

It's ALL About Oxygen

In 2008 I was offered a position on a Hood to Coast Relay team to which I gladly accepted. At that point I felt very confident with my running ability and was ready to take on the challenge of doing more than just a 5k. I wouldn't have called myself a runner at the time, but for the upcoming months I knew I had to become one. I was in for a surprise. I procrastinated with my training and guess what? I short changed my training finishing HTC with questions on how improve or what I needed to do differently.

Why is warming up so important?

With the onset of exercise the inner workings of your body changes dramatically. Taking the body from a resting state and inflicting a major stress, such as exercise, will cause the fight or flight system to kick in. Your breathing and heart rate will increase which both help pump blood to your skeletal muscles. However, blood vessels will constrict, slowing down the flow of oxygen in the blood to your muscles, which is what it needs the most. So the muscles can counteract this, but it takes some time. Warming up muscles in a dynamic way helps relax and open up blood vessels to allow blood flow to where it is needed during your workout. Without a warm up you may feel very winded or your muscles may feel heavy because they aren't getting the oxygen that they so desperately need.

Why am I out of breath at the beginning of a workout when I am not doing any type of intense activity?

While you are starting your workout/warm-up you may have noticed you are out of breath at the beginning even if you aren't doing an intense activity. This is also part of the warm-up process. Well along with getting oxygen to your working muscles, your body has to play catch up with how much oxygen it is consuming. Since you are going from a resting state your body only needs a small amount of oxygen at that time, but once you start moving major muscle groups more oxygen is needed and that is why your breathing becomes harder and more frequent. So once your oxygen consumption meets your body's demands then breathing will become easier and not so rapid.

How quickly do I lose aerobic adaptations if I stop training?

The saying "Use it or lose it," comes in quite handy when explaining how quickly your body loses the training that you have worked so hard for. If you were to take just one week off, say for vacation, it could take you 4 or more weeks to get back to the level that were at before your break. Taking 5 weeks off could be detrimental and start you back at zero when it comes to training. So say you are on vacation and don't have time for your usual hour workout, try to do at least 15 minutes at a higher intensity. Shorter workout sessions at a higher intensity will help you maintain your training level if you don't have the time.

What is the main goal of cardiovascular training?

Oxygen and nutrients are needed by the muscles and are delivered in the blood when working out. In order to get them there efficiently the heart, lungs, arteries, capillaries, and veins all need to work together to get the blood to muscles quickly, and that takes conditioning.

The main goal of cardiovascular training is to increase blood flow to the skeletal muscles. Now, you may not be able to see if more blood is getting there, but you will definitely be able to tell by how your body feels while you are working out.

Noticing if you have shallow or deep breathing, or how rapid it is, are good indicators about what is happening on the inside of your body. Having rapid shallow breath won't allow your body to sustain a workout. So the fuller more relaxed your breath is, the more likely your body will be receiving adequate oxygen for your workout.

When muscles aren't using oxygen as an energy source they will start to fatigue quickly. At high intensities, such as sprinting, your body switches to two other energy systems which can be broken down very fast but the energy supply runs out quickly. So that is why you can only sprint for a short amount of time. With adequate amounts of oxygen your body is ready for more endurance activities.

With more cardio training your body will become more efficient at reaching a steady state while you exercise. Generally, a steady state is when you are at a nice intensity (steady pace), and able to have deep controlled breathing. So your body is meeting your oxygen demands and you can maintain that intensity for some time (endurance).

Your cardiovascular system is like a muscle and it needs to get worked out in order to see improvements. So when you have reached a steady state for a while you should up the intensity for as long as you can sustain, for over a minute at least, and then return back to your steady state. By pushing yourself at a higher intensity for a short amount of time will help your body becomes more conditioned.

What I Learned...

During my first training run I made a huge mistake by not warming up my body before going on an intense run. I now know that my legs weren't getting their adequate amount of oxygen and that is why they felt so tired and heavy. All I had to do was slow it down to warm up a bit and allow my body adjust to what it was about to do, but instead I just kept it at a higher intensity and ended up with an unsuccessful 7 minute training session.

I can't believe that I thought I should have been able to run for 30 minutes that first day. If I had realized about how quickly I lose training adaptations I would have started training much sooner!

So when it comes to training ***listen to your body and slow it down when needed***. Always make sure you are getting enough oxygen ☺

