

# Low BMI is a risk factor for CVD in hypertensive patients with diabetes

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Low BMI is a risk factor for CVD in hypertensive patients with diabetes, according to research presented at the ESC Congress today by Dr Takanori Nagahiro from Japan. The findings provide evidence for an obesity paradox in hypertensive patients with glucose intolerance.

Dr Nagahiro said: "Obesity is a risk factor for cardiovascular disease (CVD) but several studies have reported that low [body mass index](#) (BMI, kg/m<sup>2</sup>) was associated with worse cardiovascular outcome compared to middle or higher BMI. This strange phenomenon is called the 'obesity paradox' and has been described in patients with stroke, [heart failure](#), [coronary artery disease](#) and renal disease."

He added: "The obesity paradox was reported in diabetic patients in 2012. Adults who were normal weight at the time of incident diabetes had higher mortality than adults who were overweight or obese.<sup>1</sup> However, the relationship between obesity and cardiovascular events in patients with diabetes and hypertension is unknown."

The current study assessed the relationship between BMI and [cardiovascular events](#) in patients with hypertension and [glucose intolerance](#). The researchers used data from the Nagoya Heart Study, a randomised trial comparing the efficacies of valsartan and amlodipine among 1,105 hypertensive patients with glucose intolerance in Japan. Patients were enrolled from October 2004 to January 2009 and the median follow-up was 3.2 years. The CVD endpoint was a composite of [acute myocardial infarction](#), stroke, admission due to heart failure, [coronary revascularization](#), or [sudden cardiac death](#).

Patients were classified<sup>2</sup> into four groups according to their baseline BMI:

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