

Why is it important to warm-up and warm-down before and after paddling?

Warming up is a way of preparing your body for paddling. As your body temperature increases, you'll loosen your joints, rev up your cardiovascular system and increase blood flow to your muscles. That means less stress on joints and tendons. Warm, well-lubricated joints prepare the body to execute sudden and/or explosive movements with ease. Warming up may also help reduce muscle soreness and lessen your risk of injury.

When you've finished paddling, it's important to cool down. Stopping suddenly after a session can mean blood pooling in your muscles, dizziness and cramps. Cooling down after paddling allows for a gradual recovery of pre-exercise heart rate and blood pressure, reducing the chance of injury and keeping your body in check by ridding the body of lactic acid build-up.

As we get older a number of things happen deep within our bodies:

- **Plaque builds up inside our blood vessels.** This is like the scale that builds up in the water pipes of our houses. This is fatty and/or hard calcium. The rate that this builds up is influenced by the makeup of the blood, protective nutrients and the presence or absence of inflammation.
- **Tissues, especially the arteries, harden due to scarring and calcification.** This process, along with laying down of plaque, is happening in at least 80% of people and begins early in life. Hard, scarred, partially blocked blood vessels, as well as muscles that more gristle than muscle due to chronic overwork and repeated injuries make it progressively harder to pump life-giving blood through the body.
- **Micro blood vessels become damaged and blocked.** Tell-tale signs of this process, atherosclerosis and arteriosclerosis, may be seen as the development of tiny spider veins, which are most obvious around the insides of the ankles. When your optometrist looks at the back of your eyes, micro blood vessel die-off is being examined.
- **Systemic inflammation increases with age.** The modern, globalised diet can be described as being "pro-inflammatory". Throw in toxins such as medications, arsenic, mercury, lead, herbicides, pesticides, illness and disease - infected gums for example - and excessive exercise - the inflammatory burden may be overwhelming.
- **Mineral and other nutrient imbalances and deficiencies get worse with age.** Many minerals, principally calcium, magnesium, sodium, potassium and iron, and the fat and the water soluble vitamins, must all be plentiful and in balance for robust cardiovascular function.
- **Peak cardiovascular output declines by a factor of about 0.01 per year of life after the age of 28-30.** This equates to about one heart beat less off your peak heart rate per year (*this is where the 220 beats per minute - minus your age comes from to estimate your age-adjusted maximum heart rate*). So, the typical 50-year-old athlete has around 20 or more fewer heartbeats to play with as compared to a 30 year old opponent. By 65 or 70 years of age the loss of peak cardiovascular capacity is huge and it shows in the performance.
- **The older athlete may be completely asymptomatic of any blood vessel blockages until the narrowing exceeds about 80% or more of a blood vessel's diameter.** The only hint may be a faster than expected deterioration of physical work output and this is usually put down to "getting old".

As you read this you might have realised that all of the above are actually independent of and not the inevitable consequences of ageing. They are preventable, manageable and often reversible... regardless of one's age.

So come to paddling! And exercise regularly between sessions. Keep your body physically fit and healthy!

The best measure of how well you are doing with this is your peak heart rate during exercise. If it is a little higher next year, despite you being a year older, then you are doing something right!