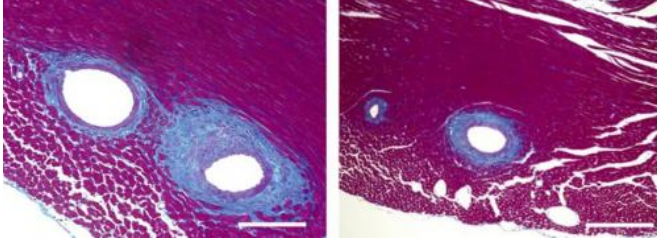


Healing the heart with fat

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Provided by Rockefeller University



Cardiac fibrosis was dampened in mice treated with 18-HEPE (right) compared with a control group (left). Credit: Endo et al., 2014

Too much dietary fat is bad for the heart, but the right kind of fat keeps the heart healthy, according to a paper published in *The Journal of Experimental Medicine*.

Unsaturated dietary fatty acids, such as [eicosapentaenoic acid](#) (EPA), are known to protect against cardiovascular diseases. However, the mechanism and the specific fat metabolites responsible for this protection were unknown.

A group of Japanese scientists now show that mice engineered to produce their own EPA are protected against heart disease and have improved [cardiac function](#). One particular EPA metabolite, called 18-hydroxyeicosapentaenoic acid (18-HEPE), was required for this protection. 18-HEPE was produced by immune cells called macrophages, which dampened inflammation and fibrosis in the heart. Treatment with 18-HEPE confirmed its heart-protective effects.

A diet enriched in 18-HEPE might thus help prevent heart failure in patients with cardiovascular diseases.

More information: Endo, J., et al. 2014. *J. Exp. Med.* [DOI: 10.1084/jem.20132011](https://doi.org/10.1084/jem.20132011)

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