

BMI Not as Effective as Waist-To-Height Ratio in Determining Heart Risks

A new research suggests that body mass index (BMI) doesn't predict cardiovascular risk as well as waist-to-height ratio and other measures of obesity (1).

The study analyzed data from two German cohort studies called DETECT and SHIP. DETECT followed 6,355 patients for more than 3 years, and SHIP followed 4,297 patients for more than 8 years. Overall, 620 people in both studies died, with 181 deaths attributed to cardiovascular causes, and 325 reached the composite endpoint of stroke, heart attack or cardiovascular death.

In both studies, the waist-to-height ratio was the best predictor of cardiovascular mortality, all-cause mortality and the combined endpoint. The relative risk of cardiovascular mortality in the highest quartile of waist-to-height ratio compared to the lowest quartile was 2.75. For BMI, the RR in the highest quartile versus the lowest quartile was 0.74. Both waist-to-height ratio and waist circumference were significant predictors of all-cause mortality, and all measures except BMI were significantly correlated with the composite endpoint.

BMI does not distinguish between visceral fat, the 'bad' fat that accumulates in the belly, and subcutaneous fat, the 'good' fat that is under the skin and it is more useful to know about abdominal fat than BMI when it comes to cardiovascular risk assessment.

There are some limitations to BMI, but it is easy to obtain. It might still be useful for assessing other risks, such as for orthopedic complications of being overweight or obese, which were not considered in the current study.

References

1- J Clin Endocrinol Metab 2010.