

# Study compares different measures of body fat for predicting kidney function decline

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A new study indicates that waist circumference and body mass index (BMI) may be as reliable as direct measures of different types of body fat for assessing an individual's risk of developing chronic kidney disease (CKD). The findings appear in an upcoming issue of the *Clinical Journal of the American Society of Nephrology (CJASN)*.

In the past two decades there has been an increase in the prevalence of CKD that has paralleled the increase in the prevalence of obesity. Although higher BMI has been associated with development of CKD, it may be important to consider where excess fat is stored, rather than simply how much [excess fat](#) a person is carrying. This is because fat can have differing effects on health and metabolism depending on its location in the body.

To investigate, Magdalena Madero, MD (National Heart Institute, in Mexico City) and her colleagues examined information from computed tomography scans on 2489 Health Aging and Body Composition Study participants who had normal kidney function and an average age of 74 years. The scans measured visceral abdominal fat, subcutaneous fat, and intermuscular fat. The team also collected patient data on BMI and [waist circumference](#).

CKD developed in 17% of participants over a median follow-up of 9 years. Visceral fat, intermuscular fat, BMI, and waist circumference—but not subcutaneous fat—were all associated with kidney function decline and the development of CKD.

"Although we hypothesized that direct measures of body fat would provide a better risk estimate for kidney function decline, we found that anthropometric measures of [body fat](#) such as BMI appear to provide similar estimates," said Dr. Madero.

**More information:** "Comparison between Different Measures of Body Fat with Kidney Function Decline and Incident Chronic Kidney Disease," *Clinical Journal of the American Society of Nephrology* (2017). [DOI: 10.2215/CJN.07010716](https://doi.org/10.2215/CJN.07010716)

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