

# Treat snoring to avoid deadly heart failure

December 5 2012

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Patients with obstructive sleep apnea have the same early cardiovascular damage as diabetics, according to research presented at EUROECHO and other Imaging Modalities 2012. The study<sup>1</sup> was presented by Dr Raluca Mincu from Bucharest, Romania.

EUROECHO and other Imaging Modalities 2012 is the annual meeting of the European Association of [Cardiovascular Imaging](#) (EACVI)<sup>2</sup>, a registered branch of the European Society of Cardiology (ESC)<sup>3</sup>. It takes place 5-8 December in Athens, Greece, at the Megaron Athens International Conference Centre.

Obstructive sleep apnea (OSA) is a common sleep disorder that has been associated with cardiovascular disease. OSA increases the risk of hypertension, arrhythmias, [myocardial infarction](#), stroke, [sudden cardiac death](#) and [heart failure](#).

Dr Mincu said: "There are not enough studies in the medical literature on early cardiovascular dysfunction in patients with OSA, when active steps can be taken to prevent progression to heart failure."

She added: "Because OSA leads to so many cardiovascular disorders, we compared early cardiovascular dysfunction in OSA patients and patients with diabetes mellitus, which is a typical risk factor for cardiovascular disease."

The study assessed endothelial and arterial function in 20 patients with moderate to severe OSA (and no diabetes), 20 patients with treated [type](#)

[2 diabetes mellitus](#) (matched for age, sex and [cardiovascular risk factors](#)), and 20 healthy controls (age and sex matched).

In all subjects, arterial function was assessed by intima-media thickness (IMT). Arterial stiffness was measured by young elastic modulus, beta stiffness index, arterial compliance, first systolic peak and second systolic peak. [Endothelial function](#) was assessed by flow mediated dilatation (FMD).

Dr Mincu said: "Patients with moderate to severe OSA had [endothelial dysfunction](#) and higher arterial stiffness than controls, and their results were similar to patients with diabetes mellitus. This suggests that OSA is associated with a high risk for cardiovascular disease."

She added: "Patients in the OSA and diabetes groups had a higher intima-media thickness, which shows that their arteries are remodelled in a pathological way."

All five parameters of arterial stiffness were significantly higher in the OSA and diabetes mellitus groups compared to controls. FMD was lower in these groups, meaning they had poorer endothelial function than controls.

Dr Mincu said: "Patients should realise that behind snoring there can be a serious cardiac pathology and they should get referred to a sleep specialist. If they are diagnosed with obstructive sleep apnea, they are at increased risk of cardiovascular disease and need to adopt a heart healthy lifestyle to reduce that risk."

She added: "Although OSA treatment with continuous positive airway pressure (CPAP) is inconvenient – it requires sleeping with a mask – patients should use it because it can reverse the parameters measured in our study."

Dr Mincu concluded: "Our study is a signal for cardiologists, pneumologists and general practitioners to work together to actively diagnose obstructive sleep apnea, administer the appropriate treatment (CPAP) and assess arterial function. This will help avoid progression of early cardiovascular dysfunction through to heart failure, the final stage of heart disease."

**More information:** Obstructive sleep apnea determines endothelial dysfunction and increased arterial stiffness, similarly with diabetes mellitus (abstract 50318)

Provided by European Society of Cardiology

Citation: Treat snoring to avoid deadly heart failure (2012, December 5) retrieved 25 April 2024 from <https://medicalxpress.com/news/2012-12-deadly-heart-failure.html>

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