

Clearing damaged cells out of the body helps heal diabetics' blood vessels

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Research published today in *Experimental Physiology* shows that ramping up one of the body's waste disposal system, called autophagy, helps heal the blood vessels of diabetics.

Complications with [blood vessels](#) (known as [vascular complications](#)) are major risk factors for morbidity and mortality in the diabetic patients. These complications are divided into microvascular (damage to [small blood vessels](#)) and macrovascular (damage to larger blood vessels).

Microvascular complications include damage to eyes which can lead to blindness, to kidneys which can lead to [renal failure](#) and to nerves leading to impotence and diabetic foot disorders (which lead to amputation).

Autophagy is the body's way of cleaning out damaged cells, in order to regenerate newer, healthier cells. Impaired autophagy has been reported to be involved in Type 2 diabetes, but researchers weren't sure why.

This study, from researchers at the Yonsei University College of Medicine is the first to demonstrate a protective role of autophagy stimulation in the vascular dysfunction of Type 2 diabetes. The researchers used mice that have similar features as human Type 2 diabetes, and measured the diameter of small arteries, which is an indication of how healthy the arteries are.

Soo-Kyoung Choi, first author on the study said: "We are excited about

these results because our study suggests that targeting autophagy could be a potential target for the treatment of vascular problems in Type 2 diabetic patients."

More information: Soo-Kyoung Choi et al, Stimulation of autophagy improves vascular function in the mesenteric arteries of type 2 diabetic mice, *Experimental Physiology* (2019). DOI: [10.1113/EP087737](https://doi.org/10.1113/EP087737)

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