

Health Benefits of

short-chain FOS

Short-chain FOS such as Cal-Mag Fos-D are prebiotic fibres that have been studied for various health benefits, 7.8

Helps in glycemic control

Helps in mineral absorption

Beneficial action in non-alcoholic fatty liver disease

Reduces blood lipids

Short-chain FOS is resistant to hydrolysis by human digestive enzymes

Escapes digestion in the smallintestine & enters the colon

FOS is digested by colonic "good" bacteria

Increases beneficial colonic bacteria, decreases pathogenic bacteria

Increases the production of colonic short-chain fatty acids (SCFA)

Clinical Evidences highlighting

Health benefits of Cal-Mag Fos-D

The beneficial effects of FOS on various aspects of health have been highlighted in several studies in the scientific literature.



Effect of short-chain FOS on Bowel Movements and Digestive Health

32 healthy adults aged between 18 to 60 years included

Increased number of bowel movements (p = 0.0006) and softer stools (p = 0.0045) for the first 24 hours

Fibre Mixtures containing FOS improves bowel movements and digestive health

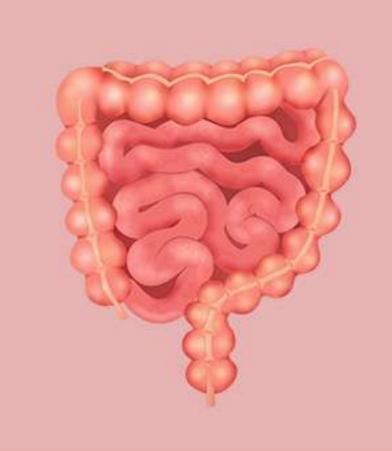


Effect of FOS on constipation in Pregnant Women

Randomized, double-blind placebo-controlled trial including 84 pregnant women given 8 g/day of FOS vs 8 g/day sucrose

Stool frequency in the FOS group was found slightly higher vs placebo group two weeks after the intervention (1.0 vs 0.8 times/day)

FOS alleviates constipation in pregnant women



Effect of 10g/day short-chain FOS on intestinal bacteria

40 healthy volunteers, divided into five subgroups were given FOS (0g, 2.5g, 5g, 10g, 20g) with saccharose, with each dose totalling 20g

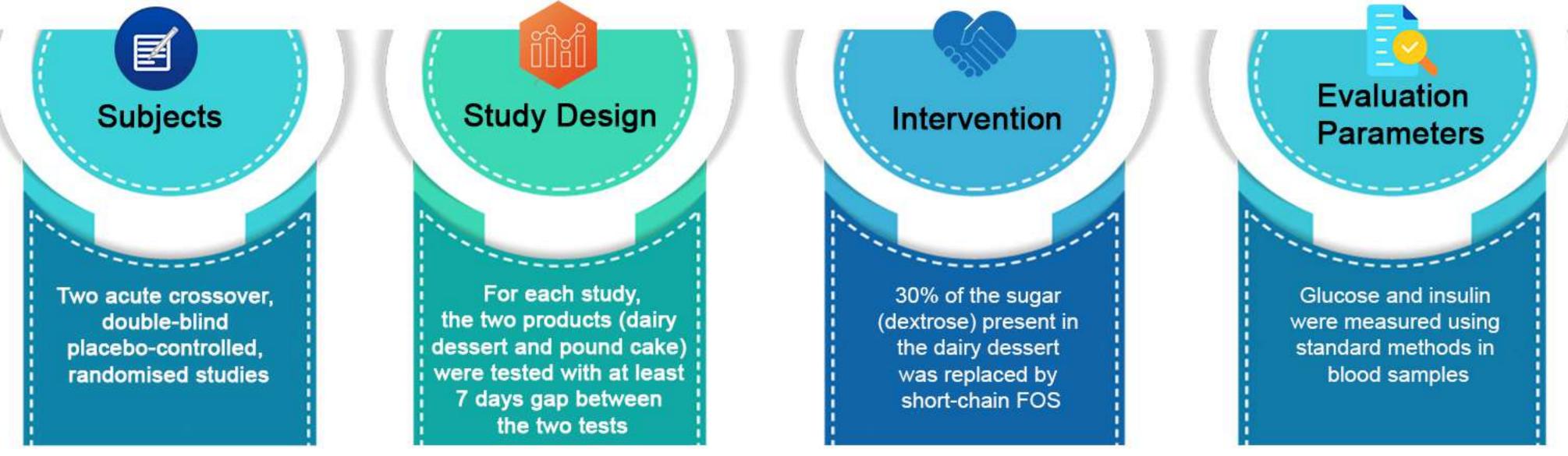
Bifidobacteria counts were significantly greater in groups with 10g and 20g than in the groups consuming 0g and 2.5g (p < 0.05)

An Optimal Dose of 10g/day of FOS significantly increases faecal Bifidobacteria in healthy adults

Clinical Evidences highlighting Health benefits of Cal-Mag Fos-D

Effects of Short-chain FOS on Glycaemic and Insulinemic Responses in Healthy Adults

The present study was performed to evaluate short-chain FOS impact on glycaemic and insulinemic responses in healthy adults. The study methodology is summarized below.



Significantly lower postprandial blood glucose and insulin response were found in the short-chain FOS dairy dessert than the dextrose containing dessert (Table 1).

Table 1: AUC0-120 minimum and maximum concentration (Cmax) of plasma glucose and insulin for 2 hours after consumption of dairy dessert with standard or reduced sugar content

Dairy Dessert (n=24) Reduced in Sugars Dessert Effect: p Control Mean Mean 92.8 + 90.6 69.3 ± 56.0 0.02 Glucose AUC (mmol x min/l) 92.8 + 90.60.02 69.3 ± 56.0 Glucose AUC (mmol x min/l) 7.3 ± 1.4 6.9 ± 1.2 0.184 Cmax (mmol/l) 0-003 Insulin AUC (mU x min/l)* 2867 ± 1190 2232-41121 64.8 ± 25-4 0-003 Cmax (mU/I)* $57-5 \pm 25.0$

Short-chain FOS may help to reduce the postprandial glycemic and insulinemic responses to foods when used in place of sugars (w/w) for partial replacement

^{*} To convert insulin in mU/I to pmol/I, multiply by 6-945.

Effect of Cal-Mag Fos-D Supplemented Formula on Immune System

To evaluate the effects of short-chain FOS fortified infant formula on anti-polio virus-specific immune response, the Anti-poliomyelitis vaccine (used for various virus infections) was chosen.

Study details

Full term formula-fed infants (0-7 days; n = 61) were included in this randomized, double-blind, placebo-controlled trial

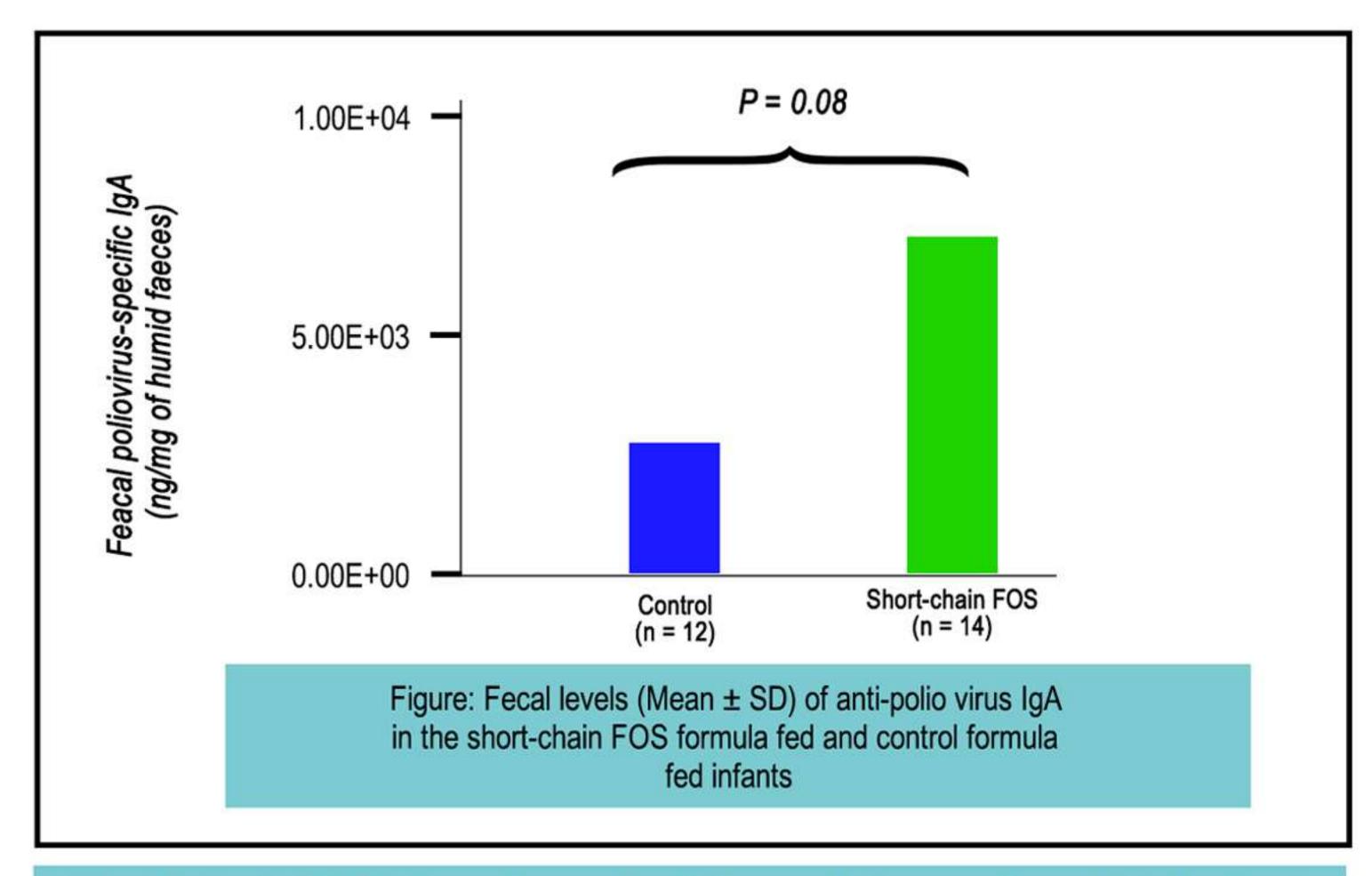
Intervention

Infants received either the short-chain FOS supplemented formula (4 g/L sc-FOS) or the placebosupplemented formula (4 g/L maltodextrin) until the age of 4 months

Outcome

At 4 months of infant age faecal levels of anti-polio virus specific IgA were higher in short-chain FOS fortified formula fed infants as compared to the controls (short-chain FOS group: $7,852 \pm 12,107$ vs control: $2,334 \pm 3,896$ ng/mg in humid faeces; p = 0.08) (Figure).

In the short-chain FOS formula-fed infants, there was a significant increase in the Bifidobacteria count, which was associated with a trend towards a relative increase in the specific immune response.¹⁸



Short-chain FOS Supplemented Formula has a beneficial effect on the Immune System of Infants.

Health Benefits of Calcium

Calcium is an important mineral which is essentially required in body in a great abundance to facilitate lots of body functions. The major part of calcium (99%) is needed in the formation of bones and teeth in body and minor part (1%) remains in blood. Calcium helps in blood clotting, muscle contraction, nerve conduction and building and maintaining strong bones and teeth. This mineral also facilitates Hormone release and Skeletal mineralization. Adequate calcium intake is necessary for our body to stop the wearing of bones over time. This can decrease the risk of developing osteoporosis, Rickets and Osteomalacia. The proportion of the calcium in blood needs to be maintained. If it decreases below normal level, the calcium in bone can be taken to the blood to keep blood calcium level maintained. Therefore, calcium intake is necessary in body to maintain bone calcium level and facilitate smooth blood flow.

The Difference between Calcium Carbonate and Calcium Citrate

Calcium carbonate

- Calcium carbonate cannot get dissolved in the intestine and absorbed into the blood without getting an acidic environment.
- It can be only taken on full stomach



Calcium citrate

- In order to get dissolved in the intestine and be absorbed into the blood, Calcium citrate does not require the presence of extra stomach acid
- It can be taken on an empty or full stomach



Health Benefits of Magnesium

Magnesium is a mineral that our body essentially needs in making, repairing and replicating DNA and regulating muscle and nerve function. It helps us to stay healthy by providing protein for our body and bones and controlling blood sugar levels and blood pressure. Proper amount of Magnesium intake is important for many processes in the body and low magnesium intake for a long period of time, however, can cause numbness, tingling, muscle cramps, seizures, personality changes, and an abnormal heart rhythm. *Magnesium helps vitamin D in getting activated and also increases the absorption rate of calcium in the body.*



Health benefits of Vegan Vitamin D3

Vitamin D3

Vitamin D mainly helps to retain bone heath and in Cal-Mag-Fos-D, the best quality Vegan Vitamin D3 has been used extracted from Lichen source to make our bones stronger.

The Vegan Vitamin D3 has high calcium and phosphorus absorption power to make Immune system strong in body and its efficacy rate is quite high than the commonly available Veg Vitamin D3 extracted from Sheep Wool.

It can take care of the Brain health, Muscle and nerve function. Vitamin D3 has anti-inflammatory and antioxidant properties to heal body pain. Vitamin D3 may help regulating cardiovascular health, insulin levels and some pregnancy complications like gestational diabetes, preeclampsia, and pre-term birth.



Sheep Wool not used



Vegan Vitamin D3 derived from Lichen source

Benefits

- Cal-Mag-Fos-D can help in maintaining our bone strong
- It can support muscles to move smoothly
- It can help in releasing hormones to affect many functions in the body.
- It can assist in two-fold increase of metabolic flux to facilitate vitamin D3 biosynthesis.
- It can support in Protein Synthesis, DNA repairing and producing energy
- (16)
 It supports brain cell activity.

- 2 It can importantly stimulate the growth of "friendly" gut bacteria like Bifidobacterial and Lactobacilli to take care
- It can help nerves to carry messages between the brain and the rest of the body
- 8
 It can support skeletal mineralization.
- (11)
 It helps to keep the heartbeat steady.
- It can also be useful to treat migraine headaches.
- It can be useful for pregnant women to eradicate some pregnancy complications like gestational diabetes, preeclampsia, and pre-term birth.

- It can positively modulate host gut-microbiota to exhibit a strong prebiotic effect under simulated conditions if consumed appropriately
- 6 It can assist blood vessels to carry blood smoothly throughout the body
- It helps in regulating blood pressure and blood sugar levels by controlling the increase of postprandial glucose.
- 12)
 It supports a healthy immune system.
- It can help our body to fight against bacteria and viruses.



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