What is PGX®?

PolyGlycopleX® (α-D-glucurono-α-D-manno-β-D-manno-β-D-gluc), (α-L-gulurono-β-D-manno), β-D-gluc-β-D-mannan), more commonly known as PGX®, is a uniquely highly-purified, water-soluble polysaccharide (fibre) developed from natural ingredients using advanced EuroSimplex™ technology. The three starting ingredients are combined in a very specific ratio and act synergistically to develop a higher level of viscosity than any other dietary viscous fibre currently known (Figure 1). Unlike many fibre-containing natural health products, PGX® does not lose its gel-like viscosity in either acidic stomach or alkaline intestinal environments, despite these drastic changes in pH.

How is PGX® an improvement over other fibre supplements/products on the market?

PGX® is much more than a fibre source due to its viscosity. PGX® is easy to use, natural, colourless, and has no distinctive odour and flavour. Because of these positive metabolic effects, adding sufficient quantities of soluble fibres like PGX® to one’s daily intake is an excellent way to both improve overall health and reduce the risk of developing chronic diseases like cardiovascular disease and diabetes.

What is the physiology of PGX®?

The physiological benefits exerted by PGX® relate to its nature as a highly viscous polysaccharide (gel-like fibre) with a very high water-holding capacity. Mixing PGX® with food or beverages increases its thickness or viscosity, thereby increasing the volume of gastric content. This promotes an early sense of sating even when food portions are decreased. PGX® also slows down and prolongs digestion and the absorption of any food along the gastrointestinal tract. This results in beneficial effects such as extending after-meal satiety, and normalizing postprandial blood glucose and lipids. These effects are in keeping with research demonstrating that the greater a fibre’s viscosity, the more effective it will be in reducing the glycemic response to foods.

In clinical studies, PGX® has been shown to be beneficial, and may influence gut microbial fermentation producing healthful short-chain fatty acids, substances important to colon health, lipid metabolism and appetite control. As a viscous fibre, PGX® may also inhabit the reabsorption of bile, increasing its excretion and thereby removing bile from enterohepatic circulation. A decrease in bile returned to the liver necessitates the use of cholesterol for the synthesis of new bile acids. The net effect of this process is a lowering of serum (total and LDL) cholesterol levels. Because of these positive metabolic effects, adding sufficient quantities of soluble fibres like PGX® to one’s daily intake is an excellent way to both improve overall health and reduce the risk of developing chronic diseases like cardiovascular disease and diabetes.

What research is there to support the benefits and effectiveness of PGX®?

PGX® is the result of many years of clinical and laboratory research in collaboration with universities from around the world, specialized research organizations and with the Canadian Centre for Health Information. After years of research involving thousands of participants, it is clear that adding PGX® to meals can improve blood

References

glucose levels, reduce the glycemic index of foods, restore insulin sensitivity (a key factor in weight control), reduce hunger and food intake, assist in weight management, and lower cholesterol levels.

Health benefits of PGX® include:

- Improved postprandial glycaemia (lowering the glycemic index of foods)
- Reduced risk factors associated with metabolic syndrome
- Improve and better manage blood glucose levels
- Pregnant or lactating women should discuss PGX® with their health care professional prior to taking PGX®.
- Anyone who cannot compensate for a large intake of water, sodium, or food fad should consult their physician.
- PGX® can slow the rate of absorption of food and therefore it can help control blood glucose, it may lessen the need for insulin or other medications accordingly.
- It is important for people to understand the possible side effects and that results can vary.
- The client’s diet is low in fibre, they should start on a low dose of PGX® and increase the amount very gradually. Start with 2.5 g once per day and increase gradually to the dose to the target level.
- If PGX® is adding too much bulk to the diet, it may be advised to drink more water with or immediately after each PGX®. Side effects are greatly minimized by consuming enough water – between 375 and 500 ml (12.6-16 fl oz) per 5 g.

Why should clients (patients) incorporate PGX® into their diets?

- The dietary fibre intake for total daily fibre consumption is 25 g for women and 38 g for men. **The Canadian Community Health Survey Cycle 2.2** concluded that most individuals eat less than the daily recommended amount of fibre. Adding sufficient quantities of both soluble and insoluble fibre to daily intake is an excellent way to both improve overall health and reduce the risk of developing chronic diseases like heart disease and diabetes. However, despite the widely known health benefits associated with such viscous fibres, getting a consistent amount in the daily diet may pose a challenge for some Canadians. One easy and convenient way to add more viscous soluble fibre to the diet is through the use of PGX®.

Who should add PGX® to their diets?

- The people who would benefit from PGX® include individuals who want to:
  - Reduce their risk of developing diabetes and/or cardiovascular disease
  - Prevent metabolic syndrome and lower insulin resistance
  - Improve and better manage blood glucose levels
  - Improve cholesterol levels, whether or not they are on cholesterol-lowering medication
  - Lose weight, prevent weight gain, or prevent weight regain after weight loss (maintenance)

What dosage of PGX® should clients take per day?

To attain the full benefits of PGX®, clients should take PGX® with every meal. Start with 1-2 softgels of PGX® Daily or 2.5 g of PGX® granules at one meal. Gradually add an additional 2-3 days until portion size and between-meal food cravings are decreased. It is important to drink at least 250 ml (8 fl oz) of water per 2.5 g serve of PGX®. If the client is prone to digestive upset, slow the rate at which the dose is increased to give their body time to adjust.

Some people find as few as 3 softgels of PGX® Daily or 2.5 g of PGX® granules per meal to be effective. Others require the maximum dose of 6 softgels of PGX® Daily or 9 g of PGX® granules per meal. A successful approach to weight loss and then weight management is to consume a PGX® meal replacement shake twice a day, in place of breakfast and lunch. After the initial weight loss goals are met, they can eat two regular healthy meals and try to use the PGX® meal replacement once per day. PGX® Daily softgels or PGX® granules could be consumed with food instead of taking the meal replacement, to help maintain a healthy weight.

What are the common side effects of PGX®?

PGX® is highly concentrated and highly effective form of fibre. It can take time for the body to adjust to the increased amount of dietary fibre and PGX® is no exception to this rule. To minimize side effects, such as gas, loose stools, transient diarrhea, abdominal discomfort, bloating and constipation, it is best to start with a small amount of PGX® and gradually increase the intake as the body adjusts.

If the client’s diet is low in fibre, they should start on a low dose of PGX® and increase the amount very gradually. Start with 2.5 g once per day as a starting dose and gradually increase the dose to the target level. Some people start on the full dose (10-15 g per day) and experience no adverse effects. It is important for people to understand the possible side effects and that results can vary.

If the client takes PGX® consistently and increases the dose gradually, it is almost as if they are consuming a highly effective dose within a few days to a couple of weeks. They must be sure to drink plenty of water with or immediately after each PGX®. Side effects are greatly minimized by consuming enough water – between 375 and 500 ml (12.6-16 fl oz) per 5 g.

Are there any contraindications for common medications?

PGX® can slow the rate of absorption of food and therefore it can theoretically do the same with medication. It is recommended that any oral medication be taken 1 hour before PGX® and/or 2-3 hours after consuming PGX® products.

People with diabetes must monitor their blood glucose carefully as they may need to adjust medications accordingly. As PGX® helps control blood glucose, it may lessen the need for insulin or other medications over time.

If the client has to take their oral medication with breakfast, they can take PGX® at lunch and dinner time or with a healthy mid-morning snack. If they are taking an array of medications, it may be appropriate to recommend that they consult with their health care professional prior to using PGX®.

What is PGX® and does it affect mineral and vitamin bioavailability?

In addition to being a highly effective and practical tool in the management of type 2 diabetes, PGX® can be employed as a preventative agent to help reduce the risk factors associated with certain types of chronic diseases. For instance, they have been used as food ingredients and additives for decades. In addition to being a highly effective and practical tool in the management of type 2 diabetes, PGX® can be employed as a preventative agent to help reduce the risk factors associated with certain types of chronic diseases. For instance, they have been used as food ingredients and additives for decades. In fact, PGX® has been proven safe in published studies, is self-affirmed GRAS, and over the last six years nearly half a billion single servings of PGX® have been sold with minimal adverse events, underscoring its safety for daily use. Furthermore, the key ingredients from which PGX® is manufactured all have CODEX E numbers and have been used as food ingredients and additives for decades, for health care professionals, PGX® is available through Bioclinic Naturals Inc. PGX® is also distributed by Natural Factors and Watson Pharmaceuticals wherever natural health products are sold. PGX®, PGX Daily®, PolycGlycoComplex®, and the unique two-toned PGX Daily Ultra Matrix Softgel capsules are trademarks of Inovobiologic Inc. PGX® US Patents 6268688, Patent pending in Australia, Canada, China, Hong Kong, Japan, New Zealand, Russia, South Africa, Singapore, South Korea, Taiwan, and the EU.