

Extra weight loss from dietary fibers extracted from seaweed

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A new research project conducted at the Faculty of Life Sciences (LIFE), University of Copenhagen, shows that dietary fibres from brown algae boost the sensation of satiety, thereby making people eat less and lose more weight.

Previous studies have shown that a fibre-rich diet makes it easier to maintain weight, and now a new PhD project documents that dietary fibres from brown algae, the so-called alginates, are excellent at creating an 'artificial feeling of fullness' in the stomach:

- Over a three-year period, we have studied the effect of taking different alginate doses. We are able to demonstrate that the healthy subjects who took alginates and were also allowed to eat as much as they wanted felt less hungry and ate less than the subjects not drinking fibre drinks with alginates, says PhD student Morten Georg Jensen, who arrived at the findings with his colleagues.

Gel fills up the stomach

The 12-week study included 96 overweight men and women. 48 subjects drank a specially designed drink with alginates three times daily before each main course as a supplement to an energy-reduced diet. The other 48 subjects drank a placebo drink without alginates.

Greater weight loss with alginates

The 80 subjects who completed the study achieved a far larger weight loss with alginate treatment than those drinking a similar drink without alginates.

On average, the subjects in the seaweed fibre drink group lost 1.7 kg more than those in the [placebo group](#). According to the researchers, this weight loss is primarily due to a decrease in [body fat percentage](#):

- A probable explanation of the [weight loss](#) is that the alginates form a gel in the stomach which strengthens the gastrointestinal satiety signals to the brain because the gel takes up space in the stomach. The overweight subjects thus ate less than usual, says PhD student Morten Georg Jensen.

Counterweight to junk food

The growing obesity epidemic requires research and the development of new dietary measures to counter the easy 24/7 access to enormous quantities of energy-rich food:

- Eating more than you burn results in a body energy imbalance, which may lead to weight gain in the long term. It is therefore crucial that new dietary measures improve appetite control and limit our food intake, says Morten Georg Jensen.

The researchers hope that the research findings may pave the way for new treatment options for the overweight. In collaboration with the biotech company S-biotek, the researchers have developed the special fibre drink with alginates which the subjects drank. No such fibre drink is as yet available on the market.

Primarily palm seaweed

Seaweed covers a wide range of marine macroalgae which can be classified into three groups: brown algae (Phaeophyceae), green algae (Chlorophyta) and red algae (Rhodophyta). The researchers have studied fibres from [brown algae](#), primarily palm [seaweed](#).

Provided by University of Copenhagen

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