

Introducing a **NEW ERA** of treatment to stop the early stages of osteoarthritis & a **NEW POTENTIAL** of exogenous cartilage proteoglycan as a new material for cartilage regeneration.¹



Mixed Fruit Powder Drink with Salmon Cartilage

30 sachets x 10 gram

**Each sachet contain
Proteoglycan 10mg
and hyaluronic acid 20mg**

Ingredients :

Salmon Cartilage (Proteoglycan), Fructose, Passion Fruit, Fructo-Oligosaccharides (FOS), Mango, Maqui Berry, Fruit Flavour, Tremella, Vitamin C, Seaweed Calcium, Stevia. Contain permitted food flavouring substance.

Botanical Beverage Mix Passion Fruit, Mango and Maqui Berry with Salmon Cartilage.

Direction to use :

Mix 1 sachet with 200ml water, stir well & drink.

Store below 25°C. Protect from moisture & heat.

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PROJOIN

1st in Malaysia
Japan Best Proteoglycan

Healthy & Flexible Joints



What is Proteoglycan?

Proteoglycan is a kind of glycoprotein in a broad sense that sulfated polysaccharide called glycosaminoglycan such as chondroitin sulfate, dermatan sulfate, heparan sulfate, heparin and keratan sulfate which are covalently bonded to the protein. Proteoglycan is present in the extracellular matrix and cell surfaces of animals. It is also in the fibrous matrix proteins and complex of hyaluronic acid and collagen.

Proteoglycan is not easily decomposed by the stomach acid. Therefore, it passed through the stomach maintaining its high molecular state. Nevertheless due to the decomposing enzymes in the small intestine, it is broken down up to a certain size. This decomposition product becomes the immunizing antigen M cells (micro-fold cells) as it passes through and which has been thought to bind with the immune cells. Finally, it is considered to be enzymatically decomposed in the liver. The balance that were not decomposed will be excreted in the urine.

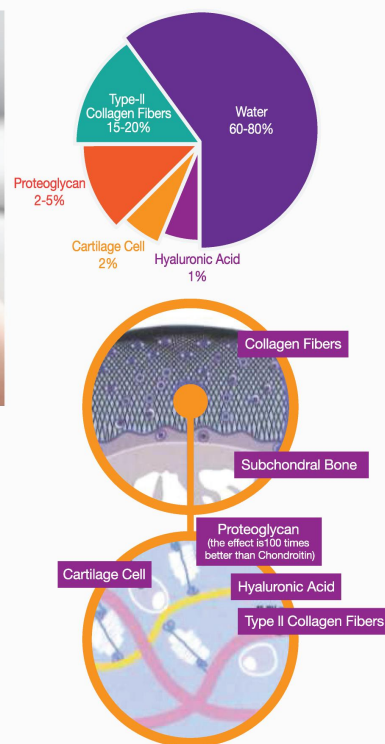
Proteoglycan is Extracted from Nasal Cartilage of Salmon

Salmon is a very popular and eaten widely in the world. Proteoglycan are extracted from the nasal cartilage of natural salmon. Nasal cartilage of salmon called "Hizu" (Icy head), because it looks clear and beautiful, is eaten traditionally in Hokkaido and Tohoku region. The ingredient is extracted from natural salmon in Hokkaido Japan. From the catching to processing, all the process is done in Japan, so it has a strong traceability.



For Joint Pain

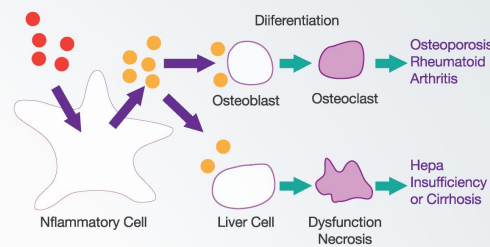
Articular cartilage is the bluish gel-like tissue that covers the ends of bones. It is 4-6mm thick, softer than bone, and could be found on many joint surfaces. The type II collagen is the basis for articular cartilage, and its fibrillar network allows cartilage to entrap the proteoglycan aggregate. The synovial fluid, which is also a part of the articular cartilage, contains hyaluronic acid as its main component, lubricates the articulating joints. The articular cartilage makes joints easier to move, and allows the bones to glide over each other very little friction.



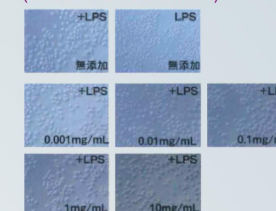
TNF- α Production Inhibiting Test

The ELISA method was used to measure the inhibiting effect of the production of TNF- α , which was stimulated with the lipopolysaccharide (LPS), in the inflammatory cell line (J774.1) of mice. Inflammatory cells such as macrophage would produce inflammatory cytokine (TNF- α) if they accept the stimulation from LPS. The TNF- α will differentiate the osteoblast into osteoclast, causing osteoporosis or rheumatoid arthritis; meanwhile, the TNF- α in liver will be the cause of liver dysfunction or necrosis and eventually result in hepatic insufficiency or cirrhosis. Thus, the inhibition of the TNF- α production could have effect on preventing inflammation, osteoporosis, rheumatoid arthritis or hepatic dysfunction.

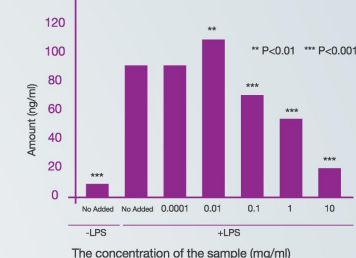
TNF- α (Inflammatory Cytokine)



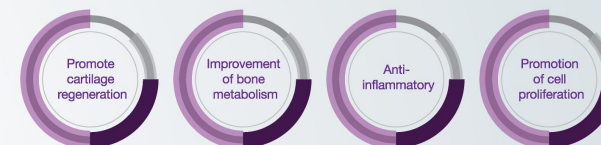
High-magnification image of cell (taken at the end of the test)



The inhibiting effect on TNF- α production



Japan Best Proteoglycan



Relieve Pain & Inflammation



Proteoglycan are important components of the ECM (extracellular matrix). Proteoglycan is supporting the growth and development of cells through their signalling and structural properties. ³

JACTA (Japan Clinical Trial Association) conducted a randomized, placebo-controlled, double-blind study to verify the joint support effects of the supplement containing 10mg proteoglycan for 12 weeks on 36 subjects. The study showed significant improvement of the knee condition in the scores of VAS (Visual Analogue Scale) and on the questionnaire of modified J-KOOS (Japanese Knee Injury and Osteoarthritis Outcome Score). ⁴

The studies shown that proteoglycan has its own growth-stimulating effect in maintaining good cartilage cells. Proteoglycan improves the condition of joint by regeneration and protection against scuffing of cartilage. Proteoglycan achieves a suppression of inflammation & relieves pain too.