

WARM UP AND COOL DOWN

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One of the least understood variables in fitness and training is the warm up and cool down. I hear so many opinions on a weekly basis, and it's clear to me that the warm up and the cool down are not very well understood. I would like to explain the benefits of the warm up and cool down, and how to apply them to your sport and training. For starters, stretching is not a warm up! Stretching is a flexibility exercise!

THE GOAL OF A WARM UP IS TO RAISE YOUR INTERNAL TEMPERATURE.

THE BENEFITS OF A WARM UP:

- Raise your internal temperature
- Warms up your muscles by moving more blood through the tissues, making them more supple and less likely to injure
- Prepares your muscles for stretching
- Increases the delivery of oxygen and nutrients to the muscles by increasing the blood flow
- Prepares your heart and lungs for the increased intensity to follow
- Readies your nerve-to-muscle pathways for exercise or the increase in intensity
- Prepares you mentally for exercise
- May delay the onset of oxygen debt
- All things being equal, will improve your performance

THE INS/OUTS OF A PROPER WARM UP:

- Again, stretching is NOT a warm up.
- If you're going to do another type of activity such as weight training, tennis, stretching, etc., then pick a general warm up of light aerobic exercise.
- If you are doing an aerobic exercise already such as running, the warm up is simply a much lower intensity than the mainstay of the workout. For running, this may be a very light jog or a walk.
- The warm up should be between 5-15 minutes. How long within this depends on the type of workout that will be done, how you feel (Do you feel warmed up? Breaking a sweat is a great indicator.), and what type of temperature is present in your environment. For example, if the workout is going to be intense or racing, a longer warm up is better. If the weather is cold, a longer warm up is preferred.
- A general guideline is that the warm up should be done at 50-55% or lower of your maximum VO₂, which is 60-65% maximum heart rate.
- If you have had a VO₂/Anaerobic Threshold test and know your numbers, the warm up should be below the Aerobic Threshold.
- If you don't track these things, then simply know the warm up should be very, very low intensity.

THE BENEFITS OF A COOL DOWN:

- Helps to remove lactic acid from the muscles and system
- May prevent or lessen Delayed Onset Muscle Soreness
- Helps your heart and breathing rate return to normal slowly
- Helps to avoid dizziness, or worse-fainting, which could result from blood pooling in the legs when intense exercise is suddenly stopped
- Calms the body and mind down to be ready for their next activity
- All these things combined helps the body recover and make the body more ready for the next time you train.

THE INS/OUTS OF A PROPER COOL DOWN:

- Basically, this is a reverse warm up.
- If you did an activity that was non-aerobic such as weight training or tennis, pick a general aerobic exercise to use as your cool down (simply walking).
- If you were already doing an aerobic exercise such as running, then a cool down is a much milder form of what you were just doing---so jogging, walking.
- Should be again between 5-15 minutes. The intensity really is the key factor here. The more intense the workout was, the longer the cool down should be. (I know we are all short of time at times---but this is important!)
- The intensity, again, should be very low—50-55% of max VO₂ (60-65% MHR) and below, or if you know your Anaerobic Threshold numbers, then below the Aerobic Threshold. NOTE: Running really gets the HR up so it will take some time to bring it down. Just continue to let the HR come down. If you're trying to jog and it won't drop, then WALK! Personally, I thinking walking is the best cool down after running.
- If you don't track your HR, then again simply keep the intensity very light. Again, you can't go wrong with walking—you'll know for sure that it's dropping down.

So that is the nuts and bolts of a proper warm up and cool down. So when do you stretch? Stretching is done last. Not first. Stretch after you've worked out, and now you'll be following all the proper rules!