



hermes consilium



portfolio.

clinically
supported
ingredients

milk protein hydrolysate with an anti-inflammatory effect, supporting joint comfort with proven efficacy in reducing inflammatory markers and swelling

- **supplier**
Ingredia Nutritional
- **product grade**
powder suitable for tablets, capsules, softgels, gums, etc.
- **daily dose**
250 mg
- **stability**
24 months shelf life
- **certificates**
Halal, Kosher



INDICATIONS
JOINT HEALTH
ANTI-INFLAMMATORY SUPPORT

advantages:

- **clean label: natural origin**, no toxicity nor reported side effects
- **innovative source compared to traditional** glucosamine, chondroitin, and herbal extracts
- **flexible formulation**: can be incorporated into capsules, sachets, or other supplement forms
- **regulatory approved**: generally recognized as safe (GRAS) status
- **proven efficacy in preclinical and consumer studies in seniors and athletes**, showing significant results on inflammation, pain, and mobility
- **fast action**: effects can be felt from day 15 onwards
- **produced in the EU (France)**

mechanisms of action:

- **several studies showed that consumption of dairy products** was associated with lower low-grade systemic inflammation
- **milk protein (casein) hydrolysate has anti-inflammatory activity**
- **acts as an inhibitor of cytokines: IL-10, IL-1 β , and TNF- α** , reducing inflammatory response
- **anti-inflammatory effect comparable to dexamethasone**, a standard corticosteroid drug treatment
- **reduces oedema formation (swelling) in animal models of arthritis** – reduces joint inflammation

preclinical study results:

- animal model (arthritic mBSA mice vs. control)
- **Xelflex® 10, 50 and 250 mg/kg**

outcomes:

- **significant reduction of knee oedema with Xelflex® at 50 and 250 mg/kg**

consumer study results:

- 66 seniors, 55 athletes with joint disorders
- 250 mg/day Xelflex® for 30 days

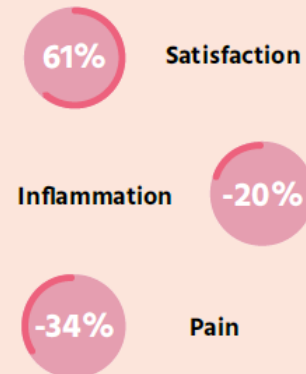
outcomes:

- **significant reduction in joint inflammation and pain after 15 days**

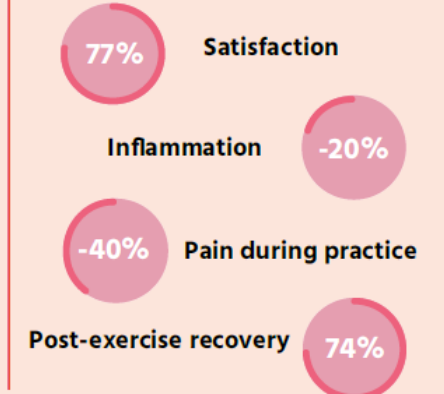
BENEFICIAL EFFECTS VALIDATED BY CONSUMERS (INTERMEDIATE RESULTS AT 30 DAYS)

Consumer study on **66 seniors and 65 athletes** with joint disorders, **250 mg** once a day during **30 days**. From day 15 onwards, joint inflammation level and joint pain intensity decrease significantly.*

SENIORS (mean age : 62 years old)



ATHLETES (mean age : 38 years old)



*statistically different results vs. baseline.

hydrolyzed marine collagen (62% collagenic proteins)
from fish cartilage for joint health and skin support,
with a synergetic action of its components

- **supplier**
Abyss Ingredients
- **product grade**
powder suitable for tablets, capsules, sticks, soft gels
and liquid forms
- **daily dose**
500 mg for skin and 1 g for joint health
- **stability**
36 months shelf life
- **certificates**
Halal, ISO22000, Non-Novel Food, Non-GMO



INDICATIONS
JOINT HEALTH
SKIN HEALTH & BEAUTY

advantages:

- **synergistic action of collagen peptides (type II) and glycosaminoglycans** (chondroitin sulfate, glucosamine sulfate, hyaluronic acid)
- **highly digestible and bioavailable** low molecular weight peptides (>85% peptides <3000 Da)
- **low dosage**
- **gentle eco-friendly** water extraction, no solvents or preservatives
- relatively **neutral in taste and odor**, allowing a **variety of formulations**
- **supported by clinical** and preclinical evidence



mechanisms of action:

- **improves joint comfort and mobility**, leading to **improved quality of life**
- **helps limit the production of pro-inflammatory molecules**, leading to **pain reduction**
- **promotes the maintenance of the cartilage extracellular matrix** that preserves **joint mobility**
- **reduces wrinkles and smooths skin texture** because of its effect on **deeper skin layers**
- **increases elastin (+40%) and hyaluronic acid (+5%) synthesis**, ensuring **elasticity, firmness, and hydration**
- **protection of the collagen matrix**: inhibits enzymes degrading collagen, helping preserve dermal density and reduce wrinkles
- **components provide structural molecules** and can stimulate the production of body's own collagen for healthy joints and skin
- **regeneration & repair**: stimulates fibroblast healing and the production of anti-inflammatory and immunomodulatory proteins, aiding skin repair
- **improvements in hair and nail appearance**

key clinical study outcomes:

- **low-dose Cartidyss® (500 mg/day) for 90 days significantly reduces facial wrinkles, improves dermal thickness and collagen structure** (Maia Campos et al., 2021)
- **Cartidyss® (1 g/day) reduces knee pain and improves joint function within 3 months, by protecting the cartilage matrix and reducing inflammatory mediators** (Henrotin et al., 2023)

preclinical study:

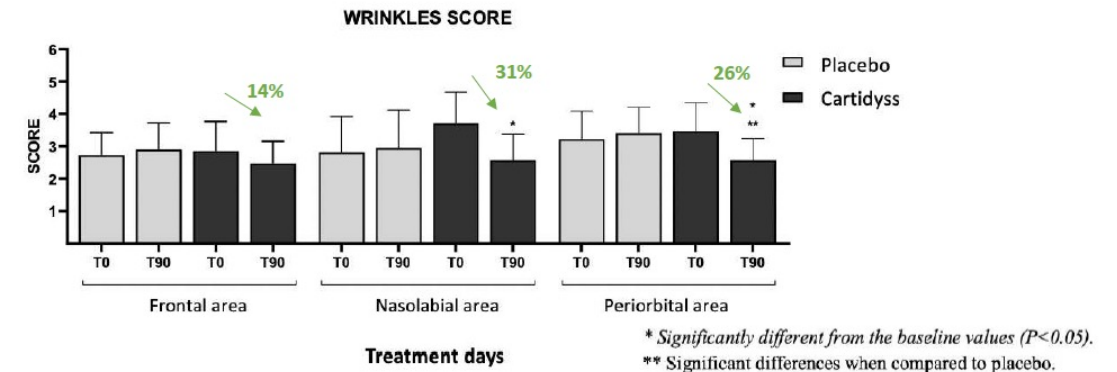
- **metabolites of Cartidyss® (12 g, single dose) increase elastin and hyaluronic acid levels while reducing enzymes responsible for photoaging (MMP-1 and MMP-3)** (Wauquier et al., 2022)

clinical study results:

- Maia Campos et al., 2021: Oral supplementation with hydrolyzed fish cartilage improves the morphological and structural characteristics of the skin: a double-blind, placebo-controlled clinical study
- randomized, double-blind, placebo-controlled
- 46 healthy females
- Cartidyss® 500 mg/day, 90 days

outcomes:

- face wrinkle reduction -25%
- dermis thickness and echogenicity improvement
- skin pore reduction
- improved collagen structure
- participants reported **improvement in skin tonus, firmness, hydration, and wrinkles**



clinical study results:

- **Henrotin et al., 2023: Oral supplementation with fish cartilage hydrolysate in an adult population suffering from knee pain and function discomfort: results from an innovative approach combining an exploratory clinical study and an ex vivo clinical investigation**
- exploratory, multi-centric, non-comparative trial combined with an ex vivo study
- 33 adults with moderate knee joint discomfort and loss of functionality
- Cartidyss® 1 g/day, 90 days

outcomes:

- **improved** Global Knee injury and Osteoarthritis Outcome Score (KOOS) after **1 and 3 months, indicating functionality improvement**
- **decreased** VAS knee pain at rest and while walking after **1 and 3 months**
- **anticatabolic role ex vivo, limited the decrease of collagen II and glycosaminoglycans (rhIL-1 β -related)**
- **anti-inflammatory effect by reducing NO production**

preclinical study results:

- Wauquier et al., 2022. Benefits of Circulating Human Metabolites from Fish Cartilage Hydrolysate on Primary Human Dermal Fibroblasts, an Ex Vivo Clinical Investigation for Skin Health Applications
- *ex vivo*
- 10 healthy men, Cartidyss® 12 g (single dose)

outcomes:

- peak absorption of collagen biomarker hydroxyproline and chondroitin sulfate metabolites: 140 min post-ingestion
- inhibited the expression of destructive enzymes responsible for photoaging: MMP-1 -50.2%, MMP-3 -30.9%
- stimulated **hyaluronic acid (skin hydration)** and **elastin synthesis** +40%

consumer test (2023):

- 62 women 25-50 years old, Cartidyss®, France

outcomes:

- significant **improvement in hair and nail appearance** from 1 month
- 94% of consumers reported a positive opinion after 3 months
- validated beauty claims

product examples



product examples



water-soluble composition from turmeric (*Curcuma longa*), standardized to bioactive polysaccharides turmerosaccharides (10-20 %) and without curcuminoids, for joint and cartilage health

- **supplier**
Natural Remedies
- **product grade**
powder suitable for shots, tablets, capsules, lozenges, sprays, gummies, nutri-bars, biscuits, candies; and granules
- **daily dose**
500-1000 mg
- **stability**
24 months shelf life
- **certificates**
non-GMO Project verified, clean label, Kosher, Halal



INDICATIONS
JOINT HEALTH
ANTI-INFLAMMATORY SUPPORT
SPORTS NUTRITION

advantages:

- **first turmeric ingredient** not based on curcuminoids
- **clean label**
100% turmeric extract
- **water-soluble**
naturally bioavailable, no need to further improve absorption like with standard turmeric extracts
- **non-staining of manufacturing equipment**
- **patented composition**
- **clinically researched and supported**
5 clinical studies, 1 safety study, 7 preclinical studies

mechanisms of action:

- **exerts potent anti-inflammatory properties**, by downregulating mediators, such as prostaglandin (PGE2) and interleukin-12 (IL-12) secretion
- **shows chondroprotective activity**
- **increases levels of interleukin-10 (IL-10)** that plays a role in cartilage homeostasis
- **improves joint pain**, stiffness, and function

clinical study key outcomes:

- **Supplementation of Turmacin[®] (1 g/day) significantly reduces knee pain scores and reduces the need for analgesics in osteoarthritic (OA) patients** (Madhu et al., 2012)
- **Turmacin[®] (1 g and 0.5 g/day) significantly increased the time to initial pain and reduced the overall pain experienced at the knee joint upon exertion in healthy volunteers** (Raj et al., 2020)
- **Supplementation with Turmerosaccharides + 20% curcuminoids (2x500 mg capsules/day) improved knee pain in an inflammatory phenotype of knee OA patients over 12 weeks** (Wang et al., 2020)
- **Turmacin[®] (1000 mg or 2000 mg/day) for 84 days is safe and tolerable in healthy volunteers** (Selvi et al., 2020)
- **Combined supplementation (500 mg Turmacin[®] and 19.5 mg curcuminoid complex) reduced pain at night while in bed and in an upright standing position in subjects with mild/moderate knee joint pain** (Calderon-Perez et al., 2020)



clinical study results:

Madhu et al., 2012: Safety and efficacy of *Curcuma longa* extract in the treatment of painful knee osteoarthritis: a randomized placebo-controlled trial

- 120 patients with primary knee OA
- 1000 mg/day Turmacin[®] vs. 1500 mg/day Glucosamine vs. combination vs. placebo, 42 days

outcomes:

- **reduced Visual Analog Scales (VAS) pain scores, Western Ontario and McMaster Universities scale (WOMAC) scores and Clinician Global Impression of Change (CGIC)** on days 21 and 24 vs. placebo and combination group
- no significant difference vs. glucosamine alone
- **reduced joint tenderness -86.2%** in Turmacin[®] vs. other groups
- **decreased use of rescue medication** (paracetamol) in the Turmacin[®] group

preclinical study results:

Raj et al., 2020: Effect of Turmacin supplementation on joint discomfort and functional outcome among healthy participants – A randomized placebo-controlled trial

- 90 healthy adults, subjected to 10-minute strenuous exercise
- Turmacin[®] 0.5 or 1 g/day for 12 weeks

outcomes:

- **lower mean final pain scores** in 1 g and 0.5 g vs. placebo from day-7 and day-5 onwards
- **increase of the pain threshold**: difference in **time to initial pain** on days 56 and 84 (1 g vs. placebo)
- difference in **mean range of movement (ROM) of knee** between 0.5 g vs. placebo at day 84

preclinical studies:

- Turmacin[®] was found to be genotoxically safe, assessed by bacterial reverse mutation test (BRMT), chromosome aberration (CA), and micronucleus (MN) tests, and exhibited maximum tolerable dose of more than 5 g/kg rat body weight (Chandrasekaran et al., 2013)
- Turmacin[®] exhibits potent *in vitro* immune-stimulatory activity by macrophage activation, splenocytes proliferation and cytokine release, and shows anti-inflammatory activity by downregulating prostaglandin (PGE2) and interleukin-12 (IL-12) secretion (Chandrasekaran et al., 2013)
- Polysaccharide fraction of Turmacin[®] attenuated acute and chronic inflammation in rodent models (Illuri et al., 2015)
- single administration of turmerosaccharides rich fraction (at 45 and 90 mg/kg) showed better analgesic activity than turmerosaccharides less fraction in rats, with similar effects on osteoarthritis pain as that of tramadol (Bethapudi et al., 2017)



product examples



the optimal bioavailable 99.8% all-trans vitamin K2, from the natural menaquinone-7 (MK-7) source using a specific strain of *Bacillus subtilis* natto

- the most bioavailable, longest-lasting, and most bioactive form of Vitamin K
- product grade:
 - oil grades:
 - Palm-free MCT Oil:** 1,500 ppm, 10,000 ppm, 50,000 ppm, MenaQ7 Vitamin K2 50,000 ppm
 - Sunflower Oil:** 1,500 ppm, 10,000 ppm
 - Olive Oil:** 4,500 ppm, 20,000 ppm
 - other:
 - Concentrate:** 97% Concentrate
 - MCC+MCT:** Natural 2,000 ppm
 - Matrix:** Vitamin K2 MK7 Matrix 10,000 ppm, Vitamin K2 MK7 Matrix 2,000 ppm



INDICATIONS
BONE HEALTH
CARDIOVASCULAR HEALTH

suitable for tablets, capsules, liquids (droplets, sprays, syrups), gummies & soft chews, ready-to-drink powder dairy (milk powder, yogurt), combinations with minerals

- **daily dose**
from 45-90 mcg of vitamin K2
- **stability**
24 or 36 months shelf life, depending on grade
- **certificates**
Vegetarian, Vegan, Kosher and Halal, non-GMO, lactose and gluten-free
- Novel Food status



INDICATIONS
BONE HEALTH
CARDIOVASCULAR HEALTH

clinical study key outcomes:

- **22+ published clinical trials with MenaQ7®** centered on cardiovascular health, bone health, antioxidant and immunity, cognition health, children's health and other
- **low dose of MK-7 (56 mcg/day) significantly improves vitamin K status** (Knapen et al., 2015)
- **MK-7 effectively prevents age-related stiffening of the arteries** (Vermeer C., 2020)
- **modest supplementation with MK-7 (45 mcg) increases circulating concentrations of MK-7 and increases osteocalcin carboxylation in children** (van Summeren et al., 2009)
- **among renal transplant recipients with stable graft function, MK-7 supplementation was associated with improvement in subclinical K deficiency and arterial stiffness** (Mansour et al., 2015)
- **supplementation with vitamin MK-7 (MenaQ7®, 360 µg/day for 2 years) reduces new coronary artery calcification and calcium mass in subjects with mild coronary disease** (Vossen et al., 2026)



clinical study results:

- **Knapen et al., 2015: Yogurt drink fortified with menaquinone-7 improves vitamin K status in a healthy population**
- randomized, double-blind, placebo-controlled intervention trial
- 60 healthy adults, two 250 mL yogurt drinks daily for 12 weeks
- yogurt drink + MenaQ7® (56 µg/day), n-3 PUFA (EPA+DHA), vitamin D3, vitamin C and minerals (calcium and magnesium)

outcomes:

- MK-7 **efficiently absorbed from the yogurt matrix** – yogurt is an ideal vehicle for vitamin K2 delivery
- **increased plasma MK-7 levels:** 0.28 to 1.94 ng/mL
- **decreased** uncarboxylated osteocalcin (**ucOC**) and dephospho-uncarboxylated matrix Gla-protein (**dp-ucMGP**)
- **improved vitamin K status**

clinical study results:

- **Vermeer C., 2020: Effect of Menaquinone-7 (vitamin K2) on vascular elasticity in healthy subjects: results from a one-year study**
- randomized, double-blind, placebo-controlled clinical trial
- 243 individuals with poor baseline vitamin K status (circulating dp-ucMGP > 400 pmol/L)
- 180 µg/day of MK-7 as MenaQ7® for one year

outcomes:

- **decreased dp-ucMGP: -138 ± 257 pmol/L – improved vascular vitamin K status**
- **reduction in arterial stiffness (cfPWV)**
- control: increased dp-ucMGP and age-related increase in cfPWV
- favorable vascular effects and weight loss were **most pronounced in women**

clinical study results:

- **van Summeren et al., 2009: The effect of menaquinone-7 (vitamin K2) supplementation on osteocalcin carboxylation in healthy prepubertal children**
- double-blind, randomized, placebo-controlled intervention trial
- 55 healthy prepubertal children
- 45 µg MenaQ7® for 8 weeks

outcomes:

- **increased circulating MK-7: +328.5%**
- **decreased UCR** (Vitamin K Status Indicator): -33.3% vs. control: +0.0%
- **decreased ucOC** (Inactive Bone Marker): -25.6% vs. control: +12.2%
- **increased cOC** (Active Bone Marker): +12.2% vs. control: +1.2%
- **increased circulating concentrations of MK-7 and osteocalcin carboxylation**
- **no increase of procoagulant activity, MK-7 is safe**

clinical study results:

- **Mansour et al., 2015: Vitamin K2 supplementation and arterial stiffness among renal transplant recipients—a single-arm, single-center clinical trial**
- prospective, single-center, single-arm clinical pilot study
- 60 renal transplant recipients with stable graft function for at least 3 months
- 360 µg MenaQ7® daily for 8 weeks

outcomes:

- **reduced Arterial stiffness: -14.2%** in mean carotid-femoral pulse wave velocity (cfPWV)
- **reduced dp-ucMGP** (Vitamin K status): **-55.1%**
- **reduced mean arterial pressure, Systolic and Diastolic BP** (24h measurement)

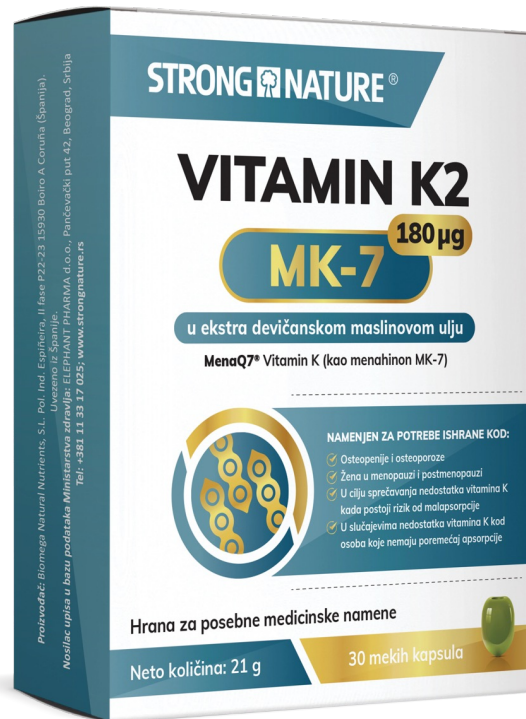
clinical study results:

- **Vossen et al., 2026: Two Years of Menaquinone-7 Supplementation and Coronary Artery Calcification: A Randomized Clinical Trial**
- randomized, placebo-controlled clinical trial
- 180 patients with preexistent coronary artery calcification
- MenaQ7® 360 µg/day for 2 years

outcomes:

- **increased MK-7 plasma levels** in the treated group
- **lower progression of new coronary artery calcification (-29% vs. placebo)**
- **lower progression in calcium mass (-42% vs. placebo)**

product examples



bioavailable and water dispersible micronized source of calcium (tricalcium phosphate, 33.7-39.6 % elemental calcium) coated with lecithin, which increases calcium dispersibility and absorption.

- **supplier**
Lubrizol
- **product grade**
powder (for liquid suspensions) and granulated grade (sachets, capsules, sticks)
- **daily dose**
800 mg/day (Nutrient Reference Value for calcium in the EU)
- **stability**
18 months shelf life (36 months for granulated grade)
- **certificates**
Halal, Kosher, Vegetarian



INDICATIONS
BONE HEALTH
MUSCLE FUNCTION
DENTAL HEALTH

advantages:

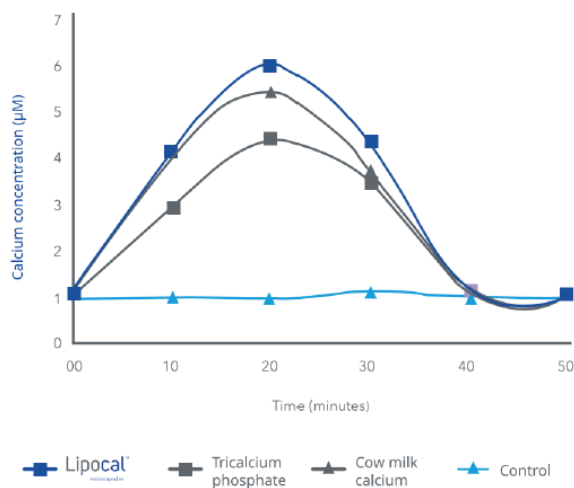
- microencapsulation improves dispersibility
- high calcium concentration (33.7-39.6 %)
- high bioavailability (more bioavailable than milk calcium)
- non-animal source of calcium
suitable for vegetarians

authorized health claims in the EU for calcium:

- calcium is needed for normal **growth** and **development of bone** in children
- maintains normal **bones** and teeth
- contributes to normal blood clotting
- contributes to normal energy-yielding metabolism
- contributes to normal muscle function
- contributes to normal neurotransmission
- contributes to the normal function of digestive enzymes
- has a role in the process of cell division and specialization

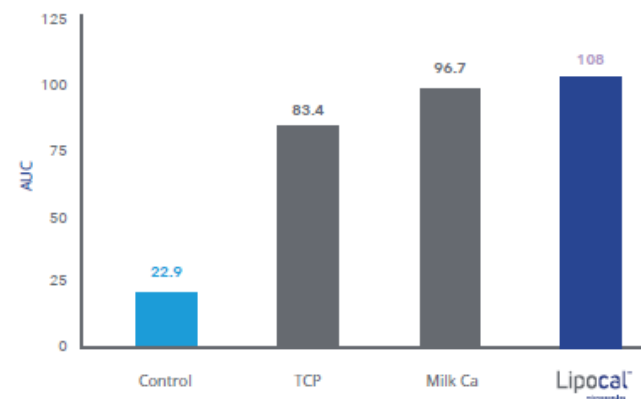
preclinical study results:

- assessment of intestinal absorption and bioavailability of calcium in animal model (guinea pigs)
- comparison of bioavailability of calcium from three sources: tricalcium phosphate (TCP), Lipocal™ microcapsules and dairy calcium
- 3.43 mg calcium/kg body weight orally, blood sampling up to 50 min after the intake



outcomes:

- faster increase in calcium blood concentration profile is observed with Lipocal™ microcapsules compared to other sources
- Lipocal™ is 41% more bioavailable than TCP and 15% more than milk calcium





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