

What is Cardiorespiratory Fitness?

Cardiorespiratory fitness, quantified by VO₂max, represents the body's maximum ability to absorb oxygen, and is a measure of your physical ability. A high VO₂max score is better than a low score. The ranges of a 'high', 'moderate' and 'low' VO₂max score is dependent on your age and gender, and is also affected by the body weight.

Why is it important to know your score?

The VO₂max score tells you about your body's general health. That is why the American Heart Association (AHA) sees VO₂max as a more important health indicator than other known risk factors. A recent study among 750.000 Americans have just confirmed the importance of VO₂max, where VO₂max is a stronger risk indicator than for example known heart diseases, high blood pressure, diabetes and obesity. Furthermore the study shows that moderate physical activity improves the VO₂max and will have a significant impact on the prognosis.

Why is it smart to estimate with Seismofit®?

A true VO₂max is measured by biking on an ergometer bike, while wearing a mask over nose and mouth that then measures the amount of oxygen the body can absorb. To complete this test, you will have to push the body to its maximum. The test is time-demanding and costly, which is why you often see a less precise 'sub-maximal' ergometer test being used, without use of the mask and the measurement of oxygen intake. However, the variability in this test is quite large, and it will therefore not give a precise estimate of the VO₂max.

With VentrIJect's Seismofit® you would just need to relax and lie down for a maximum of 3 minutes. The Seismofit® measures the efficacy of the heart, which is translated into a VO₂max estimate that shows a strong correlation to the true VO₂max test measurement. The test with Seismofit® does not require any form of physical activity and is therefore able to be used by anyone. The test is especially good for testing in an office-setting, since it can be done without the need for changing clothes and taking a shower after the test.

Fig. 1 Estimation of VO₂max with Seismofit®

