

Trifibe SAP

Science-based, smooth-blending, three-fibre combination of exceptional quality

A daily supplement of three soluble, viscous fibres (oat β -glucan, psyllium husk, and glucomannan) designed to reduce blood LDL and total cholesterol, as well as insulin and glucose responses. Other health benefits of a soluble and viscous fibre blend include weight management and improvement of gut regularity and health.

ACTIVE INGREDIENTS

Each 10 grams (~2 tbs) contain:

Oat fibre (<i>Avena sativa</i>) (whole), 22% β -glucan.....	6.5 g
Psyllium (<i>Plantago ovata</i>) husk powder.....	2.5 g
Glucomannan (<i>Amorphophallus konjac</i>) root.....	1.0 g

This product is non-GMO and vegan friendly.

Contains: Gluten

Contains no: Soy, corn, eggs, dairy, yeast, citrus, preservatives, artificial flavour or colour, starch, or sugar.

Trifibe SAP-340 contains 340 g per bottle.

DIRECTIONS FOR USE

Adults: Stir 2 rounded tablespoons (~10 g) into 8 oz. (250 ml) of water or juice once or twice daily or as directed by your healthcare practitioner. Follow immediately with another 8 oz. (250 ml) of water or juice. Consume plenty of water or juice daily while using Trifibe SAP-340™. **Not taking plenty of fluids may cause constipation.** If you are taking other medications, take this product 1 hour before or after them. Trifibe SAP-340™ will thicken if left standing.

INDICATIONS

Trifibe SAP-340:

- Is a viscous 3-fiber blend of oat beta-glucan, psyllium husk, and glucomannan designed to support healthy cholesterol levels, blood glucose levels, and weight management, promoting cardiovascular health.*
- Helps to maintain gut regularity and intestinal health.*

NOTICE: This product should be taken with at least a full glass of liquid. Taking this product without enough liquid may cause choking. Do not eat this product if you have difficulty in swallowing.

ACCEPTABILITY

Trifibe SAP-340 blend and doses of fibres have been selected to minimize bloating and flatulence that may be experienced after consuming higher doses of each of the three fibre types.

CAUTIONS, WARNINGS, AND CONTRAINDICATIONS

Cautions and warnings: Consult a healthcare practitioner if symptoms worsen or if laxative effect does not occur within seven days. Consult a healthcare practitioner immediately if you experience chest pain, vomiting, or difficulty in swallowing or breathing after taking this product. Consult a healthcare practitioner prior to use if you are taking medications which inhibit peristaltic movement (e.g. opioids, loperamide); if you have symptoms such as abdominal pain, nausea, vomiting, or fever (as these could be signs of abnormal constrictions of the gastrointestinal tract, diseases of the oesophagus and/or the superior opening of the stomach (cardia), potential or existing intestinal blockage, paralysis of the intestine, megacolon, faecal impaction, inflamed bowel or appendicitis); or if you are pregnant or breast-feeding. Loose stools, flatulence, diarrhea, and abdominal discomfort have been reported.

Contraindication: Do not use if you are experiencing a sudden change in bowel habits that has persisted for more than 2 weeks, undiagnosed rectal bleeding, or failure to defaecate following the use of another laxative product. Do not use if you have diabetes mellitus in which blood sugar is difficult to regulate. Consult a healthcare practitioner prior to use if you have diabetes. Do not use if you have difficulty swallowing.

Known adverse reactions: Hypersensitivity, such as allergy, has been known to occur following inhaled and/or ingested psyllium; in which case, discontinue use. May cause temporary gas and/or bloating.

PURITY AND CLEANLINESS

All ingredients listed for all Trifibe SAP-340 lot numbers have been tested by a third-party laboratory for identity, potency, and purity.



Scientific Advisory Panel (SAP):
adding nutraceutical research
to achieve optimum health



351, Rue Joseph-Carrier, Vaudreuil-Dorion, Quebec, J7V 5V5
T 1 866 510 3123 • F 1 866 510 3130 • nfh.ca

For healthcare professional use only.

WHAT IS FIBRE?

Dietary fibre can be found throughout the plant foods we eat and is made up of materials of diverse chemical and morphological properties.^[1] Dietary fibres are considered to be water-soluble or insoluble and are categorized as either polysaccharides or lignans.^[1]

Generally among the soluble fibres, some fibres form very viscous solutions or gels in water: these are considered viscous fibres. Examples of viscous fibres are pectins from fruit and vegetables, β -glucan from oats and barley, gums from legumes, mucilages from the outer surface of plants such as sea weeds and psyllium, and roots such as konjac.

In the human intestine, it is a fibre's physical and chemical properties that allow it to exert effects benefiting a person's health.^[1] Research has suggested for decades that the intake of viscous fibres may protect against the onset of adult diseases such as diabetes, hyperlipidemia, coronary heart disease (CHD), diverticula of the colon, and colon cancer.^[2]

OPTIMAL FIBRE BLENDS

Although, overall, no optimal dose is evident in scientific literature,^[3, 4] there appears to be a dose-response effect where an increase in the amount of soluble fibre consumed correlates with a greater reduction in blood lipids (mainly total cholesterol and LDL cholesterol).

Similarly, recent research has used a "dietary portfolio" approach combining scientifically proven mildly hypocholesterolemic foods (including multiple viscous-fibre sources) to achieve an additive reduction in serum LDL cholesterol of approximately 30%, producing clinically significant reductions in CHD risk, and matching LDL reductions to those seen with the use of a starting dose of cholesterol-lowering statin medication.^[5] The foods used in this dietary portfolio research included psyllium husk, plant sterols, soy protein, almonds, okra and eggplant on top of a low-saturated-fat diet where the psyllium husk was important as source of viscous fibre.^[5]

OAT FIBRE β -GLUCAN

Oat β -glucan is a type of water-soluble fibre found in whole oat products and is considered to be the component in oat most strongly affecting serum cholesterol levels.

Over 40 human clinical trials have indicated beneficial effects of oatmeal or oat bran in reducing plasma lipids,^[3] and a meta-analysis of 20 trials revealed that as little as 3 g/d of soluble fibre from oat products can lower total cholesterol by up to 5%.^[6]

Oat fibre has also been shown to promote gut motility^[7] as well as help normalize and improve bowel function by decreasing incidence of constipation, increasing fecal weight, and decreasing transit time.^[8]

PSYLLIUM FIBRE

Psyllium is a source of natural and concentrated water-soluble polysaccharide fibre derived from the husks of blonde psyllium seed.^[9]

Psyllium supplementation is well accepted as a safe and effective bulk laxative (more so than other soluble fibres) and an adjunct to a dietary approach to cholesterol lowering.^[9] On its own or in combination with a low-fat diet, psyllium supplementation has resulted in moderate (4–8%) cholesterol reductions in numerous human clinical trials.^[10] Psyllium consumption has also been linked with significant improvements in glucose absorption, insulin levels, Hb_{A1c} (glycosylated haemoglobin), C-peptide, and 24-hour urinary glucose excretion among a sample of type II diabetics^[11] and with improved glucose homeostasis and lipid and lipoprotein profiles in obese children and adolescents.^[12]

GLUCOMANNAN

Glucomannan, also known as konjac mannan and konjac fibre, and in Japan as devil's tongue and konnyakun, comes from the root of the konjac plant.

Glucomannan is a water-soluble polysaccharide chain composed of glucose and mannose in the molar ratio of 1:1.6 with β -(1 \rightarrow 4) linkages.^[2] This dietary fibre has a very high water-holding capacity, forming highly viscous solutions when dissolved in water, and is considered to have the highest molecular weight and viscosity of known fibres.^[13]

Glucomannan holds generally recognized as safe (GRAS) status in the US and novel food status in Canada.^[14] Research supports the consumption of glucomannan for achieving the following: improved cholesterol,^[13–16] decreased postprandial glucose levels and improved insulin resistance,^[13, 14, 16] decreased triglycerides,^[14] increased satiety and weight loss,^[15] decreased constipation,^[13] decreased transit time^[2] and increased fecal weight.^[2]

FIBRE AND NUTRITION RESEARCH**Mechanisms of Action**

Effects of viscous fibre in the small intestine are thought to be due to its ability to increase the thickness of the unstirred water layer in the gut.^[17] Fibre is also associated with increased bile acid and lipid excretion, important in achieving total and LDL-cholesterol reduction.^[1]

Fibre has been shown to produce short-chain fatty acids after intestinal fermentation of soluble fibres, a process that affects intestinal pH^[1] and inhibits hepatic cholesterol synthesis.^[17]

Gastrointestinal Health, Irritable Bowel Syndrome, Diverticular Disease, and Colon Cancer

The laxative effect of a fibre is related to its ability to increase fecal bulk and accelerate intestinal transit time. Although soluble and insoluble fibres both increase fecal mass, soluble fibre generally has a much lower fecal-bulking effect of the two.^[17] Psyllium, however, is not well fermented by colonic microflora and does have a fecal-bulking effect.^[17]

In a recent meta-analysis of people suffering from irritable bowel syndrome (IBS), soluble fibre intake was linked with significant improvements in global symptoms and constipation related to IBS.^[18]

Use of fibre in the treatment of uncomplicated diverticular disease is well established;^[1] however, the relief of symptoms appears greater with insoluble fibre types. While some arguments support the potential for highly fermentable soluble-fibre intake to protect against colon cancer, controversy exists as to whether or not reduction of risk for development of this disease can be expected to occur.^[19]

Cardiovascular Disease

In contrast to water-insoluble fibres, most soluble fibres may lower plasma total cholesterol by a specific effect on LDL cholesterol, whereas HDL cholesterol or triglyceride concentrations are not generally affected. Increases in the amount of soluble fibre consumed correlate directly with the extent of reduction in blood lipids, and consumption of soluble, viscous fibres plays a role in reducing the risk of CHD by decreasing total and LDL cholesterol.^[17]

Diabetes

Soluble-fibre intake has been associated with reduced glucose and insulin responses. These effects have been attributed to the fibre creating a gel-like substance in the stomach, and thus delaying gastric emptying and absorption. It has also been suggested that consumption of soluble fibre speeds up intestinal transit, allowing less time for carbohydrates to be absorbed in the upper jejunum, thus relieving insulin demand.

Viscous fibre preparations have been used in the management of diabetes, as well as to reduce serum cholesterol levels in hyperlipidemia.^[17]

ACCEPTABILITY OF FIBRE SUPPLEMENTATION

Fibre intake can interfere with the absorption of some medications, and it is recommended that it be ingested at least an hour before or after other supplements or medications. Furthermore, with intakes of oat, psyllium or glucomannan, some individuals have reported increases in flatulence.

REFERENCES

1. Kay R.M. "Dietary fiber." *Journal of Lipid Research* Vol. 23, No. 2 (1982): 221–242.
2. Doi, K. "Effect of konjac fibre (glucomannan) on glucose and lipids." *European Journal of Clinical Nutrition* Vol. 49, Suppl. 3 (1995): S190–S197.
3. Truswell, A.S. "Cereal grains and coronary heart disease." *European Journal of Clinical Nutrition* Vol. 56, No. 1 (2002): 1–14.
4. Krauss, R.M., et al. "AHA Dietary Guidelines: revision 2000: A statement for healthcare professionals from the Nutrition Committee of the American Heart Association." *Circulation* Vol. 102, No. 18 (2000): 2284–2299.
5. Kendall, C.W. and D.J. Jenkins. "A dietary portfolio: maximal reduction of low-density lipoprotein cholesterol with diet." *Current Atherosclerosis Reports* Vol. 6, No. 6 (2004): 492–498.
6. Seggsothy, M. and P.A. Phillips. "Vegetarian diet: panacea for modern lifestyle diseases?" *QJM* Vol. 92, No. 9 (1999): 531–544.
7. Turconi, G., et al. "The effects of high-fibre cereal-based breakfast meals on daily dietary intakes and bowel function." *European Journal of Clinical Nutrition* Vol. 49, Suppl. 3 (1995): S312–S316.
8. Muller-Lissner, S.A. "Effect of wheat bran on weight of stool and gastrointestinal transit time: a meta analysis." *British Medical Journal (Clinical Research Ed.)* Vol. 296, No. 6622 (1988): 615–617.
9. Anderson, J.W., et al. "Cholesterol-lowering effects of psyllium intake adjunctive to diet therapy in men and women with hypercholesterolemia: meta-analysis of 8 controlled trials." *The American Journal of Clinical Nutrition* Vol. 71, No. 2 (2000): 472–479.
10. Chan, E.K. and D.J. Schroeder. "Psyllium in hypercholesterolemia." *The Annals of Pharmacotherapy* Vol. 29, No. 6 (1995): 625–627.
11. Sierra, M., et al. "Therapeutic effects of psyllium in type 2 diabetic patients." *European Journal of Clinical Nutrition* Vol. 56, No. 9 (2002): 830–842.
12. Moreno, L.A., et al. "Psyllium fibre and the metabolic control of obese children and adolescents." *Journal of Physiology and Biochemistry* Vol. 59, No. 3 (2003): 235–242.
13. Gonzalez Canga, A., et al. "[Glucomannan: properties and therapeutic applications]." *Nutrición Hospitalaria* Vol. 19, No. 1 (2004): 45–50.
14. Vukusan, V., et al. "Konjac-Mannan and American ginseng: emerging alternative therapies for type 2 diabetes mellitus." *Journal of the American College of Nutrition* Vol. 20, No. 5 Suppl. (2001): 370S–380S; discussion 381S–383S.
15. Walsh, D.E., V. Yaghoobian, and A. Behforooz. "Effect of glucomannan on obese patients: a clinical study." *International Journal of Obesity* Vol. 8, No. 4 (1984): 289–293.
16. Vukusan, V., et al. "Beneficial effects of viscous dietary fiber from Konjac-mannan in subjects with the insulin resistance syndrome: results of a controlled metabolic trial." *Diabetes Care* Vol. 23, No. 1 (2000): 9–14.
17. Jenkins, D.J.A., T.M.S. Wolever, and A.L. Jenkins. "Fiber and other dietary factors affecting nutrient absorption and metabolism." in *Modern Nutrition in Health and Disease* 9th Edition. M.E. Shils, J.A. Olson, M. Shike, and A.C. Ross, Eds. Baltimore: Williams & Wilkins. Knapka, J.J. 1999. p. 679–698.
18. Bijkerk, C.J., et al. "Systematic review: the role of different types of fibre in the treatment of irritable bowel syndrome." *Alimentary Pharmacology & Therapeutics* Vol. 19, No. 3 (2004): 245–251.
19. Lupton, J.R. "Is fiber protective against colon cancer? Where the research is leading us." *Nutrition* Vol. 16, No. 7–8 (2000): 558–561.