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Review [Prog Cardiovasc Dis](#). Jan-Feb 2014;56(4):382-90. doi: 10.1016/j.pcad.2013.09.002.

Epub 2013 Oct 11.

## Fitness vs. fatness on all-cause mortality: a meta-analysis

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PMID: 24438729 DOI: [10.1016/j.pcad.2013.09.002](https://doi.org/10.1016/j.pcad.2013.09.002)

### Abstract

The purpose of this study was to quantify the joint association of cardiorespiratory fitness (CRF) and weight status on mortality from all causes using meta-analytical methodology. Studies were included if they were (1) prospective, (2) objectively measured CRF and body mass index (BMI), and (3) jointly assessed CRF and BMI with all-cause mortality. Ten articles were included in the final analysis. Pooled hazard ratios were assessed for each comparison group (i.e. normal weight-unfit, overweight-unfit and -fit, and obese-unfit and -fit) using a random-effects model. Compared to normal weight-fit individuals, unfit individuals had twice the risk of mortality regardless of BMI. Overweight and obese-fit individuals had similar mortality risks as normal weight-fit individuals. Furthermore, the obesity paradox may not influence fit individuals. Researchers, clinicians, and public health officials should focus on physical activity and fitness-based interventions rather than weight-loss driven approaches to reduce mortality risk.

**Keywords:** All-cause mortality; BMI; Body mass index; CRF; Cardiorespiratory fitness; Fitness and fatness; Obesity paradox; PA; body mass index; cardiorespiratory fitness; physical activity.

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Di Angelantonio E, Bhupathiraju SN, Hu FB, Danesh J, Peto R, Lewington S; Global BMI Mortality Collaboration.

Lancet. 2017 Jun 10;389(10086):2285-2286. doi: 10.1016/S0140-6736(17)31369-7.

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