game ice bath. But Wait! Before you go jumping into the frozen lake behind the rink, know that this extreme form of recovery is unnecessary for recreational athletes. There should be enough recovery time between exercise sessions that accelerating recovery should be as simple as a healthy post-game meal and a good night's sleep.