Autonomic function tied to coronary flow reserve in T2DM

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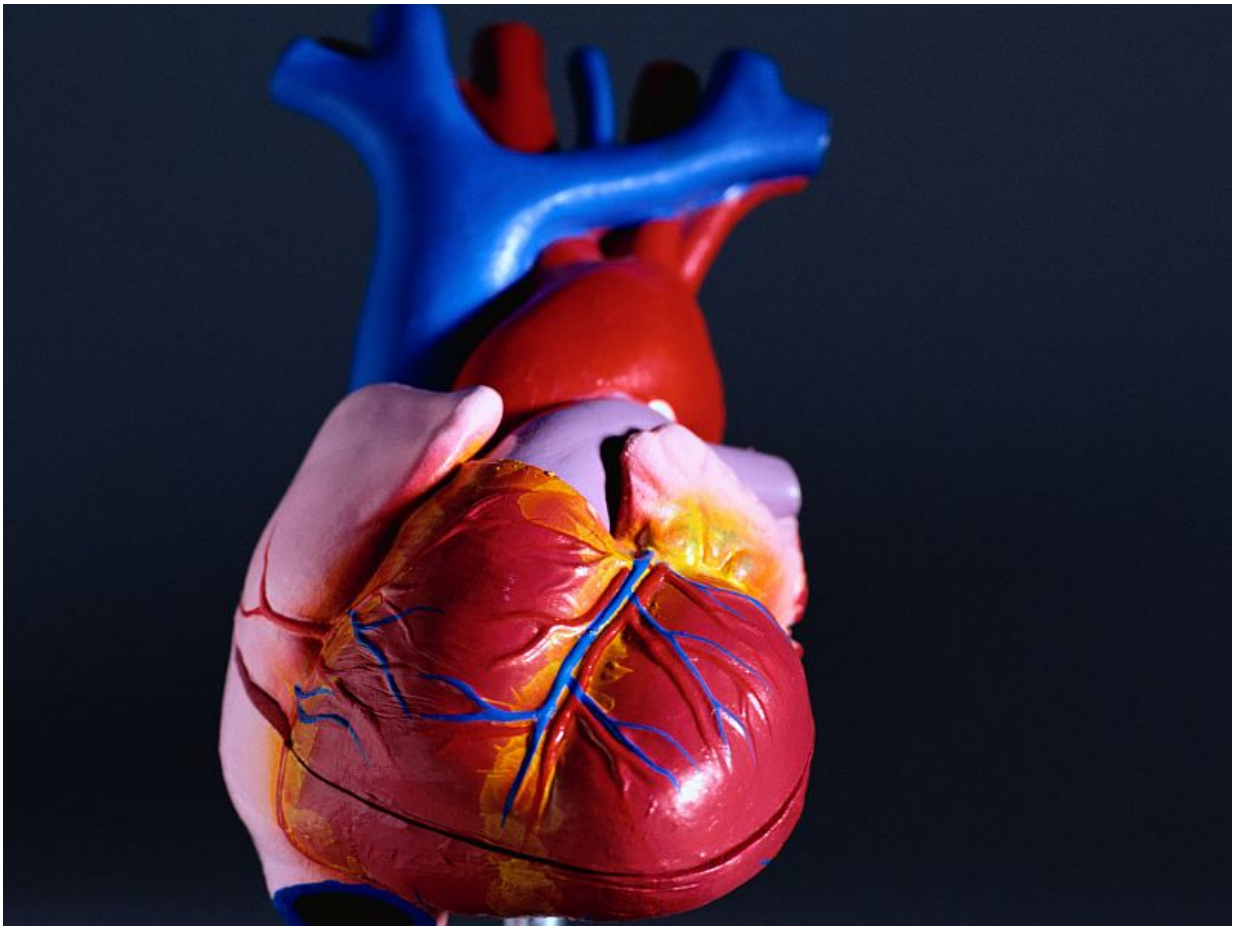

(HealthDay)—Impaired cardiac autonomic function is associated with

coronary flow reserve (CFR) in patients with type 2 diabetes, according to a study published in the June issue of *Diabetes*.

Bernt Johan von Scholten, M.D., from the Steno Diabetes Center in Denmark, and colleagues applied new and sensitive methods to assess the correlation between cardiac autonomic dysfunction and cardiac microvascular dysfunction in a population with type 2 diabetes. Cardiac autonomic reflex tests and heart rate variability indices were performed in 55 patients with type 2 diabetes without cardiovascular disease and 28 controls to assess coronary flow reserve.

The researchers found that impaired function of all cardiac autonomic measures correlated with reduced CFR. After age and heart rate adjustment, there was a positive correlation between a heart rate variability index reflecting both sympathetic and parasympathetic function and the late heart/mediastinum-ratio. After further adjustment, the late heart/mediastinum-ratio remained correlated with CFR.

"In type 2 diabetic patients without cardiovascular disease, we demonstrate an independent association between cardiac autonomic function and CFR," the authors write. "We suggest that a reduced cardiac autonomic function and damage to the adrenergic receptors may contribute to the development of cardiac microvascular dysfunction."

More information: Full Text (subscription or payment may be required)

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