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Live longer, be thinner and drink red wine

The day when people can eat their favourite foods, stay thin and live to be 120 without getting diabetes or cancer may be nearer than many realize, according to a study published yesterday.

Researchers at the Massachusetts Institute of Technology, near Boston, believe they have found the key to a long, lean and healthy life in a single protein — Sirt1 — that controls whether we store fat or shed it.

Intriguingly, the protein is activated by a compound found in red wine,



Drink up. A protein activated by red wine may hold the key to longer life.

called resveratrol, linked by earlier research with extended lifespan in yeast and tiny worms.

The earlier work linked the activation of proteins called sirtuins to the well-documented life-extending effects of fasting — in people, taking the uncomfortable step of reducing intake to half the

normal daily calories could extend lifespan by up to 50 per cent while cutting the risk of diseases of old age. But just how a low-calorie intake achieves that feat has been a mystery.

"For the first time, this study gives us a glimpse of how calorie restriction works at the molecular level. And it will ultimately lead to health benefits in people," said Prof. Leonard Guarente of MIT.

In the journal Nature yesterday, scientists describe how one of the sirtuins. Sirt1, senses short-term famine and allows fat cells to release fat.

"The ability of fat cells to sense famine [or short-term hunger] and release the fat is regulated by this gene," Guarente said.

Guarente speculates that fat cells also tell the body how fast to age.

"If we could make this happen in people, it wouldn't just make them live longer; it might also help prevent diseases of aging, like cancer, diabetes and heart disease," he said.

Aging and obesity could be curbed by mimicking the molecular effect of famine without actual dieting. "If we could make a drug that would bind to Sirtl and fool the body into thinking that it needed to release that fat, then maybe people could get the benefits of calorie restriction without the side-effects." he said. — The Daily Telegraph

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