Talksheet Fabuless™ Mechanism of action study

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Storyline, nutritional perspective
Several short term studies performed in the past have indicated that Fabuless™ can affect food intake or hunger feelings, indicating a potential role for this ingredient in weight management.

Effect on appetite control, such as energy intake and hunger/satiety, has been investigated in several randomized placebo-controlled clinical studies. Food intake was significantly reduced in normal weight, overweight and obese individuals when Fabuless™ was compared to corresponding control product with the same amount of fat. In addition an effect on appetite was demonstrated with Fabuless™.

The hypothesis was further confirmed in 2007 when a long term study demonstrated that Fabuless™ could reduce hunger, weight regain and waist circumference, accompanied by an increase in a satiety hormone, as compared to a control. As hypothesised, but until that point not demonstrated, the data confirmed that consumption of Fabuless™ can lead to mild improvement of weight maintenance.

A new published study confirms the mechanism of action of Fabuless™, supporting the findings in previous studies. The results shows that Fabuless™ stimulates a key natural appetite control mechanism, namely transit time (i.e. speed of food passage through the digestive system).

Objective and design of study
- Study objective: demonstrate a difference in passage time from mouth to large intestine between Fabuless™ and control fat emulsion, using salazopyrine as a marker.
- Study design: randomised, double-blind, placebo-controlled cross-over design human study.
- Study participants: healthy male volunteers.
- Intervention: 8 AM: yoghurt breakfast with Fabuless™ (test) or dairy fat (control); 11 AM: nutritional drink with salazopyrine as marker for orocecal transit time.
- Measurements: regular blood sampling to analyse sulfapyridine, which is a salazopyrine metabolite formed only in colon (appearance of this substance in the blood indicates arrival of food in the colon and is thus a measure of passage time).

Study results
Fabuless™ affects the speed of food passage through the digestive system, resulting in 45 minutes statistically significant (ANOVA p<0.05) increase in passage time of food from mouth to the large intestine.
What do you see in the graph? For breakfast the test persons consumed yogurt containing either Fabuless™ or a control with the same amount of dairy fat emulsion. To the meal that was consumed 3 hours later a marker (salazopyrine) was added and passage time was monitored by following the appearance of its colonic metabolite (sulfapyridine) in the bloodstream. In the Fabuless™ group, the meal took significantly longer time to pass through the digestive tract. The difference in the plasma levels of the placebo and Fabuless™ equals 45 minutes.

Why is the salazopyrine marker consumption 3 hours later than the Fabuless™ or control? Fabuless™ starts working after a few hours, therefore the effect on food transit at the next meal was measured.

Why does the sulfapyridine line only appear later? This is because the salazopyrine that is taken with the meal has to be first metabolized in the colon after which it is absorbed into the blood (it takes some time for it to pass through the digestive tract). During this study blood plasma samples were taken at regular intervals to measure the level of sulfapyridine appearing in the bloodstream.

Reference