Genetic ‘switch’ targeting fat cells may help combat obesity

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis.

A master gene that orders fat cells to burn energy rather than store it has been found. Tinkering with it made mice lose weight as their fat-storing cells were converted into fat-burning cells, raising the prospect of a gene therapy to treat obesity.

“You could say we’ve found fat cells’ radiator, and how to turn it up or down,” says Manolis Kellis, who co-led the team that carried out the work at the Massachusetts Institute of Technology and at nearby Harvard Medical School.

Not all fat is created equal. Humans carry several different types. White fat is the insulating stuff that builds up around our middles, storing energy rather than burning it. Brown fat, which is found in small pockets around our neck and spinal cord, does the opposite – burning calories to produce heat. Beige fat is somewhere in between. It has a different origin to classical brown fat and is dispersed within white fat cells – but it also burns calories without us expending any effort.

In the past few years, we’ve realised that it may be possible to turn people’s white fat cells into beige fat. But it’s not easy and involves doing things like exposing yourself to cold temperatures or doing strenuous exercise. Kelis’s team’s work suggests that there might be an easier way – just flip a genetic switch.

Read full, original post: Genetic switch makes fat cells burn energy rather than store it