

Knowing your fitness number predicts your risk for future ill health

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US Marines exercising on the USS Bataan. Credit: United States Navy

It is well known that individuals who are unfit are at substantially greater risk for lifestyle-related diseases and premature death. Despite its high value in assessment of risk, fitness is not routinely measured in clinical practice. The likely reason for this is the costly and time consuming testing procedure that requires trained personnel and expensive equipment. Therefore, research has recently turned to non-exercise algorithms, which, without the need for expensive equipment or trained

personnel, estimate fitness from available clinical information and information provided by the patient.

In a new study published in *Mayo Clinic Proceedings*, researchers from K.G. Jebsen Center for Exercise in Medicine, at Norwegian University of Science and Technology tested the value of estimated fitness in predicting the risk of premature death from either heart disease or any other cause, alone or in combination with other risk factors such as [high blood pressure](#), smoking status, alcohol consumption, family history of [heart disease](#), and diabetes. In other words, they investigated whether adding estimated fitness to traditional risk factors could improve the reliability of predicting premature death.

In order to test their hypothesis, the researchers analyzed data available on 38,480 men and women who participated in the second wave of the Nord-Trondelag Health Study (HUNT2), followed up for up to 16 years.

"We found that estimating fitness was enough to predict future risk of [premature death](#) from all causes. There was no need to perform complicated risk score algorithms that traditionally are used to calculate risk," explained Javaid Nauman, PhD, and Bjarne M. Nes, PhD, first co-authors of the study.

"With the increase in lifestyle-related diseases around the world, estimated fitness is an easy, cost-effective method that could significantly help medical professionals identify people at high risk and improve patient management," commented co-author Carl J. Lavie, MD, from the John Ochsner Heart and Vascular Institute, New Orleans, LA.

"And just as importantly, it is a test that individuals can easily use to assess his/her own Fitness Number and Fitness Age, and in cases of low [fitness](#) do something about it! The only thing needed is access to the Internet and/or a smartphone as we have made this tool freely available

(worldfitnesslevel.org and as apps on Google Play and Apple Store)," noted Ulrik Wisløff, PhD, lead investigator of the study.

More information: Javaid Nauman et al, Prediction of Cardiovascular Mortality by Estimated Cardiorespiratory Fitness Independent of Traditional Risk Factors: The HUNT Study, *Mayo Clinic Proceedings* (2016). [DOI: 10.1016/j.mayocp.2016.10.007](https://doi.org/10.1016/j.mayocp.2016.10.007)

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