

Nutrition Centre

By TATE & LYLE

PROMITOR[®]
Soluble Fibre
and bone health

As we strive to meet the changing health needs of people across the globe, we're continually researching the benefits that our innovative and extraordinary ingredients can bring to the health of consumers.

Research studies into PROMITOR[®] Soluble Fibre have shown that it has a number of potential health benefits*, including supporting gastrointestinal health,^{1,2} good digestive tolerance and maintaining healthy post-meal blood glucose levels^{3,5} (when used to substitute sugar or other digestible carbohydrates).⁶⁻⁸

In addition, studies have shown that PROMITOR Soluble Fibre supports increased calcium absorption and bone calcium retention, which may help support bone health.^{2,9-11}

Calcium is crucial

One of the most important building blocks for good bone health is diet, with calcium being of particular importance.

The recommended daily calcium intake ranges from 700 - 1200 mg per day^{13,14} worldwide for healthy adults aged 19-64. However, just like the fibre gap, the calcium intake of the global population typically falls below the recommended levels^{12,14}.



Why does bone health matter?

Bone health is extremely important.

- On a very simple level, bones provide structural support to the body and allow for movement.
- Healthy bones act as a protective barrier, protecting internal organs in case of injury and harm.
- Poor bone health can lead to conditions like osteoporosis, which is characterised by reduced bone density and increased bone injuries and breakages.¹²

Because of this, anything we can do to increase calcium absorption and retention is extremely significant for our future bone health.

The development of strong bones begins in childhood and continues through adolescence, with optimal bone density typically achieved by the age of 30¹⁵. Taking proactive steps to support bone development during these crucial stages can have long-lasting benefits and help prevent future bone-related issues. It's also key to continue to look after bone health in later life, particularly for women after menopause when they have lost the protective effect of oestrogen¹⁶.

Clinical study data suggests that PROMITOR[®] Soluble Fibre has a role to play here*.

*Labelling and claims may vary by country. Customers are advised to consult their own regulatory experts to determine appropriate labelling and claims for their products.

What is PROMITOR[®] Soluble Fibre?

PROMITOR[®] is a corn-based soluble fibre that can be added to food and beverages to create products with a higher fibre content without increasing their calorie content (when used to substitute sugar or other digestible carbohydrates). Soluble and versatile, it's used in a variety of different food and beverage products across the Americas, Europe and Asia-Pacific, with no compromise when it comes to taste, texture and consumer enjoyment.

PROMITOR[®] Soluble Fibre and the potential benefits for bone health*

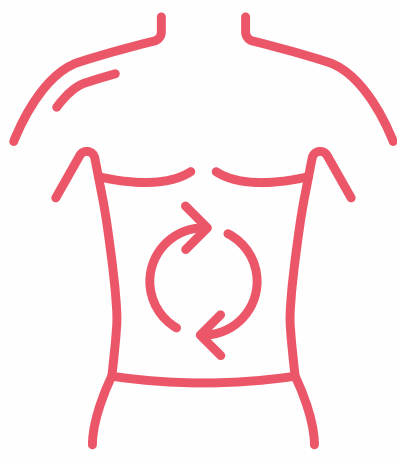
A number of studies have indicated that PROMITOR[®] Soluble Fibre is a prebiotic fibre*, which has been shown to support calcium absorption and bone calcium retention and, therefore, may help to maintain bone health^{2,9-11,17}. But how? Potential prebiotic qualities*

What are prebiotics?

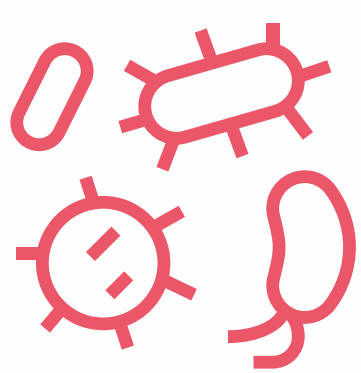
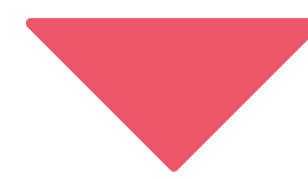
Prebiotics are food ingredients that are non-digestible and that stimulate the growth and/or activity of the gut microbiota, promoting a healthy gut. In more technical terms, a prebiotic is a substance selectively utilised by host microorganisms, conferring a health benefit¹⁸.



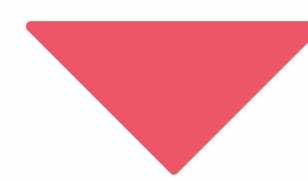
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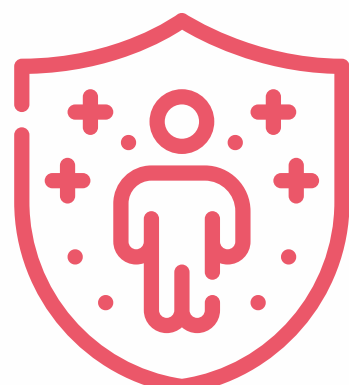
As a fibre, PROMITOR[®] Soluble Fibre is resistant to digestion in the stomach and small intestine. Instead, it passes through the gut until it reaches the large intestine, where it then starts to be broken down by bacteria. This process could have a positive impact on the composition and activity of gut microbiota¹⁹.



Some studies have demonstrated that PROMITOR[®] Soluble Fibre supports the growth of beneficial bacteria in the gut^{1,2,15,20} and increases the production of short-chain fatty acids.^{20,21} It has been suggested that this may result in a lower gut pH level, causing an increase in calcium absorption.



Studies have also indicated that PROMITOR[®] can increase the amount of calcium retained by the bones. Both these aspects are important for maintaining bone health^{1,2,9-11}.



PROMITOR[®] Soluble Fibre may also help immune health*, an emerging area of research²⁰.

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The story so far – what the research suggests

Increased calcium absorption of 12%

A study conducted on 24 adolescents showed that when they had 12 g a day of soluble corn fibre whilst maintaining a low calcium diet containing 600 mg of calcium per day, their calcium absorption increased by 12% ². The study estimated that a sustained intake of soluble corn fibre at this level for 12 months would lead to potential bone accrual and an additional calcium absorption of 9.3g.

5 – 7% increase in bone calcium retention in postmenopausal women

A study conducted on 14 post-menopausal women showed that consumption of PROMITOR[®] Soluble Fibre during a 50-day period significantly enhanced bone calcium retention by 5% (at 10g/d) and 7% (20 g/d), respectively ¹¹.

PROMITOR[®] Soluble Fibre - looking to future*

As calcium and dietary fibre are key nutrients for certain age groups, such as children and older adults, it is exciting to find out that adding one very effective and well-tolerated ingredient can not only reduce the fibre gap but also help promote bone health.

With over 160 years of trusted experience, we're excited to build on existing studies and research and continually add to the wealth of knowledge we already have about the potential benefits of PROMITOR[®] Soluble Fibre.

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