

## Have a taste for liver? Food preferences might be hard wired

Fancy some white wine? What about artichokes? Dark chocolate? Stinky cheese? Butter for your bread? Sounds like an satisfying summer meal to me. A recent genome-wide study has discovered [new genes that help determine what we like to eat](#):

In unraveling the genetic cipher, the researchers conducted a pair of genome-wide association studies on more than 2,300 Italians along with another 1,755 people from countries elsewhere in Europe and in Central Asia. In the analysis, 17 independent genes appeared to influence tastes for foods including artichokes, bacon, coffee, chicory, dark chocolate, blue cheese, ice cream, liver, oil or butter on bread, orange juice, plain yogurt, white wine, and mushrooms.

The Italian geneticists identified 17 genes that seem to relate to food preferences even though they are not known to relate to smell or taste. This means the genetic influences on what we like to eat are much more complicated and involve many more processes than those contained in our mouths and noses. Anyone who has trembled at the site of an Oreo can attest. Geneticists Nicola Pirastu and Antoniette Robino believe their findings could help refine diet plans for those people who need to lose weight for medical benefit. By taking into account a person's taste preferences, [eating plans might be easier to follow and more effective](#):

Our studies will be important for understanding the interaction between the environment, lifestyles, and the genome in determining health outcomes. Although there has been a lot of work on food-related diseases such as obesity, this has rarely taken food preferences into account. This is a major limitation which our work attempts to remedy, and as yet we have only really scratched the surface of this issue.

And, having a genetic screening via blood or saliva sample would be a much more accurate way to devise an eating program than relying on people to recall what they've eaten over the last few years. Self-reporting of diet is a particularly flawed research method. The researchers briefly described a pilot study of 190 obese individuals who were put on gene-tailored diets, with a net 600 calorie reduction per day regardless of which foods they ate. Those eating the tailored diet lost a third more weight than control subjects:

Something as simple as measuring fat liking can provide us with a great deal of information. Understanding the genetics of these traits will open new possibilities for the development of personalised diets and of functional foods aimed at improving people's health and therefore their quality of life," Dr Pirastu said.

Bon Appetite! **Additional Resources:**

- [‘Fat gene’ stands falsely accused, offers lesson in gene-gene interactions](#), Kenrick Vezina, Genetic Literacy Project

- [French fries and skinny genes: Are we programmed to be obese?](#), Meredith Knight, Genetic Literacy Project
- [Why you may not want to get off the couch to run: The skinny on genes and exercise](#), Tabitha Powledge, Genetic Literacy Project