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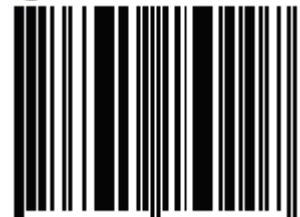
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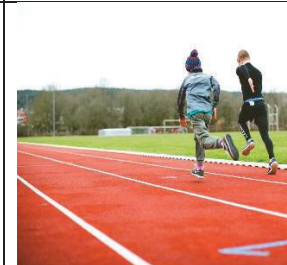
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BLEEP TEST VS VO₂MAX TEST

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Aerobic fitness tests are assessments used to measure an individual's cardiovascular endurance and overall aerobic capacity. Aerobic fitness is not only about your heart - it also involves three of the body's systems: cardiovascular, respiratory, and muscular. An individual's ability to efficiently transfer oxygen and utilize the transported oxygen are the key to good aerobic fitness (Khushoo et al., 2015).

Common aerobic fitness test:

➤ VO ₂ max test	➤ Bleep test	➤ Step test	➤ Cooper test
			

This article will specifically focus on the *VO₂ max test* and the *Bleep test*, as these two aerobic assessments are widely recognized and utilized.

What is the similarity between the *VO₂ max test* and the *Bleep test*?

Both assessments provide information on aerobic fitness by measuring the *VO₂ max* level. So, the final outcome obtained from these two assessments are the *VO₂ max* value.

VO₂ max
The maximum capacity or rate of oxygen your body is able to use during intense maximal exercise (Scribbans et al., 2016).

Difference between the *VO₂ max* test and the Bleep test.

	VO ₂ max test	Bleep test
Objective	Directly measures the maximum amount of oxygen an individual can consume during maximal exercise.	Predicts the aerobic fitness level based on the running stage the individual can complete.
	Lab testing usually done using treadmill or stationary bike.	Field testing.
	Use specific incremental exercise protocols (Bruce, Naughton, Balke,	Running back and forth between two markers of 20m distance apart.

Methodology	Ellestad) that push the aerobic effort of the subject.	The time between beeps gradually shortens, requiring the subject to increase their speed until they can no longer maintain the pace.
Equipment	Specialized expensive equipment. Requires trained person to administer.	Minimal equipment. Marker and audio source.
Time	Time consuming. Minimal number of subjects at a time.	Easy and more practical to conduct with many subjects at a time.
Outcome	Precise measurement of VO ₂ max. One of the accurate tests to measure aerobic fitness.	The test is less controlled and the VO ₂ max outcome is less accurate.

Conclusion:

Both tests offer insights into an individual's aerobic fitness (VO₂ max) at different levels of information precision and accuracy.

References

Anderson, J. (2017). VO₂ Max, Aerobic Power & Maximal Oxygen Uptake – Sport Fitness Advisor. Retrieved on July 2, 2023 from <https://www.sport-fitness-advisor.com/vo2max.html>

Khushoo, T.N., Rafiq, N., & Qayoom, O. (2015). Assessment of cardiovascular fitness (VO₂ max) among medical students by Queens College step test. *International Journal of Biomedical and Advance Research*, 6, 418-421.

Scribbans T.D., Vecsey S., Hankinson P.B., Foster W.S. & Gurd B.J. (2016). The Effect of Training Intensity on VO₂max in Young Healthy Adults: A Meta-Regression and Meta-Analysis. *Int J Exerc Sci*;9(2):230-247. PMID: 27182424; PMCID: PMC4836566.