

- Food
- Food Additive
- Cosmetic
- Quasi-drug



# Hokkaido Salmon

## 『 Chondroitin 』

Technical  
Data

### Extracting Chondroitin from Salmon Cartilage



Salmon is very popular and eaten widely in the world. Chondroitin is 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 of Hokkaido that is very familiar with Japanese people, so it has very reliable image.

Not only reliable and familiar image, from the catching the fishes to processing, all the process is done in Japan, so it has a strong traceability.

#### Expected Function

- ◎ Arthritis treatment, anti-inflammatory effect
- ◎ Antitumor activity
- ◎ Nerve cell elongation effect
- ◎ Improving skin function
- ◎ Moisturizing the skin
- ◎ Improving eye strain, focus adjustment, eyesight
- ◎ Lipase inhibitory activity  
(Suppressing fat accumulation in adipocytes, anti-obesity, diet effect)

#### Recommended Dosage

- ◎ 100~2,000 mg/day as Chondroitin sulfate  
※ (by Japan Health and Nutrition Food Association)

#### Uses

- ◎ Supplements, drinks and processed food for joints.
- ◎ Supplements, drinks and processed food for beauty and health.

#### Display Name Example

- ◎ Chondroitin, Chondroitin sulfate, Salmon cartilage extract, etc.

#### Quality Standard Composition

Material	Cartilage of Salmon
Property	White to light yellow powder with original scent
Mucopolysaccharide (Chondroitin sulfate)	Over 40.0%
Ph	5.0~7.5
Heavy metal (Pb)	Less than 20ppm
Arsenic (As <sub>2</sub> O <sub>3</sub> )	Less than 2ppm
Viable count of bacteria	Less than 1,000pcs/g
Coliform bacteria	Negative

#### Other

Quantity	5kg
Shelf life	1 year from the production date
Storage condition	Keep in cool dry place, and avoid direct sunlight.

#### Company Information

Ver.2304

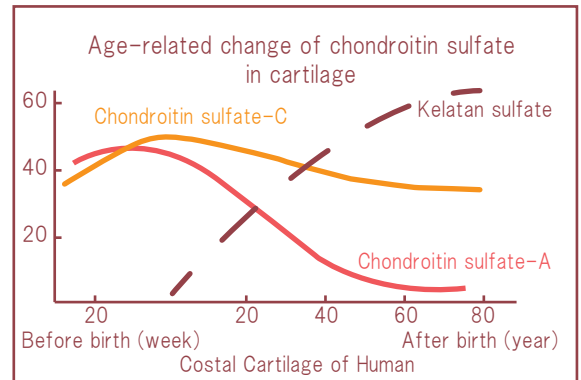
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### ■ What is Chondroitin Sulfate ?

Chondroitin sulfate is a kind of acidic mucopolysaccharide present in the substrate part of the connective tissue that connects cells together. It is present in the connective tissue such as cartilage, bone, tendon, cornea, lens, blood vessel, skin in a state bound to protein or in free form. Chondroitin sulfate is a sticky substance that can gel a large amount of water, give water retention, viscosity and lubricity to cartilage and human body fluids.

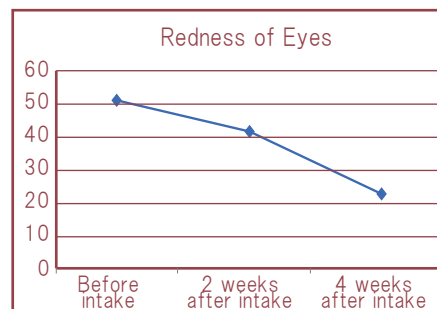
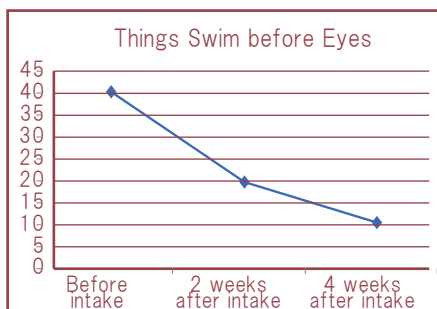
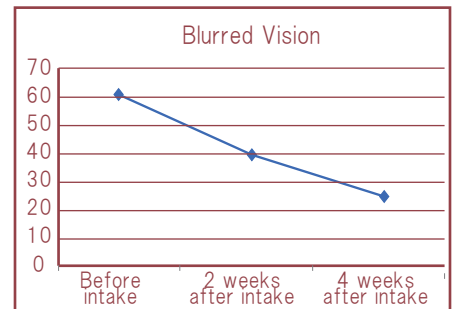
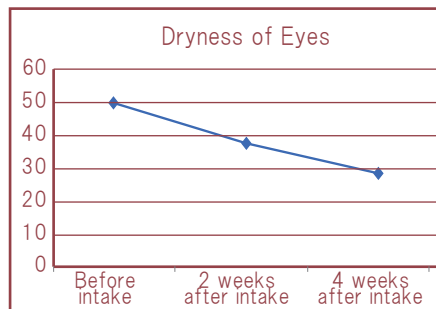
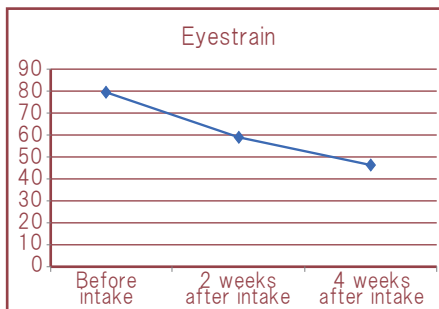
Chondroitin sulfate is made every day in the body, but synthetic ability disappears with age, giving various bad effects to the body. Therefore, it is said that it is preferable to take it positively from food.



### ■ Improving Symptoms of Eyestrain



We conducted a 4-week open trial on 10 subjects from 30 to 40 years old and conducted a VAS questionnaire survey on subjective symptoms of chronic eyestrain. As a result of the test, significant improvement is observed with chondroitin sulfate derived from salmon. From this, it is considered that the chondroitin sulfate has a high improvement effect on chronic eyestrain.

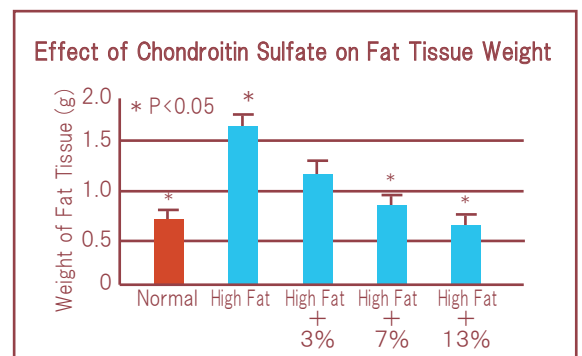


### ■ Decreasing Body Fat Mass



ICR female mice are fed normal diet, high fat diet and high fat diet with chondroitin sulfate in each group for 8 weeks, and their fat tissue weight is measured.

As a result of the test, a significant decrease is observed with chondroitin sulfate 7% and 13% group. This suggests that chondroitin sulfate has an antiobesity effect.



### Company Information