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Body

Intermittent fasting: what the clinical trials showed

The TREAT trial (2020), the Chinese study in the NEJM (2022) and why eating within a time window does not seem better than ordinary calorie reduction

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Intermittent fasting covers several ways of eating in which periods of eating alternate with periods without food. The best known is **time-restricted eating**, for example 16:8: eating only within eight hours a day, from 12 noon to 8 pm, and the rest of the time without food. Other variants are the 5:2 diet or fasting every other day.

Why it became so popular

Animal studies had shown interesting benefits, and the simple idea, "don't eat after a certain hour", was easy to understand. Many books and videos promised rapid weight loss and metabolic benefits, regardless of the amount of food.

The TREAT trial, 2020

In 2020 Dylan Lowe, Ethan Weiss and their colleagues at the University of California, San Francisco, divided about 116 overweight adults into two groups for 12 weeks. One group ate only from 12 noon to 8 pm; the other ate three meals a day without time limits. Weight loss was very small in both groups and the difference between them was not statistically significant.

The NEJM study, 2022

In 2022 Deying Liu and colleagues in China followed 139 people with obesity for a year. Both groups followed the same calorie restriction; one group ate only from 8 am to 4 pm. Both groups lost weight, about 6–8 kilograms, but the difference between them was not significant. For other factors too, such as blood pressure and blood sugar, the results were similar.

> *The time of the meal matters less than is claimed. The amount and quality of food still play the main role.*

What this means

Intermittent fasting seems to work mainly because it helps some people eat less overall. For those who find it easier to follow a time rule than to count calories, it can be a useful tool. But it does not seem to have a magic effect beyond calorie reduction.

Several different forms

"Intermittent fasting" is a common name for several different ways of eating. Time-restricted eating, as in the studies above, means eating only within a window of 6 to 10 hours each day. Alternate-day fasting means eating very little, or nothing, every other day. The 5:2 method means eating normally five days a week and about a quarter of one's usual calories on two days. These forms do not necessarily have the same effects, so the results of one do not automatically apply to the others.

Alternate-day fasting

In 2017 John Trepanowski and colleagues compared alternate-day fasting with an ordinary daily reduction in calories for one year in 100 adults with obesity. After a year, weight loss was similar in both groups. But more people dropped out of the study in the fasting group, about 38 per cent, compared with 29 per cent in the reduced-calorie group. This suggests that for many people, alternate-day fasting is not easier to follow, even though in theory it seems simple.

The 5:2 method

Michelle Harvie and colleagues in Manchester tested in 2011 a version of the 5:2 method in 107 young overweight women. After six months, the women who restricted calories on only two days a week lost on average almost the same amount of weight as those who restricted them slightly every day. The 5:2 group showed a slightly greater improvement in insulin sensitivity. The researchers stressed that both methods were effective and that the choice may depend on what suits each person best.

The timing of meals

Does it matter when we eat, even without changing the amount? A small but very tightly controlled 2018 study by Elizabeth Sutton and colleagues followed eight men with prediabetes. For five weeks they ate all their food within six hours, with the last meal before 3 p.m., and for another five weeks within twelve hours, with the same calories. With early eating, insulin sensitivity and blood pressure improved even without weight loss. This suggests that matching meals to the body's internal clock may matter.

What a review in the NEJM says

In 2019 Rafael de Cabo and Mark Mattson published a review in the *New England Journal of Medicine* on the effects of intermittent fasting. They described how, during fasting, the body switches from using glucose to using fat and ketones, and that laboratory animals often benefit from this switch. But in humans, most studies have been short and with small numbers of participants. The authors themselves stressed that longer studies are needed to know the long-term effects, especially in older people and in those with chronic illnesses. Until then, the most honest summary is that intermittent fasting is one possible tool among several, not a uniquely powerful method, and that the best eating pattern is the one a person can keep up comfortably for years.

Who should be careful

- People with diabetes, especially those taking insulin or drugs that lower blood sugar.
- Women who are pregnant or breastfeeding.
- Children and adolescents.
- People with a history of a difficult relationship with food.
- Anyone taking medicines that must be taken with food.

In these cases, any major change in the way of eating should first be discussed with a doctor.

Sources

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