

Lean vs. obese adipose tissue cells

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Eosinophils are a type of white blood cell that plays many roles in the body, including helping to maintain metabolic homeostasis, the steady state that ensures the body is adequately fueled and waste is eliminated.

Previous studies have found the adipose (fatty) tissue of obese individuals have low levels of eosinophils and high levels of pro-inflammatory macrophages, another type of white blood cell. Inflammation is a characteristic of obesity.

Now Alyssa Hasty, Ph.D., and colleagues report that reduced levels of eosinophils in [adipose tissue](#) are restored to physiological lean levels during diet-induced [weight loss](#) while macrophage levels drop in a mouse model of obesity. In the liver, however, eosinophil numbers do not change significantly during dietary weight gain or loss, they reported last month in the journal *Physiological Reports*.

While more study is needed, a greater understanding of the mechanisms and [cell types](#) involved in returning adipose tissue to the lean state may lead to more effective treatments for obesity, they concluded.

More information: William Reid Bolus et al. Obesity-induced reduction of adipose eosinophils is reversed with low-calorie dietary intervention, *Physiological Reports* (2018). [DOI: 10.14814/phy2.13919](https://doi.org/10.14814/phy2.13919)

Provided by Vanderbilt University

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