End ‘yo-yo dieting’: Fat-burning molecular switch could block hunger impulse

Australian scientists have discovered a new molecular switch in our brains that controls fat burning – and by flicking it on, they hope to stop the dreaded effects of “yo-yo dieting”. And a second team say they have found a way of switching off the chemical that makes us hungry. Together, the two studies could lead to potential new weight-loss drugs.

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In work published in Cell Reports on [February 14], Dr [Zane] Andrews’ team showed that if the switch can be flicked on, it can also be flicked off.

The team used mice genetically modified to lack an important enzyme, Crat. This molecular switch tells AgRP neurons to put the body into starvation mode.

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[T]he mice without the enzyme did not enter starvation mode, and continued to burn fat when they resumed a normal diet.
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Dr Sandra Galic and her team genetically modified mice to lack an enzyme that responds to ghrelin.

In a paper published on [February 13], the team showed that by blocking the ghrelin receptor, the signal to eat after dieting was blocked, keeping the mice lean.

Together, the two papers offer interesting new targets for drugs that could switch off starvation mode – or switch off our appetite altogether.

Read full, original post: Your body wants to be fat. Science wants to change its mind