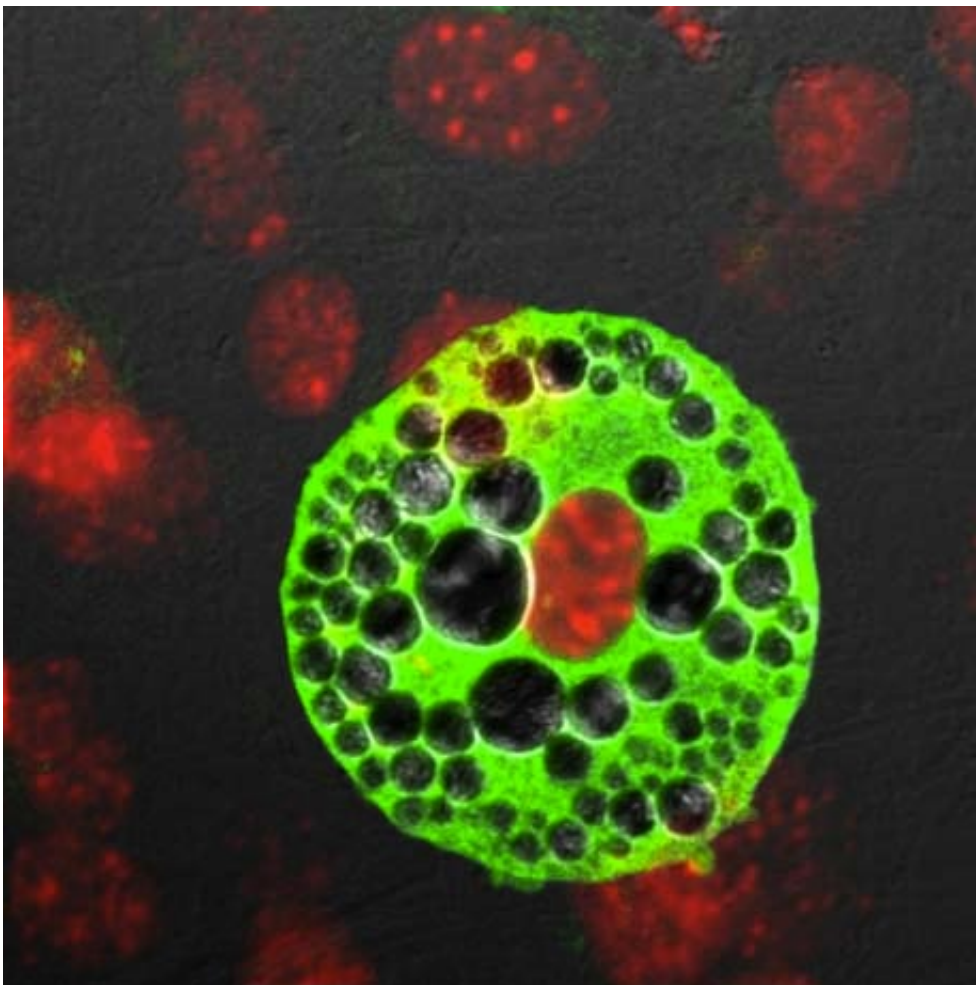


Newly discovered human fat cell opens up new opportunities for future treatment of obesity

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Researchers at Sahlgrenska Academy, University of Gothenburg, Sweden, have discovered that we humans have two different kinds of brown fat cells and not one kind as previously thought. Credit: The University of Gothenburg

The body's brown fat cells play a key role in the development of obesity and diabetes. Researchers at Sahlgrenska Academy, University of Gothenburg, Sweden, have now discovered that we humans have two different kinds of brown fat cells and not one kind as previously thought. This discovery, now published in *Nature Medicine*, opens up new opportunities for future medicines that exploit the brown fat cells' ability to consume calories.

Unlike white [fat cells](#), which store the body's surplus energy in the form of fat, brown fat cells have the unique property of being able to burn energy and turn it into heat.

The study now published by the researchers at the University of Gothenburg shows for the first time that people have at least two different kinds of brown fat cells - not just one as was previously thought. According to Sven Enerbäck, who heads the country's leading research group in the study of fat cells and metabolism, this is an interesting discovery.

"We already know that those of us who have more brown fat tissue have a smaller risk of developing type 2 diabetes. With these new results, we should eventually be able to develop methods for stimulating the brown fat tissue, so that some of the surplus energy we store in the form of fat tissue can be converted into heat. Such a treatment could both prevent obesity and reduce the risk of developing obesity-related diseases such as [type 2 diabetes](#)," says Sven Enerbäck.

The researchers call the new type of brown fat tissue that they have discovered "classical brown fat". According to the Gothenburg study, young people have this classic brown fat tissue, but it seems to disappear during adolescence.

"One idea is to be able to "reactivate" the classical brown fat tissue in

older people and so treat [obesity](#)," says Sven Enerbäck.

The research into brown fat tissue is being done in close cooperation with researchers at Linköping University.

More information: "Evidence for two types of brown adipose tissue in humans" published online in *Nature Medicine*, April 21 2013.

www.nature.com/nm/journal/vaop...nt/full/nm.3017.html

Provided by University of Gothenburg

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