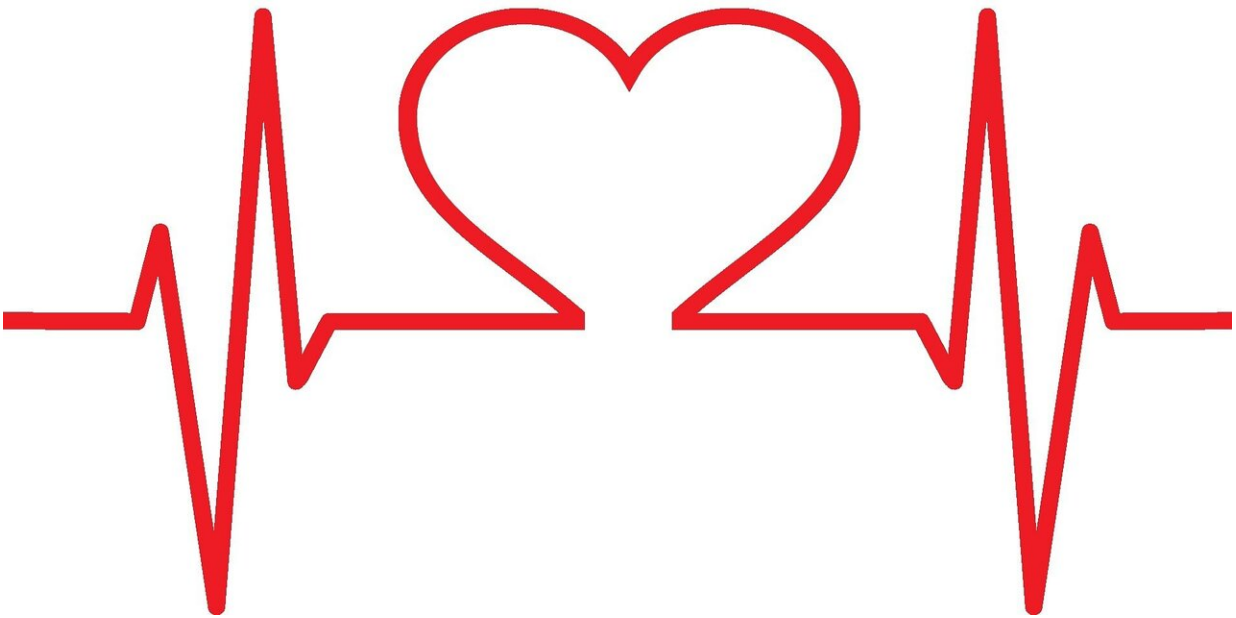


# Vitamin E found to prevent muscle damage after heart attack

September 16 2019

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Heart attack is a leading cause of death worldwide and new treatment strategies are highly sought-after. Unfortunately lasting damage to the heart muscle is not uncommon following such an event.

Published in *Redox Biology*, the pre-clinical study sheds new light on the potential of the acute therapy with  $\alpha$ -TOH (vitamin E) in patients presenting with [heart attack](#), and may ultimately offer an effective low-

cost treatment.

"One of the most effective anti-oxidant and anti-inflammatory agents is vitamin E and its derivatives," said Professor Karlheinz Peter, the Baker Institute's Deputy Director, Basic and Translational Science and lead author of the study.

"Our treatment regime reflects clinical conditions, where patients could receive their first application of vitamin E in the ambulance or upon their arrival in the emergency department, before reopening and stenting the blocked vessel and the following days in hospital before discharge."

Our next step is to test an already approved formulation of Vitamin E in patients admitted with a heart attack," said Professor Peter. "We plan to prove that heart function is preserved using sensitive magnetic resonance imaging. Thereby, we hope to establish an inexpensive and effective therapy for patients with heart attack."

Nutritional scientist and vitamin specialist from Jena University in Germany, Dr. Maria Wallert said interestingly, Vitamin E has been trialled unsuccessfully for preventing heart attacks but has not been investigated for actually treating heart attacks.

"As there is currently no drug available that can reduce the cardiac damage caused by an overshooting inflammation after reopening of a blocked [coronary artery](#), the potential impact of our finding on cardiovascular health would be significant," said Dr. Wallert.

The doses of vitamin E given in our study is approved to be safe by the European Commission Scientific Committee on Food. We hereby provide an [experimental design](#) which potentially can be translated to [human trials](#) without concern surrounding the safety of vitamin E applications.

**More information:** Maria Wallert et al,  $\alpha$ -Tocopherol preserves cardiac function by reducing oxidative stress and inflammation in ischemia/reperfusion injury, *Redox Biology* (2019). [DOI: 10.1016/j.redox.2019.101292](https://doi.org/10.1016/j.redox.2019.101292)

Provided by Baker Heart and Diabetes Institute

Citation: Vitamin E found to prevent muscle damage after heart attack (2019, September 16) retrieved 20 March 2024 from <https://medicalxpress.com/news/2019-09-vitamin-muscle-heart.html>

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