

Are you Warm Yet?

Warm-up Guidelines:

In a country where we spend most of our winters complaining about the cold, you would think we would know something about “warming up”! The concept of a warm-up prior to performing physical work dates back to 1945 when two scientists Asmussen and Boje reported in the Acta Physiological Scandinavian Journal that “...a higher temperature in the working organism facilitates the performance of work.”

Today in the world of sport every coach and athlete understands that they must warm-up prior to activity, and everyone has their own “best practices” for warming-up. My goal in this article is to provide you with some of the science behind the warm-up and some practical guidelines while preparing your warm-up based on the science.

To prepare this article I have summarized two excellent review articles by David Bishop titled Warm-up I and Warm-up II published in Sports Med 2003: 33 (6) & (7) respectively.

How to Structure a Warm-up:

Things to consider prior to developing a warm-up:

1. What kind of activity will you be participating in?
 - Consider the type, the intensity and the length of the activity.
 - Will it be a short term, high intensity/anaerobic and lactic?
 - Will it be intermediate term performance, high intensity/anaerobic lactic to aerobic power?
 - Will it be long term performance, high to moderate intensity/aerobic power to capacity?
2. What are your capabilities as an athlete?
 - Well conditioned athletes may require a longer and/or more intense warm-up as their thermoregulatory system is more efficient
3. What are the environmental Conditions?
 - Know the ambient temperature and environmental conditions of the activity you are going to participate in.

 - The warm-up must differ based on the temperature. If the temperature is between 5-18 degrees your standard 10-15 minute warm-up may apply.

 - If the temperature is above 18 degrees, the warm-up should probably be shorter than normally executed.

-If the temperature is below 5 degrees Celsius it is important that you do a more progressive warm-up and wear a little extra clothing.

NOTE: It is important to make sure to “keep warm” following your warm-up and prior to your performance, again this will more than likely be passive in nature to minimize metabolic expenditure and facilitate recovery prior to the performance.

- A great reference for Preventing Heat Illness in Sport, refer to the policy statement created by Sports Medicine Australia @ http://www.sma.org.au/information/preventing_heat_illness_in_sport_policy.asp
- A good reference for Exercising in the Cold in Sport refer to www.gwu.edu/~runners/guidelinesforcold.doc