



## **Nutrition**

# People who eat breakfast high in refined carbs rated less attractive, study finds

**Researchers in France believe subtle shift in facial attractiveness is down to changes in blood sugar and insulin**

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If you want to look your best in the morning, it may be worth swapping the ultra-processed pastries and fruit juice for wholemeal toast and tea without sugar.

Researchers in France found that people who ate a breakfast rich in refined carbohydrates were rated less attractive than those who started the day with healthier unrefined carbs.

Scientists at the University of Montpellier believe the subtle shift in facial attractiveness may be driven by changes in blood sugar and insulin that can affect skin appearance and have longer-term effects on sex hormones.

“It’s surprising to consider but our dietary choices can have rapid effects on our appearance,” said Dr Claire Berticat, an evolutionary biologist and the first author on the study. “These physiological changes could subtly alter facial features, impacting how others perceive attractiveness.”

The researchers recruited 52 men and 52 women aged 20 to 30 and randomly assigned them to have a 500-calorie breakfast rich in either refined or unrefined carbohydrates. The refined carbs breakfast included a French baguette made from industrially milled flour, jam, apple or orange juice, and tea or coffee with sugar available. The unrefined carbs meal was stoneground wholemeal bread with butter and cheese, an orange or apple, and tea or coffee without sugar.

The scientists measured blood sugar levels of volunteers before and after they ate and then took headshots of the participants under controlled lighting conditions. The photos were then passed to groups of raters to estimate how old, how masculine or feminine and how attractive the individuals looked.

**Writing in Plos One**, the researchers claim that eating refined carbohydrates for breakfast decreased facial attractiveness for men and women, though the longer-term effects of eating such foods, gleaned from questionnaires completed by the volunteers, were more complicated.

“The effect varies by gender and meal type, underscoring the complex relationship between diet and attractiveness,” Berticat said. “Our findings serve as a compelling reminder of the far-reaching impact of dietary choices not only on health but also on traits having particular social importance such as facial attractiveness.”

Refined carbohydrates can produce spikes in blood sugar, which the body counters by releasing insulin. The response can drive sugar levels too low, a condition called hypoglycaemia, and affect blood flow and skin appearance. In the study, only the refined carbs breakfast produced hypoglycaemia.

David Perrett, a professor of psychology at the University of St Andrews, who has studied facial cues for health, said there should be no surprise that diet affects attractiveness. Fruit and vegetables improved attractiveness by increasing plant

pigments called carotenoids in the skin, he said, while high-sugar diets could age the skin.

“The authors suggest that the refined carbohydrate could be affecting peripheral blood flow,” Perrett said. “Blood flow can change skin appearance very rapidly. One can see the impact within seconds in the case of feeling sick when the blood drains from the skin. We found that most people look healthier, and more attractive, when their skin colour reflects a slight rise in oxygenated blood.”

Asked what advice she would give to people who wanted to look their best, Berticat said: “We know that refined carbohydrates have a negative impact on health and that’s reason enough to limit their consumption.”

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