

Vo2max Predicts Performance

Your V02max - maximal *aerobic capacity* - tells a lot about you. It can predict your athletic performance in events lasting longer than a few minutes, basically because V02max reflects the strength of your heart and the ability of your muscles to utilize oxygen to produce energy.

The higher the V02max, the greater your endurance potential.

But can V02max also predict your future health, or, more specifically, your risk of having a heart attack? In the past, researchers haven't been exactly sure about this connection, but now there's solid evidence that V02max and the risk of heart failure are fairly tightly linked. To uncover the relationship between V02max and cardiac problems, researchers at Ball State University in the US measured 837 men (average age = 43 years) for V02max and then monitored them for about 12 years.

During the 12-year span, 68 of the men (8 per cent) had cardiac problems, including actual heart attacks, coronary-artery bypass surgeries, coronary angioplasties, or coronary catheterizations due to narrowing of a coronary artery. V02max turned out to be an excellent (inverse) predictor of heart-disease risk. Men with low V02max values (less than 32 ml/kg/min) had the greatest risk, while individuals with average V02max levels (between 32-42 ml/kg/min) possessed just 50 per cent as great a risk of heart difficulties, and high-V02max (greater than 42 ml/kg/min) people sailed along with a risk which was just 24 percent as great.

Boosting your V02max is easy. If you've been fairly sedentary, just exercising three or four times per week will do the trick. If you've pursued your athletic endeavors for lengthy periods of time, it's still possible to raise your V02max. Simply exercise for five-minute periods (intervals) at an intensity sufficient to raise your heart rate to 90-95 per cent of maximal at the end of the interval (consult your doctor before doing this, however). Complete several such intervals per workout, carry out one interval session per week, and within 40 days your personal V02max will have moved upward.

However, having a lofty V02max doesn't bring fool-proof protection from heart troubles. If you have any symptoms of heart disease, even if you're a top-level cyclist or a 2:10 marathoner, consult your doctor immediately.

('V02max as a Predictor of Cardiac Morbidity in Men,' *Medicine and Science in Sports and Exercise*, vol. 26(5), Supplement, # 1231, 1994).