

Age and Performance (running that is)

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The June 2002 issue of the newsletter *Peak Performance* featured an article on the impact of age on aerobic capacity. It seems that VO₂max (the maximum amount of oxygen utilised per kilogram of body weight per minute) declines rapidly with age in the general population. Various studies show that, from age 40, VO₂max drops by as much as 10% per decade, significantly limiting endurance performance. So much for the bad news. Is there anything that you can do about this, or can you simply use it as an excuse for a less than dazzling performance in your last 10km race? The good news is that the decline can be halted or possibly even reduced for a time, but there is a price to pay. A small number of 50-60 year old individuals in the PP age/VO₂max studies managed to preserve their race performances. The price was at least maintenance of training volume and quality and preferably increasing the average intensity of training sessions. Training in this case includes demanding interval training sessions.

Because VO₂max decreases with increased body fat it is also important to maintain the ratio of muscle mass to body fat, and to work on improving lactate threshold. This means training to buffer the negative effects of by-product build-up from anaerobic muscle function, hence raising the speed at which lactate accumulation occurs (improving vVO₂max). This requires high intensity training. Eventually it becomes impossible to maintain training intensity as this must cause some tissue damage and recovery times increase with age to the point where the recovery period required between sessions leads to decreased intensity. The issue for all of us is when "eventually" occurs.

Here are a couple of recent sessions from my training group program that are aimed at improving vVO₂max and "lactic" tolerance and keeping the neuromuscular response tuned to fast running. Remember the wise advice that it only hurts until the pain goes – but if you feel sharp pain (rather than the discomfort that comes from meeting sustained demand) stop the session.

Monday: 2 sets of {5x300m with 100m recovery}; do the 300m reps at 800m race pace, 100m jog recovery in the same time as the 300m took; 400m walk/jog recovery between sets.

Thursday: {2x200m, 2x400m, 2x800m, 2x400m, 2x200m} {100m/200m/400m/200m/100m jog recoveries respectively}; do the 200m at 800m race pace, 400m at 1500m race pace, 800m at 3k race pace.

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