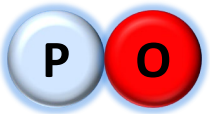
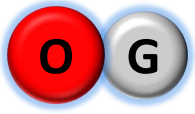
Wellnex® DI-PEPTIDE

For Joint health

Special DI-PEPTIDE PO and OG

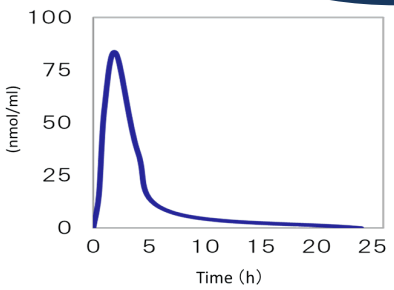


Proline-Hydroxyproline



Hydroxyproline -Glycine

Proline-Hydroxyproline (PO) and Hydroxyproline-Glycine (OG) is a unique peptide fond only in collagen peptides.



Reference: J.Agricultural and Food Chemistry Ohara et al. 2007

PO and OG can be considered relatively resistant to enzymatic degradation within the bloodstream, remaining in circulation for hours, when other hydroxyproline-containing compounds degraded in a matter of minutes.

Own enzyme treatment technology

We have been engaged in the production of gelatin and collagen for 106 years since our establishment. Succeeded in cutting out a large amount of PO/OG by our unique enzyme processing technology, which was developed through years of development.

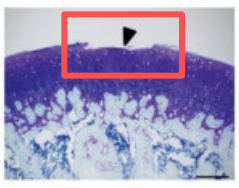
The characteristics of DI-PEPTIDE
1. Highly concentrated levels of PO & OG (**≧ 3,000ppm**) 30 times higher level of active ingredients
2. Low molecular weight (Average 1,000 Da or less)
3. Low dosage with high clinical impact : **2.5g/day**
4. Clinically tested for safety and efficacy - Just 2.5g/day intake is effective for improvement of osteoarthritis equal level with conventional type 10g

Patent JPB4490498 For Joint health

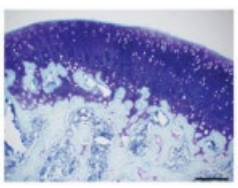
<cross-sectional photographs>

In this in vivo trial, we made a model rat of osteoarthritis (OA) and feed Wellnex DI-PEPTIDE freely.

OA model + normal diet



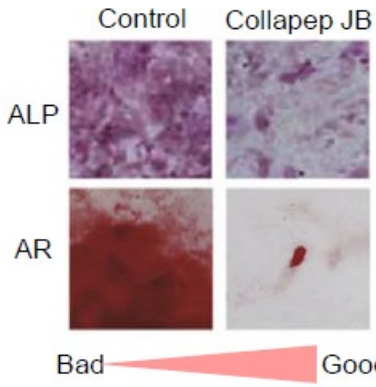
OA model DI-PEPTIDE 56 days



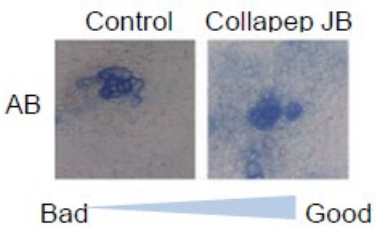
Wellnex di-peptide made the knee joint surface of the femur smooth.

<Mechanism>

Suppression of calcification



Increase in the amount of lubricating substance



In an experiment using chondrogenic ATDC5 cells, the levels of ALP and calcification, which are factors promoting calcification of cartilage, were significantly decreased in the Wellnex DI-PEPTIDE group, and the amount of aggrecan, a lubricant for cartilage, was significantly increased.

Wellnex® DI-PEPTIDE

For Joint health

Clinical impact just by 2.5g/day, 8weeks intake

Clinical trial

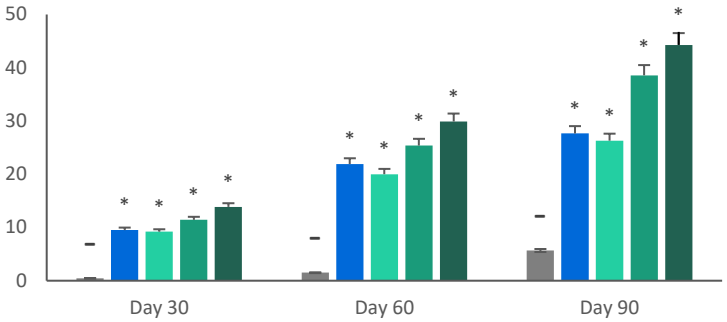
- Double-blind placebo-controlled randomized trial
- Age 30-65
- Grade II or III OA patients (Kellgren-Lawrence Grading Scale)
- Placebo (Maltodextrin) 20 subjects, 5.0 g/day
- Conventional CP 21 subjects, 10.0 g/day
- Equivalent type of DI-PEPTIDE 23 subjects, 2.5 g/day
- Equivalent type of DI-PEPTIDE 21 subjects, 5.0 g/day
- Equivalent type of DI-PEPTIDE 21 subjects, 10.0 g/day
- 90 days
- Parameter

WOMAC : The Western Ontario McMaster Universities Arthritis Index score
PICS : Physician's Impression of Change Score
MOAKS : Magnetic Resonance Imaging Osteoarthritis Knee Score

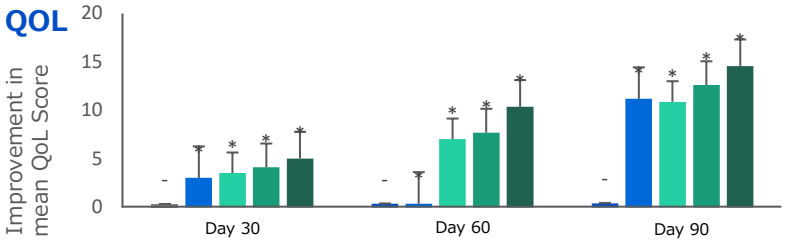
DI-PEPTIDE 2.5 g supplementation helps in improving the osteoarthritis conditions at the equivalent level of conventional CP 10g in 30days.

Reference : Sheena Devasia *et al.*, CARTILAGE. 2024, 1(12)

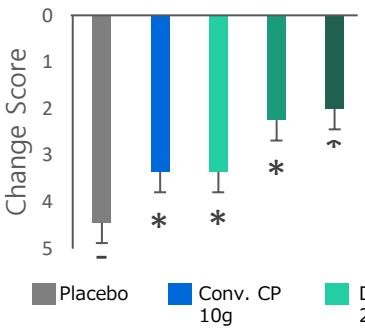
WOMAC score



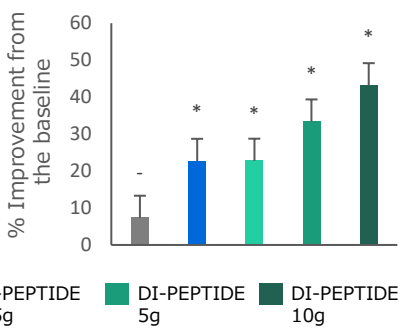
QOL



PICS (Day90)



MOAKS (Day90)



Placebo | Conv. CP 10g | DI-PEPTIDE 2.5g | DI-PEPTIDE 5g | DI-PEPTIDE 10g

Papers

	Application	Year	Subject	Abstract	Title
1	Absorption	2009	In vivo	Absorption from small intestin	Liu C., et al. Absorption of hydroxyproline-containing peptides in vascularly perfused rat small intestine in situ. Biosci. Biotech. Bioch.; 73:1741-1747, 2009
2	Absorption	2012	Clinical	OG absorption	Sugihara F, Inoue N, Kuwamori M, Taniguchi M: Quantification of hydroxyprolyl-glycine (Hyp-Gly) in human blood after ingestion of collagen hydrolysate. J Biosci. Bioeng.; 113:202-203, 2012
3	Joint health	2017	In vivo	Improvement of osteoarthritis model rat	Isaka S et al. Evaluation of the effect of oral administration of collagen peptides on an experimental rat osteoarthr itis model. EXPERIMENTAL AND THERAPEUTIC MEDICINE 13: 2699 2706, 2017
4	Joint health	2024	Clinical	Improvement of osteoarthritis by 2.5g/day intake	Devasia S .., et al. Management and Amelioration of Knee Joint Osteoarthritis in Adults Using a Novel High Functional Bovine Collagen Peptide as a Nutritional Therapy: A Double Blind, Prospective, Multicentric, Randomized, Active and Placebo Controlled, Five Arm, Clinical Study to Evaluate the Efficacy, Safety, and Tolerability. CARTILAGE.0(0) 2024

Patents

	Patent No.	Title	Abstract
1	JP 4490498 (US, CN, CA, BE, DE, FN, UK, IN, MY, CG)	Disease suppressant (Bone, Joint, Pressure ulcer).	A peptide molecule body effective in suppressing various diseases such as osteoporosis, os teoarthritis, and pressure ulcers, particularly a dipeptide that is easily absorbed into the body in the intestinal tract, and that contains the dipeptide as an essential dipeptide. A disease suppressing agent containing a collagen peptide and the dipeptid e as an essential active ingredient is provided. A collagen peptide according to the present invention is characterized by containing a dipeptide having a Hyp Gly structure as an essential dipeptide. The dipeptide according to the present invention is char acterized by having a Hyp Gly structure. The disease suppressing agent according to the present invention is characterized by containing a dipeptide having a Hyp Gly structure as an essential active ingredient.

Nitta Gelatin
Connect and Create

Overseas Sales Department, Osaka branch
Address: 4-26, Sakuragawa 4-chome, Naniwa-ku, Osaka (P.C. 556-0022) Japan
Web: https://www.nitta-gelatin.co.jp/en/index.html
Phone : +81-6-6563-1511
Fax : +81-6-6563-1510

Company web page