

By Paula Shingler, BSc, MCSP

Scenario: I arrive at a State League a little later than anticipated, having driven for 2 hours, I leap out of the car, grab my stuff and head to the start. Luckily it is only 100m so I get there in time to chat to a few friends before I dash off. After I finish my 90 minutes (yes that first control was a bit tricky), I realise I need to hurry to get back to Sydney for the Swans' game so I jump in the car and drive the 2 hours back. Familiar? But where was the time for a warm up and warm down? Why should I have done them anyway?

**Yes – and don't roll your eyes.
It's all about injury prevention**

A warm up and down is recommended for injury prevention, reducing the risk of DOMS (delayed onset muscle soreness which I talked about in the July E-News) and promoting fast recovery. Let's have a look at what happens in the body when we start to exercise and when we stop and you will see why this is important. The aim of a warm up is:

- to increase the body temperature by increasing the blood flow, heart rate and blood pressure
- decrease stiffness and increase joint range in readiness for increased exercise
- increase ventilation rate to increase rate of exchange of gases
- alert neural pathways so muscles are innervated so movement pathways are ready for action

- change in hormone levels so glucose rich blood can be delivered to muscles

Latest research

Latest research has suggested that for running the best warm up is dynamic consisting of 10-15 mins of jogging, followed by drills of 15-20m e.g. lunge walking, high knee lifts, calf walking, skipping rather than traditional static stretches. The benefits of this regime are improved running action as you have prepared the muscles to work together as a running unit and not just individual stretches. It avoids over stretching, particularly of the elastic ligaments. If you have a specific area that you are aware is tight it should be isolated and stretched individually. If you are doing a Sprint then some sprint drills are a good idea. There is a psychological benefit from a warm up as it encourages you to focus on the run ahead and not the world problems you have been tackling all week. Being focussed means you don't have to 'ease into' your run - although taking it easy to the first control does have its appeal!

**Don't just stop and head for
the Catering tent**

After your run, especially if you have been bashing your way round the bush for an extremely long time, the temptation is to head to the catering tent and replenish with a calorie laden treat. However a warm down consisting of 10-15 minutes of jogging gradually slowing down with static

stretches should be first. The purpose of this is to:

- return muscles from a taut/stretched state during exercise to a relaxed, lengthened state
- gradually decrease heart rate and blood flow ensuring blood does not pool in muscles and assists in the removal of waste products produced during exercise
- gradual slowing down allows the nervous system to lower muscle alertness and decrease the activity in muscle fibres allowing relaxation
- allow hormone levels to gradually change allowing lactate to be processed rather than stagnating in the muscles.

All this allows muscles to return to their resting length with decreased tension encouraging relaxation and preventing injury and DOMS.

**Training or competition the
warm up and warm down are
important**

Ideally you should warm up and down before any training as well as before competition. Taking a few extra minutes can make the difference between becoming fitter or just injured! From a physio aspect the benefits of warm up and down are really in injury prevention and protection from re-injury. Maybe I should not be promoting this quite so avidly - business could get a bit slow!

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