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 CollaMouv® – Joint & Mobility Innovation Drinkable Shots

An elderly man with glasses and a blue t-shirt is sitting on a large grey exercise ball in a living room. He is holding a light blue resistance band with both hands, pulling it taut in front of him. The room has a blue wall, a lamp, and some plants in the background. The floor is wooden, and there is a blue mat and some blue dumbbells on the floor.

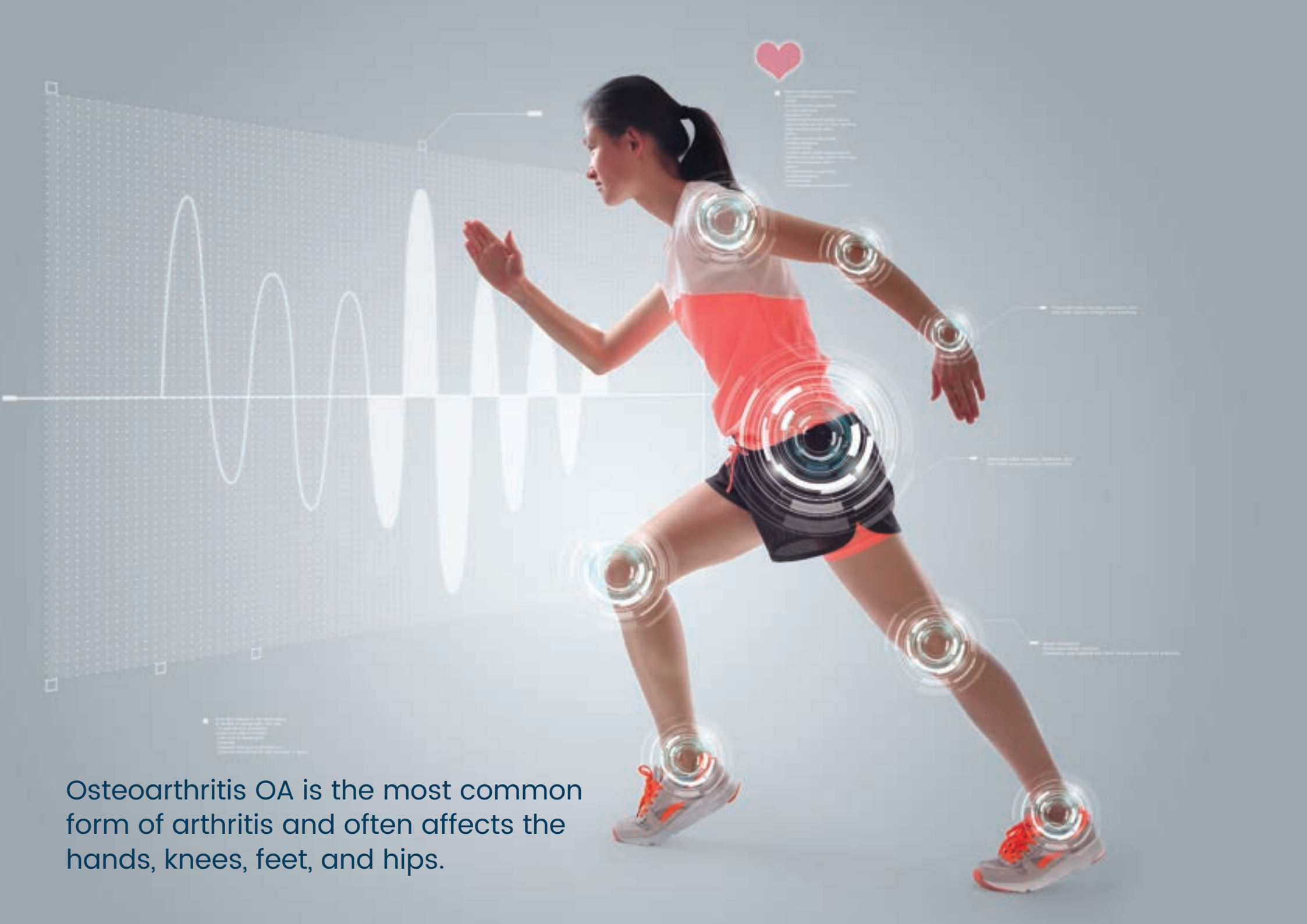
Lose the extra burden,
Gain the functioning
Collagen

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Osteoarthritis; Epidemiology and Risk Factors





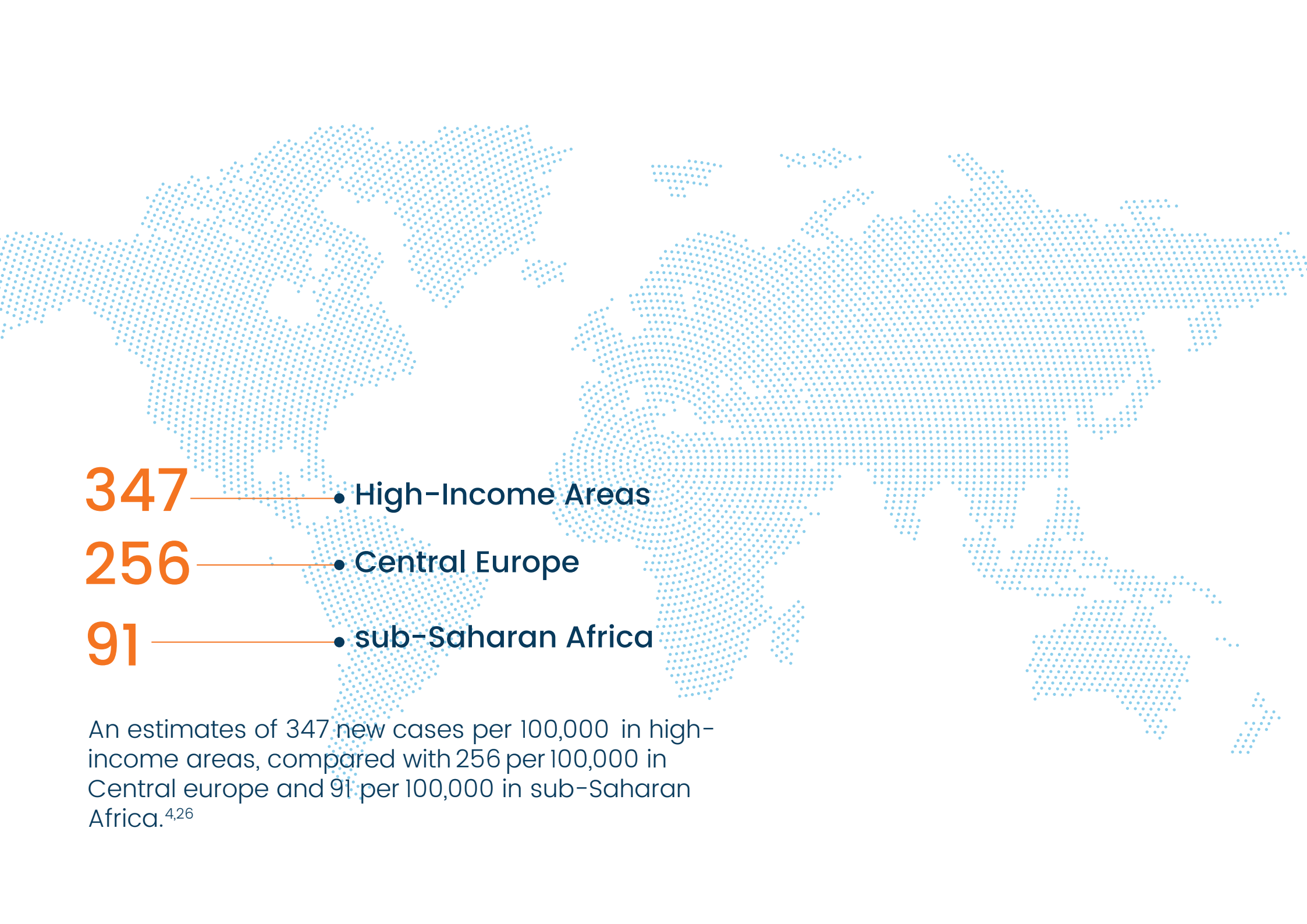
Osteoarthritis OA is the most common form of arthritis and often affects the hands, knees, feet, and hips.



Osteoarthritis of the knee is the most common joint disorder worldwide. The estimated population prevalence varies from,

4^{to} 50%

depending on age, gender distribution and disease definition. These discrepancies may be due to differences in race, lifestyle, or socioeconomic background.^{1,2,3} Patients with OA suffer mostly from pain, stiffness, discomfort, joint function impairment, and reduced quality of life. Osteoarthritis's Incidence rates vary according to regions, The prevalence is higher in high-income countries compared with low-income countries.



347 — • High-Income Areas

256 — • Central Europe

91 — • sub-Saharan Africa

An estimates of 347 new cases per 100,000 in high-income areas, compared with 256 per 100,000 in Central europe and 91 per 100,000 in sub-Saharan Africa.^{4,26}

Risk factors; Gender

Female gender is associated with a higher prevalence and severity of OA. A large meta-analysis demonstrated a greater risk in women for prevalent and incident knee and hand OA as well as incident hip OA compared with men²⁹.

In addition, women were found to have more severe knee OA than men, particularly after menopause^{28,29}.



Osteoarthritis and the Age

In the past, it was believed that the link with age was due to 'wear and tear' of articular cartilage by continuous mechanical stress; we now know, however, that OA involves an active response to injury comprising remodelling of articular cartilage and subchondral bone, in addition to synovial inflammation and damage to other joint structures, such as ligaments and menisci.³⁰



Risk factors; Age

The prevalence of osteoarthritis increases indefinitely with age.¹⁰ Despite this fact, a considerable percentage of this incidence are now occurring at as early age as 18 years old. Approximately 14 percent of adults aged 25 and older have symptomatic OA of at least one joint.²⁷ Osteoarthritis is no longer perceived as a geriatric-associated disease.

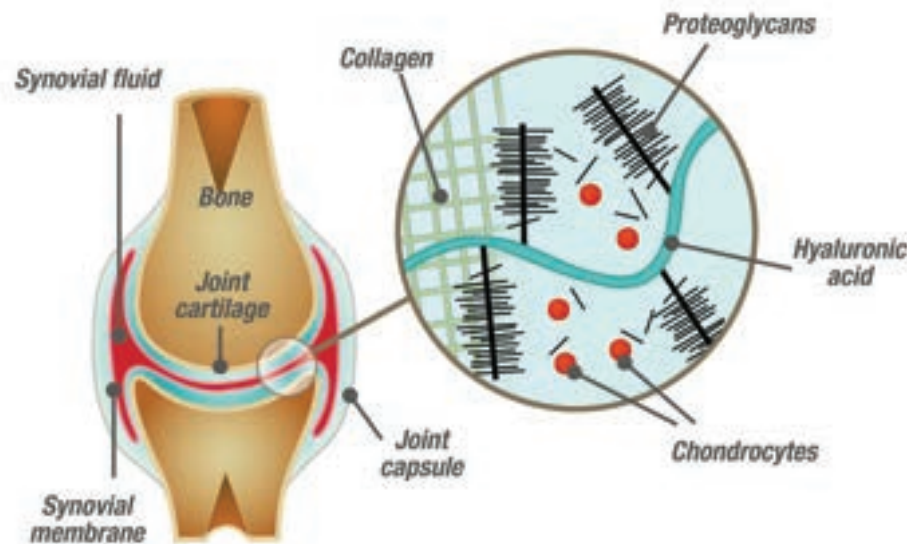
Worldwide estimates are



14% of adults aged 25 and older have symptomatic OA.

The Synovial fluid

Hyaluronic acid is the substance in the synovial fluid that provides viscosity, but it requires the presence of a large mucinous protein called proteoglycan (also known lubricin) to provide a low-friction state and protect the joint surface from shear stresses⁴. The collagen type II fibers provide the tensile strength and form a network that restrains the very hydrophilic proteoglycans that provide resiliency. Thus, the collagen plays a salient role in protecting joints cartilage by maintaining the intactness of the synovial fluid and the tensile strength.



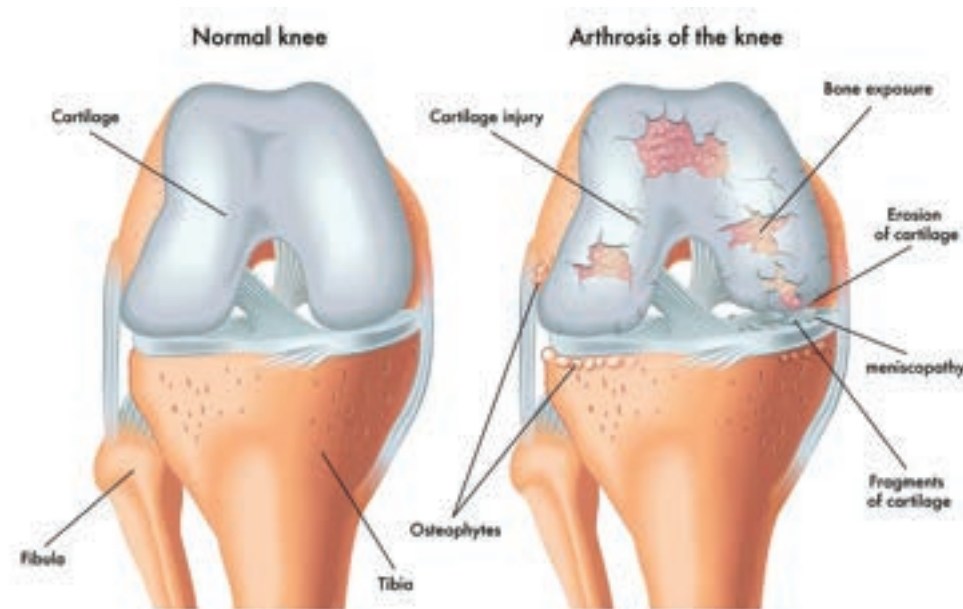
Inflammation is a key element in the pathogenesis of OA

Synovitis (inflammation of the synovium) is a critical characteristic of OA and is often considered the driver of the OA process. However, inflammatory processes are initiated via mediators that are released not just by the synovium but by bone and cartilage too.³¹ Anti-inflammatory medications are the mainstay of OA treatment and to improve patient's functionality.

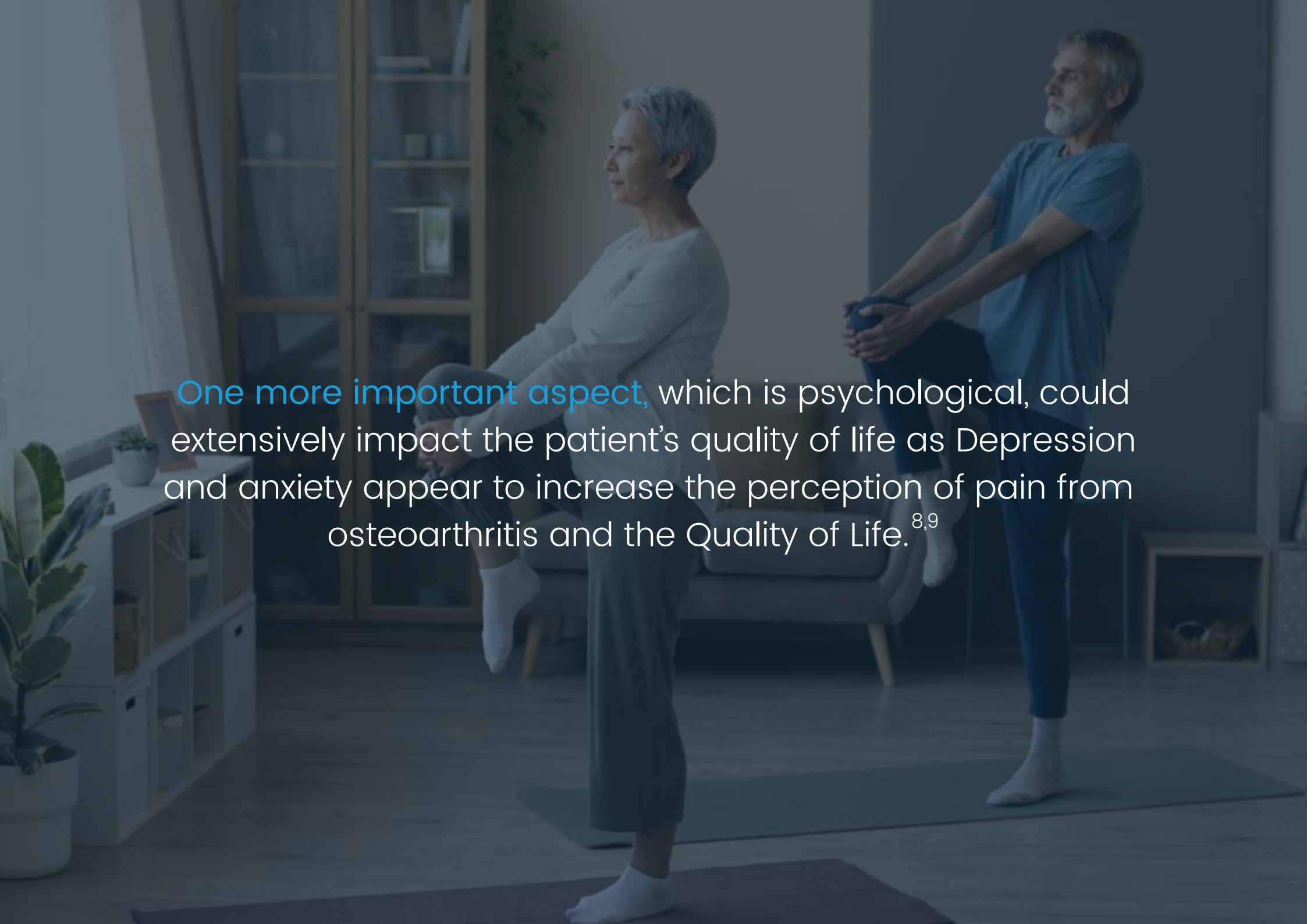


OA affects the entire joint: the cartilage is damaged, the underlying subchondral bone structure is remodelled, and a chronic inflammation of the synovium develops.

reference: Osteoarthritis: A review. Ashford S, Williard J Nurse Pract. 2014 May 12; 39(5):1-8.



One of the most interesting clinical features of osteoarthritis is the lack of correlation between its severity as determined by X-rays and the degree of pain. In some cases the joint appears essentially normal, with little if any joint space narrowing, yet the pain can be excruciating. On the other hand, there are cases where there is tremendous deformity, yet little if any pain. In fact, about 40% of individuals with the worst X-ray classification for osteoarthritis are pain free.⁵

An elderly couple is performing yoga in a modern living room. The woman, on the left, is wearing a light grey long-sleeved top and dark pants, holding her right knee with both hands. The man, on the right, is wearing a blue t-shirt and dark pants, also holding his right knee. They are standing on dark yoga mats. The background features a large window with a wooden frame, a grey sofa, and a white storage unit with a potted plant on top. The overall atmosphere is calm and serene.

One more important aspect, which is psychological, could extensively impact the patient's quality of life as Depression and anxiety appear to increase the perception of pain from osteoarthritis and the Quality of Life.^{8,9}

Guidelines

Initially the ACR recommends the nonpharmacologic approach and to promote weight reduction and physical activity in order to obtain adequate pain relief alongside intermittent dosing of OTC, acetaminophen, and NSAIDs.

If no adequate pain relief could be achieved then the use of topical/oral NSAIDs, or intra-articular corticosteroid injections may be considered. The ACR recommends against the use of Glucosamine in patients with any form of Osteoarthritis (ex. knee, hip, and/or hand OA).

While Chondroitin sulfate is strongly recommended against in patients with knee and/or hip OA, and as in combination products that include glucosamine and chondroitin sulfate but is conditionally recommended for patients with hand OA only.

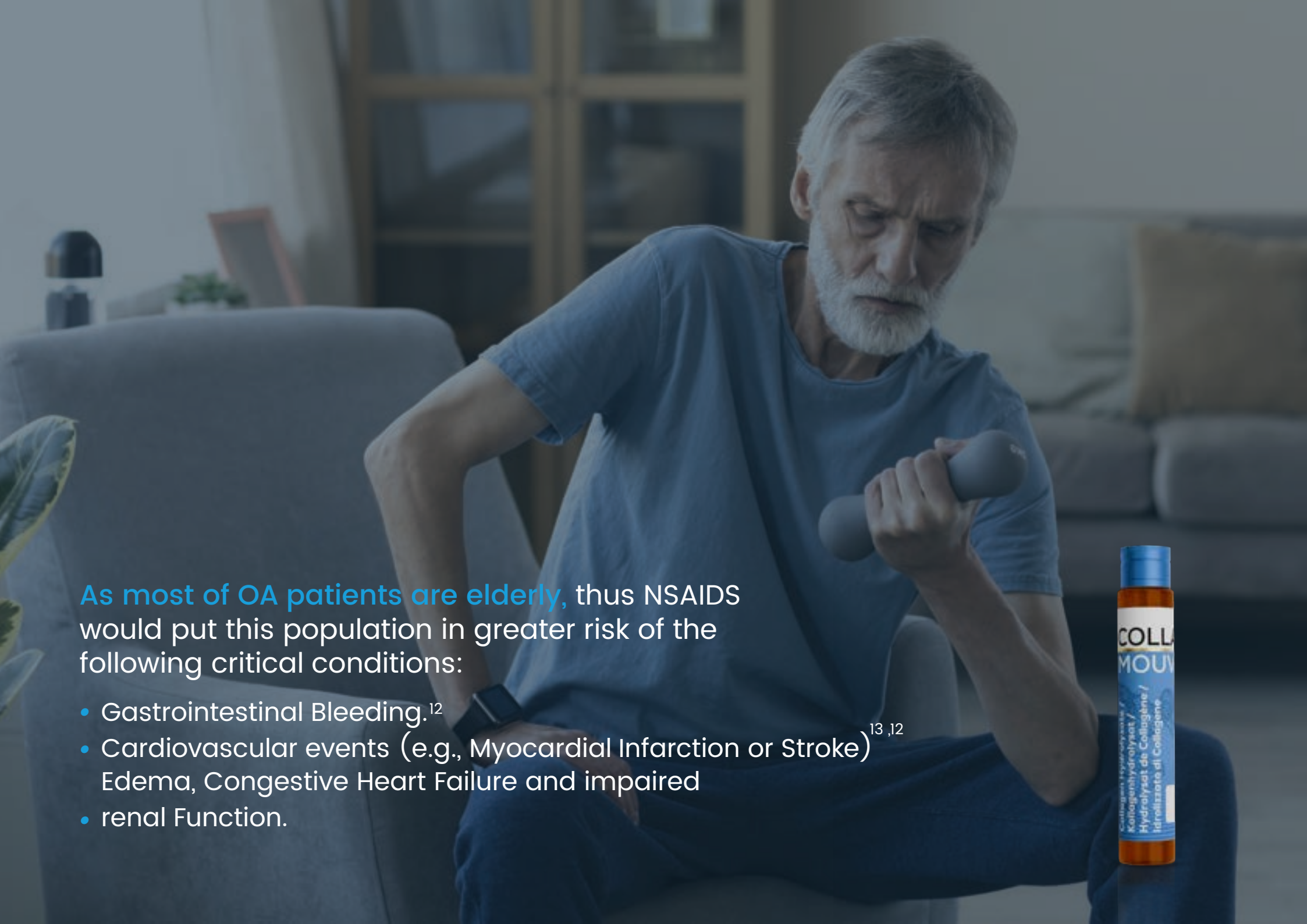


A person is running on a track, wearing a white and orange athletic top, dark shorts, and grey sneakers with orange laces. The background is a blurred green field and trees, suggesting an outdoor setting. The image has a warm, golden-hour light filter.

The ACR (the American College of Rheumatology)

Guidelines recommend NSAIDs as the mainstay of the Pharmacological Management of OA in order to obtain adequate pain relief and improves mobility.

NSAIDs appear to suppress the symptoms of osteoarthritis but accelerate its progression.¹²



As most of OA patients are elderly, thus NSAIDS would put this population in greater risk of the following critical conditions:

- Gastrointestinal Bleeding.¹²
- Cardiovascular events (e.g., Myocardial Infarction or Stroke)^{13,12}
Edema, Congestive Heart Failure and impaired
- renal Function.



Osteoarthritis and Mortality

Individuals with OA (defined both symptomatically and radiographically) at the knee or the hip show a 55% excess in all-cause mortality.



Diabetes (95% increased risk)



Cardiovascular disease (38% increased risk)



Cancer (128% increased risk)



The presence of walking disability at baseline (48% increased risk)

are independently associated with the excess in all-cause mortality.³¹

Importantly, deaths from cardiovascular causes are higher in patients with walking disability due to OA (72% higher), even after adjustment for baseline covariates, indicating that there is an interplay between the underlying OA and the additional co-morbid conditions, which result in a higher risk of mortality.

Thus, although the main clinical symptoms of OA are pain and disability, the consequences of the disease are much more far reaching.

Thus a need for an effective and safe management of osteoarthritis (OA) for the millions of people has emerged.

General Principles of Osteoarthritis management

The principles of chronic disease management apply to the care of patients with osteoarthritis (OA) and are based on the following: care should be continuous, tailored to patients according to individual needs, goals, and values, and be patient-centered; decision-making should be based on the best evidence available, with prioritization of the safety of the patient²⁷.

Patient's safety should be prioritized.

Goals of Osteoarthritis Therapy

- Alleviate or eliminate joint pain through inflammation suppression.
- Improve or restore joint function and mobility.
- Improve muscle strength to protect cartilage, ligaments and the joint capsule.
- Prevent and reduce damage to joint cartilage, bone, ligaments, muscles and local nerves.

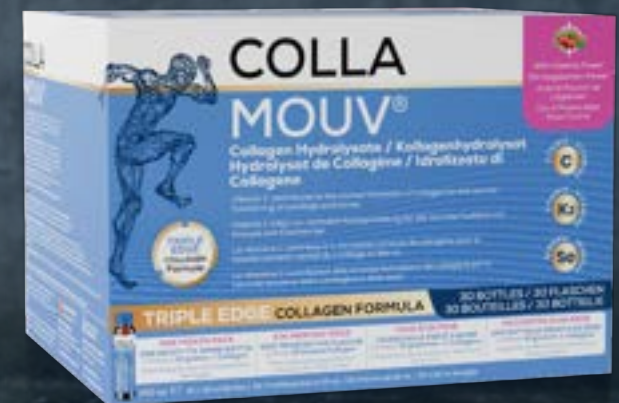
COLLAMOUV[®]

DRINKABLE SHOTS

The uniqueness
of the formula.

(Hydrolyzed Collagen Type II, Rosehip Extract, Vitamin K2, Vitamin C, and Selenium)

Lose the extra Burden,
gain the functioning Collagen



CollaMouv® //

DRINKABLE COLLAGEN TYPE II WITH CONCENTRATED ROSEHIP AND VITAMIN C

CollaMouv® Supports joints and bones health.

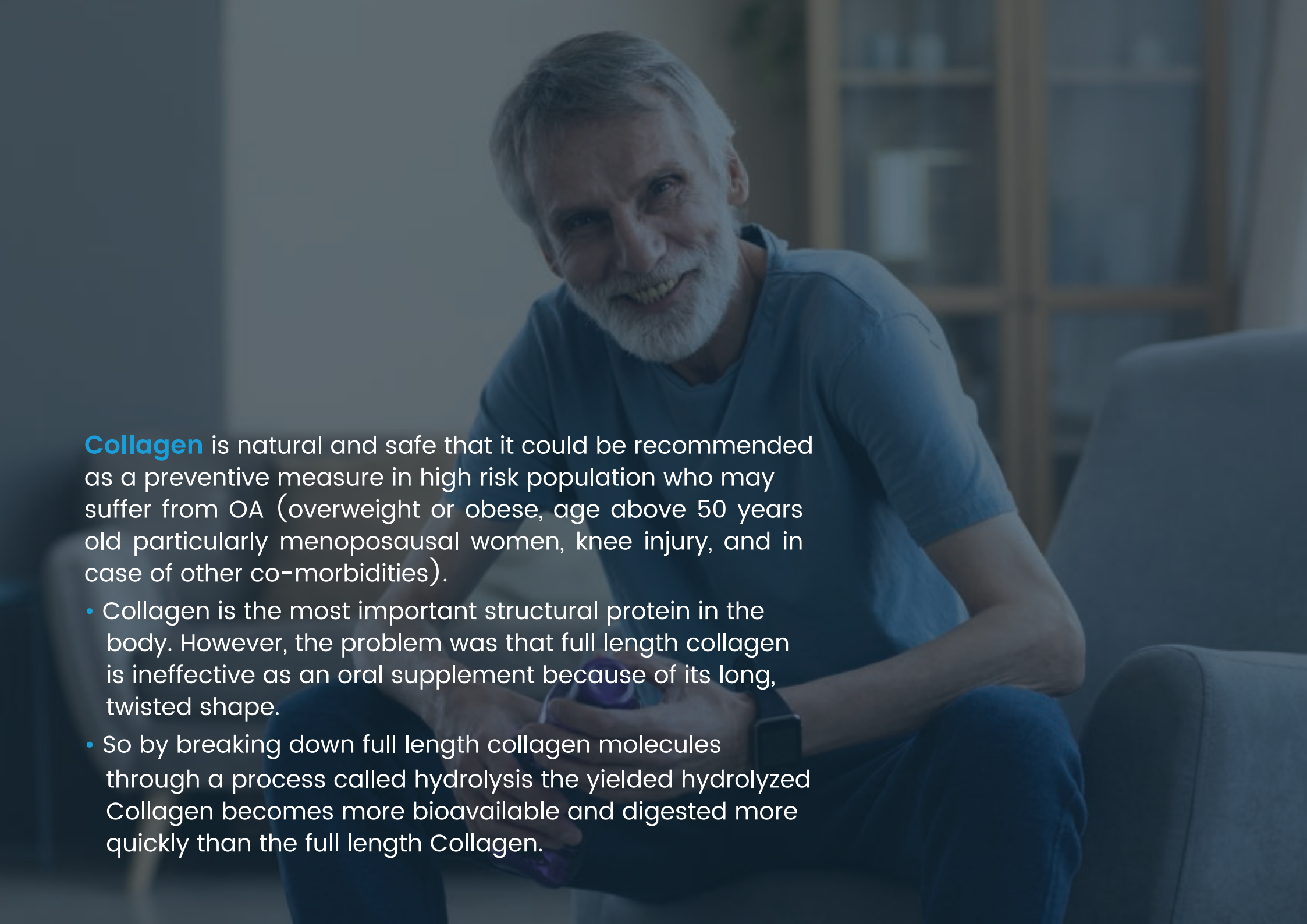
CollaMouv® Helps reduce joint pain associated with osteoarthritis.



A woman with short grey hair is performing a yoga pose, likely Warrior II, in a living room. She is wearing a white t-shirt and dark purple leggings. Her arms are raised and clasped together above her head, and her legs are in a wide stance. The background shows a modern living room with a grey sofa, a wooden bookshelf, a potted plant, and a small table. The lighting is soft and natural, suggesting daytime.

The unique formula of **COLLAMOUV®** is combining Hydrolyzed collagen type II that repairs and regenerates joint cartilage, Rosehip extract that considerably suppresses the synovial inflammation, Vitamin K2 which is necessary to prevent cartilage calcification and osteophytes formation, along with Vitamin C, and Selenium as essential anti-oxidants protecting the cartilages. Such formula turned out to be the promising Solution that shall bring effectiveness and safety together.

Collagen Hydrolysate emerged as the right and safe Game-Changer that could help millions to avoid burdening themselves with extra Co-morbidities due to NSAIDs treatment, and to revitalize the functioning of their joints.



Collagen is natural and safe that it could be recommended as a preventive measure in high risk population who may suffer from OA (overweight or obese, age above 50 years old particularly menopausal women, knee injury, and in case of other co-morbidities).

- Collagen is the most important structural protein in the body. However, the problem was that full length collagen is ineffective as an oral supplement because of its long, twisted shape.
- So by breaking down full length collagen molecules through a process called hydrolysis the yielded hydrolyzed Collagen becomes more bioavailable and digested more quickly than the full length Collagen.

CollaMouv® //

25 ml X 14 Drinkable Shots

Lose the Extra Burden, Gain the Functioning Collagen.

Collagen Fortified with Rosehip for better Results

About CollaMouv®

CollaMouv® contains Unique and effective formula that combines Hydrolyzed Collagen, Rosehip Extract, Vitamin C, Vitamin K2, and Selenium.

- With only one Serving per day, CollaMouv® provides 10 g of collagen hydrolyzed type II, the main component of Joints and Cartilage.
- The vitamin C contained in CollaMouv® Drinkable Shots makes a valuable contribution to normal collagen formation along with the Collagen type II and therefore supports bone and cartilage functions. Collagen is also important for our skin.
- Rosehip concentrate in CollaMouv® has strong and proven anti-inflammatory properties that help reducing the pain and discomfort in joints while moving.
- The proven Rosehip anti-inflammatory effect helps improve compliance and better Outcome of the collagen formation.
- Delicious and Pleasant Taste of Red Berry Flavourt

Storage:

Store in room temperature below °25C in a dry place.

Direction of use:

One COLLAMOUV® bottle per day before breakfast.

Shake well before use.

COLLAMOUV® is a dietary supplement that should not be used as a substitute for a balanced diet.

COLLAMOUV® is to be used for adults

18 years and older.

Warnings:

Keep out of reach of the Children.

Do not exceed the daily recommended dose of one bottle (10 g Collagen).

CollaMouv® is a Registered Trademark of Deutsche Heilmittel GmbH, Germany.

CollaMouv® //



- 10g Hydrolyzed Collagen Type II
- 20µg Vitamin K2
- 500mg Rosehip Concentrate
- 60mg Vitamin C
- 35mg Selenium

Nährwertangaben

Eine Trinkampulle mit 25 ml enthält	Pro 25 ml	Pro 100 ml	NRV%*
Energie	220 kJ/52 kcal	880 kJ/208 kcal	2.6 %
Eiweiß	11.0 g	44.0 g	22 %
Kollagen-Hydrolysat	10.0 g	40.0 g	--
Kohlenhydrate	2.70 g	10.80 g	1 %
Salz	0.14 g	0.56 g	2.33 %
Fett	0.13 g	0.50 g	0.19 %
konzentrierte Hagebutte	500 mg	2.0 g	--
Vitamin C	60 mg	240 mg	60 %
Sucralose	6 mg	24 mg	--
Selen	35 microgram	140 microgram	64 %
Vitamin K2	20 microgram	80 microgram	20 %

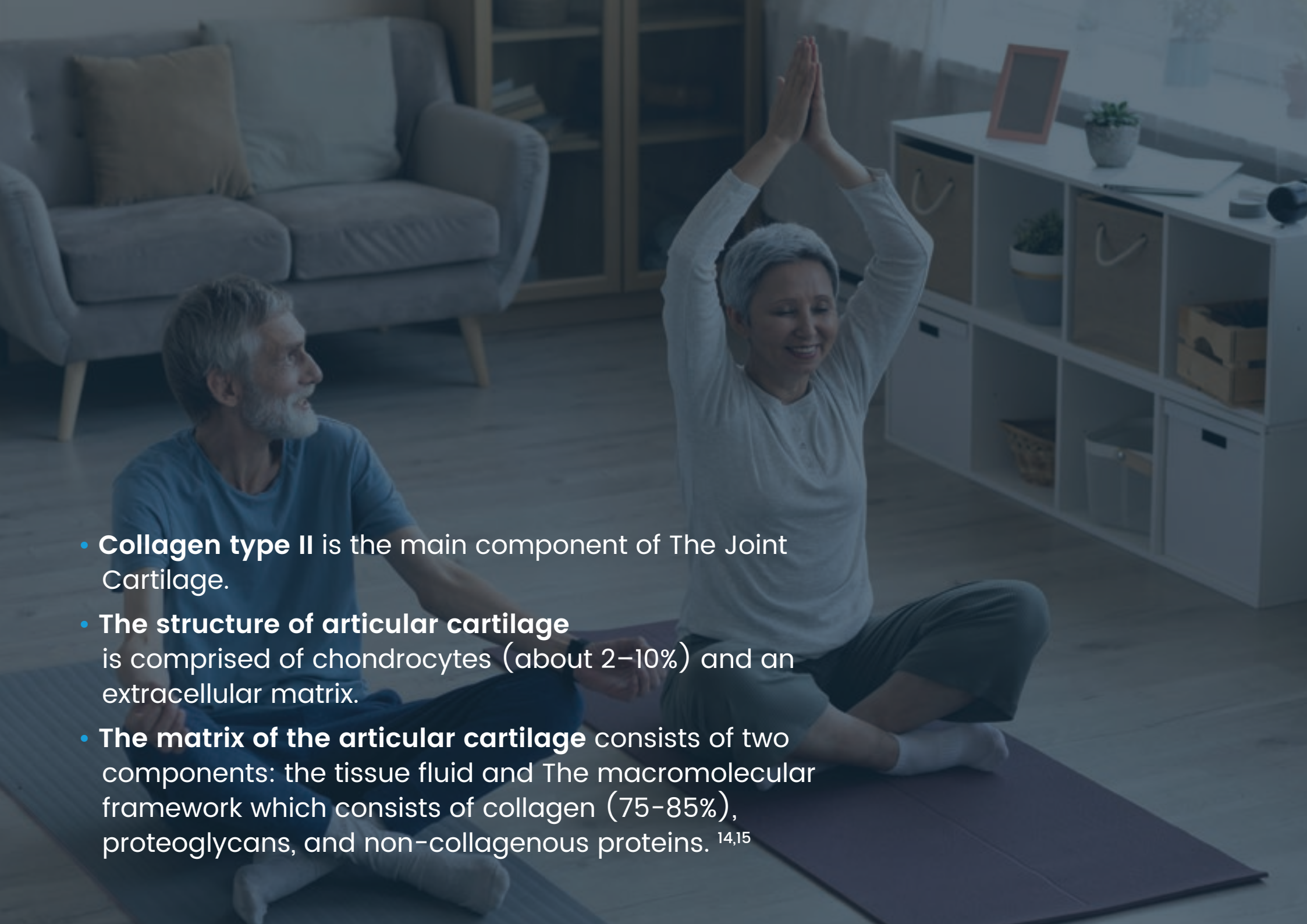
*Referenzmenge gemäß VO (EU) Nr. 1169/2011

Nutritional Fact Sheet

One bottle of 25 ml contains	Per 25 ml	Per 100 ml	RDA %*
Energy	220 kJ/52 kcal	880 kJ/208 kcal	2.6 %
Protein	11.0 g	44.0 g	22 %
Hydrolyzed Collagen II	10.0 g	40.0 g	--
Carbohydrate	2.70 g	10.80 g	1 %
Salt	0.14 g	0.56 g	2.33 %
Fat	0.13 g	0.50 g	0.19 %
Rosehip concentrated	500 mg	2.0 g	--
Vitamin C	60 mg	240 mg	60 %
Sucralose (Artificial Sweetener)	6 mg	24 mg	--
Selenium	35 microgram	140 microgram	64 %
Vitamin K 2	20 microgram	80 microgram	20 %

*Recommended Daily Allowance

The % Daily values are based on a 2000 calories diet.

- 
- An elderly couple is practicing yoga in a modern living room. The man, with a grey beard and wearing a blue t-shirt, is sitting on a blue mat in a seated position. The woman, with short grey hair and wearing a white long-sleeved shirt and dark pants, is sitting on a purple mat in a seated position with her hands raised above her head in a prayer position. The background features a grey sofa, a wooden bookshelf, and a white storage unit with various items on it.
- **Collagen type II** is the main component of The Joint Cartilage.
 - **The structure of articular cartilage** is comprised of chondrocytes (about 2–10%) and an extracellular matrix.
 - **The matrix of the articular cartilage** consists of two components: the tissue fluid and The macromolecular framework which consists of collagen (75–85%), proteoglycans, and non-collagenous proteins. ^{14,15}

Clinical Evidence for Hydrolyzed Collagen type II

Collagen supplementation as a complementary therapy for the prevention and treatment of osteoporosis and osteoarthritis: a systematic review

A systematic review of literature was carried out, focusing on scientific articles that studied the action of collagen hydrolysate on cartilage and bone, as well as their possible therapeutic support in cases of osteoarthritis and osteoporosis. The PubMed, MEDLINE, LILACS and SciELO databases were consulted, and the descriptors used for research were collagen hydrolysate, combined with osteoporosis, osteoarthritis, bone, cartilage, aging, ingestion and supplement. The search period was from January 1994 to May 2014. The review was conducted from January to May 2014.

Method

Articles published in English and Portuguese in the period of 1994 to 2014 were considered. Results: the sample comprised nine experimental articles with in vivo (animals and humans) and in vitro (human cells) models, which found that the use of different doses of collagen hydrolysate were associated with the maintenance of bone composition and strength, and the proliferation and cell growth of cartilage.

Conclusion

Collagen hydrolysate has a positive therapeutic role in osteoporosis and osteoarthritis: potentially increasing bone mineral density, having a protective effect on articular cartilage and, primarily, providing symptomatic relief of pain. Although there is no consensus in the scientific literature searched on the collagen hydrolysate dosage to be administered, it was noted that with a daily supplementation of 8g there was an increase in glycine and proline concentration in plasma.

Also, daily doses equivalent to 12g promoted a significant improvement in the symptoms of osteoarthritis and osteoporosis.

References

https://www.scielo.br/scielo.php?script=sci_arttext&pid=S1809-98232016000100153

Clinical Evidence for Hydrolyzed Collagen type II

Effect of collagen supplementation on osteoarthritis symptoms:

a meta-analysis of randomized placebo-controlled trials

2019 Mar;43(3):531-538. doi: 10.1007/s00264-018-4211-5. Epub 2018 Oct 27.

Purpose:

Osteoarthritis (OA) is one of the most common causes of disability and a prevalent chronic disease. The use of collagen is growing due to the satisfactory results in the treatment of OA. However, the possible beneficial effects of collagen for the treatment of OA are currently controversial. The aim of the present meta-analysis was to evaluate the effect of collagen-based supplements on OA symptoms.

Methods:

PubMed-Medline, Scopus, and Google Scholar databases were searched for randomized placebo-controlled trials evaluating the effect of orally administered collagen on OA symptoms using the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) scale and/or the Visual Analog Scale (VAS). Meta-analysis was conducted using a random-effects model and a generic inverse variance method. Heterogeneity was tested using the I² statistic index.

Results:

Collagen treatment showed a significant reduction in the score of total WOMAC index (WMD - 8.00; 95% CI - 13.04, - 2.95; $p = 0.002$). After subgroup analysis of the WOMAC subscores, the collagen supplementation revealed a significant decrease in the stiffness subscore (WMD - 0.41; 95% CI - 0.74, - 0.08; $p = 0.01$), whereas the pain (WMD - 0.22; 95% CI - 1.58, 1.13; $p = 0.75$) and functional limitation (WMD - 0.62; 95% CI - 5.77, 4.52; $p = 0.81$) subscores did not have significant differences. Finally, a significant reduction was found in the VAS score after collagen administration (WMD - 16.57; 95% CI - 26.24, - 6.89; $p < 0.001$).

Conclusion:

The results of this meta-analysis showed that collagen is effective in improving OA symptoms by the decrease of both total WOMAC index and VAS score.

References

Osteoarthritis Cartilage. 2011 May;19(5):478-82 - PubMed
Lancet. 2012 Dec 15;380(9859):2163-96 - PubMed
J Am Acad Orthop Surg. 2016 Nov;24(11):e148-e162 - PubMed
Osteoarthritis Cartilage. 2011 Apr;19(4):399-405 - PubMed
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Osteoarthritis Cartilage. 2011 Apr;19(4):399-405 - PubMed
Arthritis Care Res (Hoboken). 2012 Apr;64(4):465-74 - PubMed

Clinical Evidence for Hydrolyzed Collagen type II

Efficacy and tolerance of enzymatic hydrolysed collagen (EHC) vs. glucosamine sulphate (GS) in the treatment of knee osteoarthritis (KOA).

2011 Mar;35(3):341-8. doi: 10.1007/s00264-010-1010- Epub 2010 Apr 19. 13-week, multicentre, randomised, parallel, double-blind study.

One hundred men and women volunteers aged ≥ 40 years with knee osteoarthritis (KOA) were randomized to once daily enzymatic hydrolysed collagen (EHC) 10 g or glucosamine sulphate (GS) 1.5 g for 90 consecutive days. A total of 105 patients were recruited into this study, of whom five were excluded. The remaining 100 patients were randomised into the Enzymatic Hydrolyzed Collagen (EHC) group and GS groups. Four patients withdrew due to failure in the follow-up and transportation problems ($n = 2$), and another one had a domestic accident during the study. Thus, each group comprised 47 (in the EHC group) and 46 (in the GS group) completers. Follow-up took place after two weeks and after one, two and three months. Primary [visual analogue scale (VAS), Western Ontario and McMaster Universities (WOMAC Index)] and secondary outcomes variables, assessed at weeks two, four, eight and 12, were KOA pain intensity measured by quadruple visual analogue scales in the target knee, the WOMAC total score index, patient's and investigator's global assessments of disease activity, joint assessment, use of rescue medication (ibuprofen 400 mg tablets) and assessment of Quality of Life index (SF-36 Questionnaire). Safety and tolerability were also evaluated. Clear improvement was observed in both joint pain and symptoms in patients with KOA treated with the EHC (CollaMouv[®]) and significant differences were observed. Mean reductions from baseline for EHC 10 g daily and GS 1.5 g, respectively, were KOA pain intensity reduction in the target knee for EHC ($p < 0.05$): WOMAC index decrease ≤ 15 points at the last visit (day 90) for EHC (CollaMouv[®]) in 16 patients (34.04%) ($p < 0.05$) and for glucosamine in six patients (13.04%); total score index for painful joints: EHC (CollaMouv[®]) 1.6 ($p < 0.05$) and glucosamine 1.8; total score index for swollen joints: EHC (CollaMouv[®]) 0.5 ($p < 0.05$) and glucosamine 0.7; patient's global assessment of efficacy as the sum of improvement good + ideal: 80.8% for EHC and 46.6% for glucosamine ($p < 0.05$). EHC (CollaMouv[®]) showed superior improvement over GS in the SF-36 Questionnaire in the Physical Health Index (42.0 for CollaMouv[®] and 40.0 for glucosamine). The incidence of adverse events was similar in both groups. Both EHC and GS were well tolerated.

References

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3047656/>

Activity of enzymatic hydrolysed collagen (EHC) (CollaMouv®) and glucosamine sulfate (GS) on joint improvement assessment

	Glucosamine sulphate					Enzymatic hydrolyzed collagen (Colatech®)				
	M	SD	Me	Range	No.	M	SD	Me	Range	No.
Visit 2 (day 0)										
Total painful joints ²	2.4	1.5	2.0	0.0-7.0	46	2.8	1.9	2.0	0.0-7.0	47
Total swollen joints ^{1,2}	1.1	1.1	1.0	0.0-4.0	46	0.9	1.0	1.0	0.0-4.0	47
Score index, painful joints ^{1,2}	3.4	2.1	3.0	0.0-9.0	46	4.5	3.1	4.0	0.0-11.0	47
Score index, swollen joints ²	1.3	1.3	1.0	0.0-5.0	46	1.3	1.5	1.0	0.0-8.0	47
Visit 3 (day 15)										
Total painful joints ²	2.3	1.5	2.0	0.0-7.0	46	2.7	1.7	2.0	0.0-7.0	47
Total swollen joints ^{1,2}	1.0	1.1	1.0	0.0-4.0	46	1.1	1.1	1.0	0.0-4.0	47
Score index, painful joints ^{1,2}	3.3	2.1	3.0	0.0-8.0	46	4.1	2.7	4.0	0.0-11.0	47
Score index, swollen joints ²	1.3	1.4	1.0	0.0-5.0	46	1.4	1.5	1.0	0.0-8.0	47
Visit 4 (day 30)										
Total painful joints ²	2.4	1.3	2.0	0.0-6.0	46	2.3	1.7	2.0	0.0-7.0	47
Total swollen joints ^{1,2}	1.1	1.1	1.0	0.0-3.0	46	0.9	1.0	1.0	0.0-4.0	47
Score index, painful joints ^{1,2}	3.2	1.6	3.0	0.0-7.0	46	3.1	2.4	3.0	0.0-9.0	47
Score index, swollen joints ²	1.2	1.3	1.0	0.0-4.0	46	1.1	1.3	1.0	0.0-7.0	47
Visit 5 (day 60)										
Total painful joints ²	2.1	1.0	2.0	0.0-5.0	46	1.9	1.5	1.0	0.0-6.0	47
Total swollen joints ^{1,2}	1.0	1.0	1.0	0.0-4.0	46	0.6	0.9	0.0	0.0-4.0	47
Score index, painful joints ^{1,2}	2.6	1.1	3.0	0.0-5.0	46	2.3	1.9	2.0	0.0-8.0	47

assessment M median, ME median range, SD standard deviation, No. number of joints, GLM generalized linear model

Statistically significant differences were found for the follow-up values between the two groups (glucosamine vs. Colatech®) (GLM, repeated measures; $p < 0.05$).

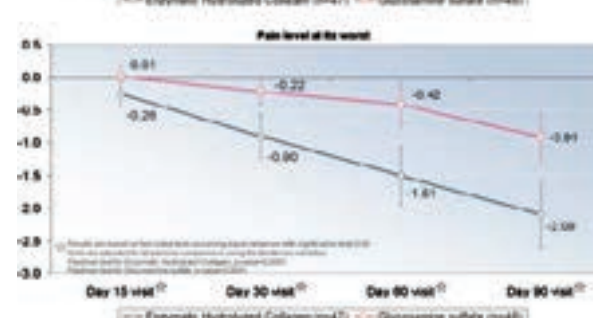
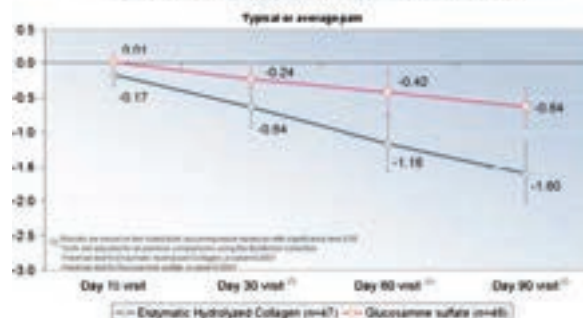
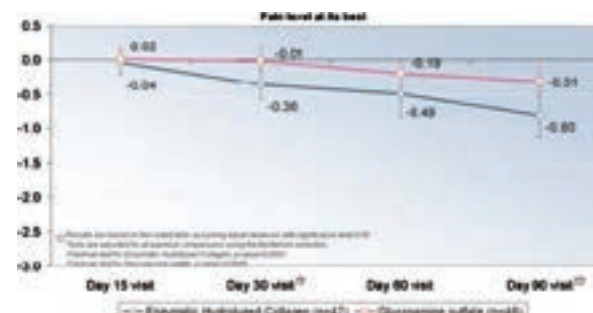
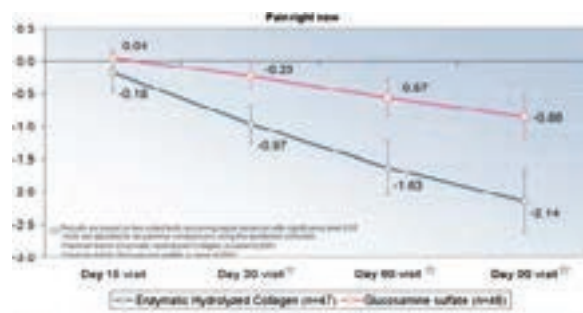
Statistically significant differences were found for the follow-up values in each group for each treatment (GLM, repeated measures; $p < 0.05$).

No statistical significant differences were found for the follow-up values in each visit between two groups (GLM, repeated measures; $p < 0.05$).

Clinical Evidence for Hydrolyzed Collagen type II

Analgesic activity of enzymatic hydrolysed collagen (EHC) (CollaMouv®) and glucosamine sulphate (GS) on the quadruple visual analogue scale (VAS).

Quadruple VAS measurements (pain right now, average pain, pain at its best, and pain at its worst) that assessed pain at the end of weeks two, four, eight and 12 after the start of the treatments showed that the pain significantly decreased when compared with their own baseline values and that EHC was statistically more active ($p < 0.05$) than GS at two weeks (pain right now) ($p < 0.05$) and at four ($p < 0.05$), eight ($p < 0.05$), and 12 ($p < 0.05$) weeks in all evaluated VAS (Table 5, and Fig. 1). Analgesic efficacy of study treatments, assessed by VAS, showed significant ($p < 0.05$) differences between groups during and after three months of treatment. In the group treated with EHC, 68% of patients showed a clear improvement in pain assessment (score improvement of ≥ 20 mm) compared with 37% of patients treated with GS (chi-square test, $p < 0.05$).



Clinical Evidence for Hydrolyzed Collagen type II

Impact on WOMAC Indexthe WOMAC index presented a greater reduction ($p < 0.05$) in the EHC group than in the GS group.

The health status score of the WOMAC scale showed significant differences between patient groups at 90 days of treatment ($p < 0.05$). A ≥ 15 -point improvement in WOMAC scores was seen in 34.8% of patients treated with EHC compared with 13.3% of patients treated with GS (chi-square test; $p < 0.05$).

Activity of enzymatic hydrolysed collagen (EHC) (CollaMouv[®]) and glucosamine sulphate (GS) on improvement in health status assessed by the Western Ontario and McMaster Universities (WOMAC) index

	GS		Colatech [®]	
	No.	%	No.	%
WOMAC Index decrease ^a	45	100.0	46	100.0
≥ 15 (decrease more or equal 15 points)	6	13.3	16	34.8
< 15 (decrease less to 15 points)	39	86.7	30	65.2

^aStatistically significant differences were found between the groups (χ^2 test; $p < 0.05$)

What is Rosehip?

Rosehips are the berry fruits of the dog rose or wild briar rose (*Rosa canina* L), a scrambling rose species native to Europe, northwest Africa and western Asia. Rosehip has been used traditionally to treat a range of conditions including diarrhoea, bladder infections and diabetes. In food, rosehips are used in teas, jams, jellies and soups, and as a natural source of vitamin C. The vitamin C content of fresh rosehips is higher than that found in citrus fruits. Rosehip is also high in folate and contains vitamins A, B3, D and E along with flavonoids, carotenoids, betasitosterol, fructose, malic acid, tannins, magnesium, zinc, copper and numerous other phytochemicals including recently characterised galactolipids.³³⁻³⁷



Therapeutic activities of rosehip

Antioxidant activity

Rosehip is rich in polyphenolic compounds such as proanthocyanidins and flavonoids such as quercetin and catechin.⁴² The high phenolic and flavonoid content of rosehips has been observed to correlate with antioxidant activity⁴² and when rosehip extract containing these phenolics is deprived of vitamin C it still shows considerable antioxidant activity.⁴³ This activity includes protective effects against oxidative stress, and enhanced activity of antioxidant enzymes.

Anti-inflammatory activity

Rosehip has been found to have anti-inflammatory and anti-nociceptive activities in several in vivo experimental models with synergistic interactions between compounds.⁴⁵ The anti-inflammatory power of rosehip is reported to be similar to that of indomethacin, although its mode of action is different.⁴⁶ Much of the anti-inflammatory action of rosehip has been attributed to high quantities of galactolipids, a class of compounds recently shown to possess anti-tumour promoting and anti-inflammatory activity, both in vitro and in vivo.³⁶

In contrast to nonsteroidal anti-inflammatory drugs (NSAIDs) and aspirin, rosehip has anti-inflammatory actions that do not have ulcerogenic effects and do not inhibit platelets or influence the coagulation cascade or fibrinolysis,⁵⁰ thereby avoiding potential side effects for patients who may be at increased risk from the gastrointestinal or cardiovascular side effects of NSAIDs.⁵¹

Clinical Evidence for Rosehip effectiveness

effectiveness A meta-analysis of the three randomised controlled trials of osteoarthritis patients included 287 patients with a median treatment period of 3 months.

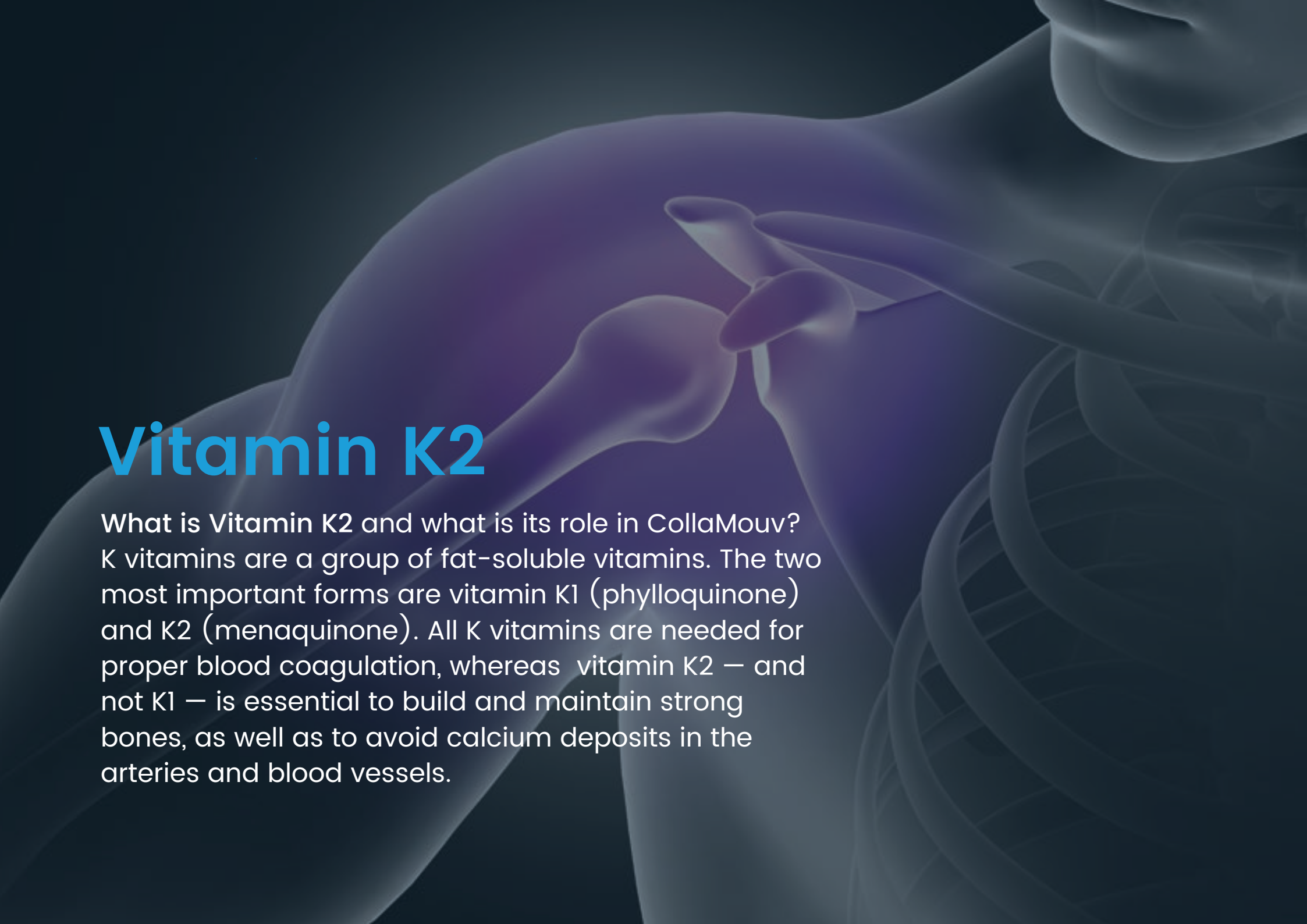
This meta-analysis reported that treatment with patented rosehip powder consistently reduced pain scores and that patients were twice as likely to respond to rosehip (as indicated by a reduction in WOMAC pain) compared to placebo (effect size of 0.37, 95% CI: 0.13–0.60).³²

Rosehip vs Glucosamine in osteoarthritis

A more recent meta-analysis provides an indirect comparison of the pain reducing effect of glucosamine hydrochloride and standardised rosehip powder for osteoarthritis. This analysis, which was based on three studies on glucosamine hydrochloride involving a total of 933 patients and the three studies described above involving 287 patients, concluded that rosehip is more efficacious than glucosamine hydrochloride in reducing pain in osteoarthritis patients.³³

Conclusion

The growing evidence base for rosehip suggests that this traditional herbal remedy has a high safety profile. Existing research (both in vitro and in vivo) suggests that standardized rosehip powder may offer an effective first line therapy and is a viable replacement or supplement for conventional drug therapies such as NSAIDs in osteoarthritis and possibly other inflammatory diseases.



Vitamin K2

What is Vitamin K2 and what is its role in CollaMouv?
K vitamins are a group of fat-soluble vitamins. The two most important forms are vitamin K1 (phylloquinone) and K2 (menaquinone). All K vitamins are needed for proper blood coagulation, whereas vitamin K2 — and not K1 — is essential to build and maintain strong bones, as well as to avoid calcium deposits in the arteries and blood vessels.

Importance and Mechanism of action

During bone remodelling, the body releases calcium into the bloodstream to meet its metabolic needs, allowing the bone to alter size and shape as it grows or repairs from smaller injuries.⁵² Two types of cells regulate remodelling: osteoblasts build up the skeleton, whereas osteoclasts break it down. As long as the two cells are in balance, a healthy bone structure is maintained. Osteoblasts also produce osteocalcin, a K-dependent protein that helps to take calcium from the blood circulation and bind it to the bone matrix, making the skeleton stronger and less susceptible to fracture. But newly made osteocalcin is inactive; it needs vitamin K to become fully activated and bind calcium.⁵³ This same process that makes vitamin K2 a bone health supporter makes it an invaluable nutrient for cardiovascular health. Matrix Gla-protein (MGP) is the most potent modulator of arterial calcification known today. It also binds calcium but, in doing so, it protects blood vessels from calcification, but only when activated, which requires adequate vitamin K2 intakes.⁵⁴ Vitamin K2's ability to help the body properly utilise calcium is what makes it an essential nutrient for both bone and heart health.

Clinical Evidence for Vitamin K2.

- Vitamin K2 is widely used for the treatment of osteoporosis in Japan, based upon clinical trial data showing improvement in BMD and a reduction in fracture risk in post-menopausal Japanese women.⁵⁵⁻⁵⁷
- Vitamin K2 supplementation delays post-menopausal bone loss. High doses of Vitamin K2 (45-90 mg/day) in combination with vitamin D3 (320 IU/day) and calcium (500 mg/day) in post-menopausal women between 50 and 60 years reduced bone loss at the femoral neck by 35% to 40% compared to a control group. This happened in a period of 3 years. It is stated that if these effects continued over decades, lifelong supplementation could postpone fractures by up to 10 years.⁵⁹
- Although vitamin D3 has been known as the bone vitamin because it puts the osteocalcin gene into action and acts swiftly on bones, the slower acting vitamin K2 has been recognized as being just as important for bone maintenance. The human skeleton is fully replaced every 8 to 10 years with good, dense bones, and these two vitamins have a big role in the process.

The long-term effects of Vitamin K2 (180 µg/day) supplementation on arterial stiffness were investigated in a double-blind, placebo-controlled trial. Healthy post-menopausal women (n=244) received either placebo (n=124) or MK-7 (n=120) for three years. In conclusion, long-term use of Vitamin K2 supplements improves arterial stiffness in healthy post-menopausal women, especially in women having a high arterial stiffness.⁵⁸

Conclusion

By far the most important form of vitamin K is K2 particularly for bone and heart health. This vitamin provides major protection from bone loss (osteoporosis) and pathologic calcification. Calcification of the arteries and soft tissues is a major known consequence of aging.⁴

COLLAMOUV®

PRODUCT KNOWLEDGE

Lose the extra Burden,
gain the functioning
collagen



Role of Vitamin C and Selenium as antioxidants in Osteoarthritis treatment

Reactive oxygen species (ROS) in OA

A free radical is a molecule with an unpaired electron in its outermost orbit. In biological systems, a free radical that involves oxygen is termed a reactive oxygen species (ROS) but the term ROS is used loosely for oxidants such as peroxides.

Normal physiological processes result in the generation of ROS such as peroxide, superoxide, hydroxyl radical and peroxynitrite. Thus, ROS occur normally in the body at very low concentrations. They are a necessary evil since our body needs them for survival but, when in excess, they may have deleterious effects.

Our body gets rid of the excess ROS using natural antioxidants such as vitamin C (ascorbate), Selenium, vitamin E, glutathione and various enzymes.

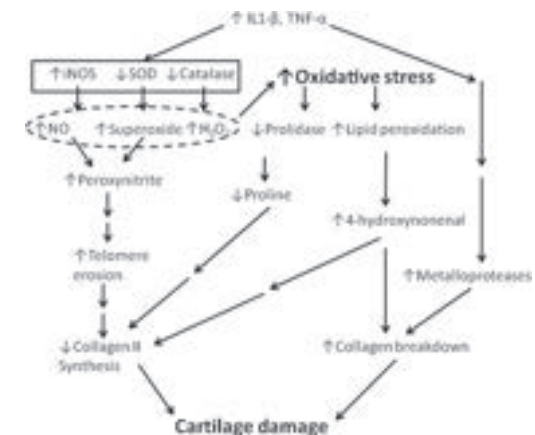
High levels of oxidative agents may damage the cells like that of the joint cartilages by oxidising lipids and by altering DNA and protein structure which may induce or exacerbate their erosions, and hence, the osteoarthritis.

Antioxidant supplements and OA

The role of ROS in the pathophysiology of knee OA provides for the rationale that suppressing the ROS levels with the appropriate antioxidant supplements may retard the progress of the OA.

Moreover, previous researches proved that high intake of antioxidant micronutrients, especially vitamin C, may reduce the risk of cartilage loss and disease progression in people with OA.

Thus, vitamin C and Selenium are of great importance in OA treatment acting as essential antioxidants, while Vitamin C has another essential role as enhancer of collagen synthesis and absorption.



A man and a woman are in a park, performing a lunge exercise. The woman, on the left, is wearing a red jacket and grey pants. The man, on the right, is wearing a light blue long-sleeved shirt and dark pants. They are both smiling and looking towards the camera. The background shows trees with autumn foliage and a park bench.

COLLAMOUV[®]
and the placebo effect !!

Why not use it to the
patient's advantage?

The placebo response can be defined as the symptomatic improvement prevent from a treatment or intervention that does not result from the substance or intervention itself, but is due to the therapeutic ritual, context, expectations or any other patient, caregiver or environmental factor involved in the treatment. Previously defined as “symptomatic improvement on receiving any inert/non-therapeutic (placebo) intervention(s) compared to those who do not receive it” or “a change in a patient’s illness attributable to the symbolic import of a treatment rather than a specific pharmacologic or physiologic property”.

Knowing that a treatment is being administered, also known as open-hidden paradigm, is one of the most evident findings supporting placebo effect in clinical care. Patients who could see the medication being administered experienced greater symptom relief than when treatment was given in a hidden manner, i.e., without the patient’s knowledge. Interestingly, in this case, no actual placebo has been given.

PLACEBO RESPONSE IN OA

The placebo response is best documented for pain and distress, two main targets in patients with OA[20]. In a systematic review involving 16,364 patients that received placebo in OA, RCTs confirmed that placebo response occurs in OA.

Moreover, the overall Electrical stimulation (ES) for pain relief was 0.51, a very substantial number and greater than most specific effect obtained from any other individual treatment for OA[14].

In a randomized controlled trial of acupuncture for OA, traditional Chinese acupuncture was found not to be superior to sham acupuncture. However, “acupuncturists’ styles had significant effects on pain reduction and satisfaction, suggesting that the analgesic benefits of acupuncture can be partially mediated through placebo effects related to the acupuncturist’s behavior”[29]. Telephone contact is shown to be a useful intervention that can enhance the functional status of OA patients by reducing pain and improving psychological health[30]. Although patients may actually receive useful treatment information by phone, the call itself surely exerts a powerful placebo effect.

The method of delivery is also very important. In general, the more invasive and the more frequently administered an intervention the higher the placebo effect.

COLLAMOUV®

besides being safe and effective option for osteoarthritis, it could reinforce the placebo effect providing better pain relief and psychological comfort.



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COLLAMOUV[®]

Vs OA Goals of therapy



OA Goal of Therapy

CollaMouv[®] effect

Alleviate or eliminate joint pain through inflammation suppression.

- Rosehip has anti-inflammatory actions that do not have ulcerogenic effects and do not inhibit platelets nor influence the coagulation cascade or fibrinolysis.
- A meta-analysis reported that treatment with patented rosehip powder consistently reduced pain scores and that patients were twice as likely to respond to rosehip (as indicated by a reduction in WOMAC pain) compared to placebo.

Improve or restore joint function and mobility.

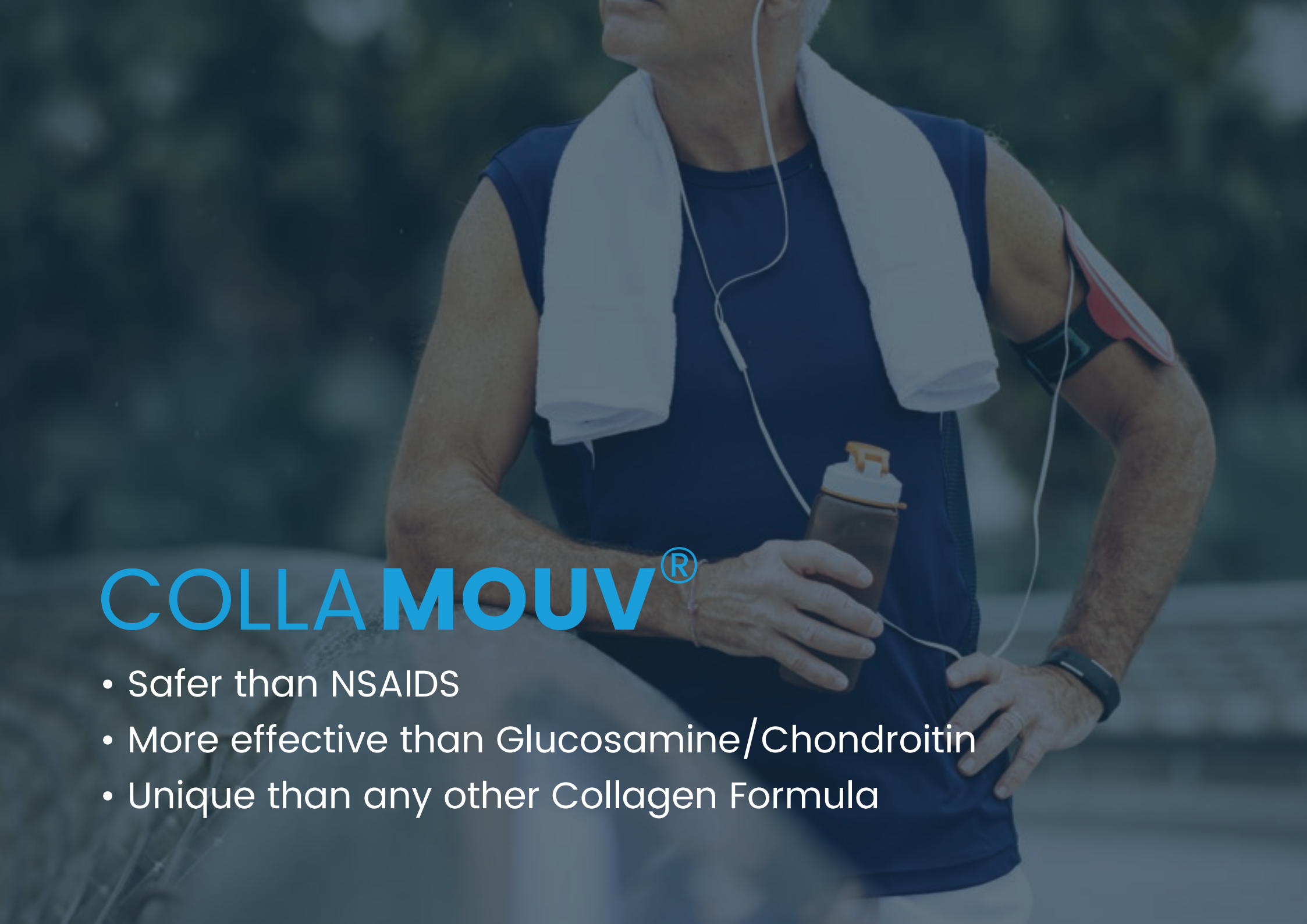
- The matrix of the articular cartilage consists of two components: the tissue fluid and the macromolecular framework which consists of collagen (85-75), proteoglycans, and non-collagenous proteins.
- Collagen Hydrolysate is rapidly absorbed and accumulates in joint cartilage to Stimulate the regeneration of cartilage substance.
- Collagen treatment showed a significant reduction in the score of total WOMAC index. After subgroup analysis of the WOMAC subscores, the collagen supplementation revealed a significant decrease in the stiffness subscore.

Improve muscle strength to protect cartilage, ligaments and the joint capsule.

- Collagen is an important component of muscles. One reason that muscle mass decreases with age is that collagen decreases. Research has already proven that collagen supplements can reverse this aging trend in people diagnosed with sarcopenia, age-related muscle loss.
- One reason collagen may help with muscle mass is that it contains the amino acids arginine and glycine, important building blocks for creatine. There is already plenty of evidence that creatine helps improve muscle mass, build strength, and improve athletic performance. (reference: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2048496/>)

Prevent and reduce damage to joint cartilage, bone, ligaments, muscles and local nerves.

- Vitamin K2's ability to help the body properly utilise calcium is what makes it an essential nutrient for both bone and heart health.
- The intake of antioxidant micronutrients, as vitamin C and Selenium, may prevent and reduce the risk of cartilage loss and disease progression in people with OA.
- Rosehip shows anti-inflammatory as well as antioxidant effects that would maintain joint's intactness by protecting it from the deleterious impact of prolonged inflammation and exposure to superoxide derivatives.

A man in athletic wear, including a blue sleeveless shirt and a white towel draped over his shoulders, is holding a water bottle. He is wearing a black wristband and a black watch. The background is a blurred outdoor setting.

COLLAMOUV[®]

- Safer than NSAIDS
- More effective than Glucosamine/Chondroitin
- Unique than any other Collagen Formula

Clinical Significance per Ingredient

Component	Clinical Benefit
Hydrolyzed Collagen Type II	Constitutes almost %50 of all protein content in Cartilage and %90-85 of articular Collagen in Cartilage.
Rosehip Conc.	Strong Anti-inflamamtory and Pain Relieving effect (Analgeic) similar to Indomethacin.
Vitamin K2	as salient role in redirecting calcium deposits in Joints to bone. Thus, reduced joint inflammation, and better bone & Cartilage Formation.
Selenium	Anti-oxidant that scavenges the Free Radicals that are involved in provoking Mechanically (friction)-induced Osteoarthritis.
Vitamin C	Essential for Production of Healthy Cartilage and slows its erosion. Also enhances Collagen Absorption following oral Intake.

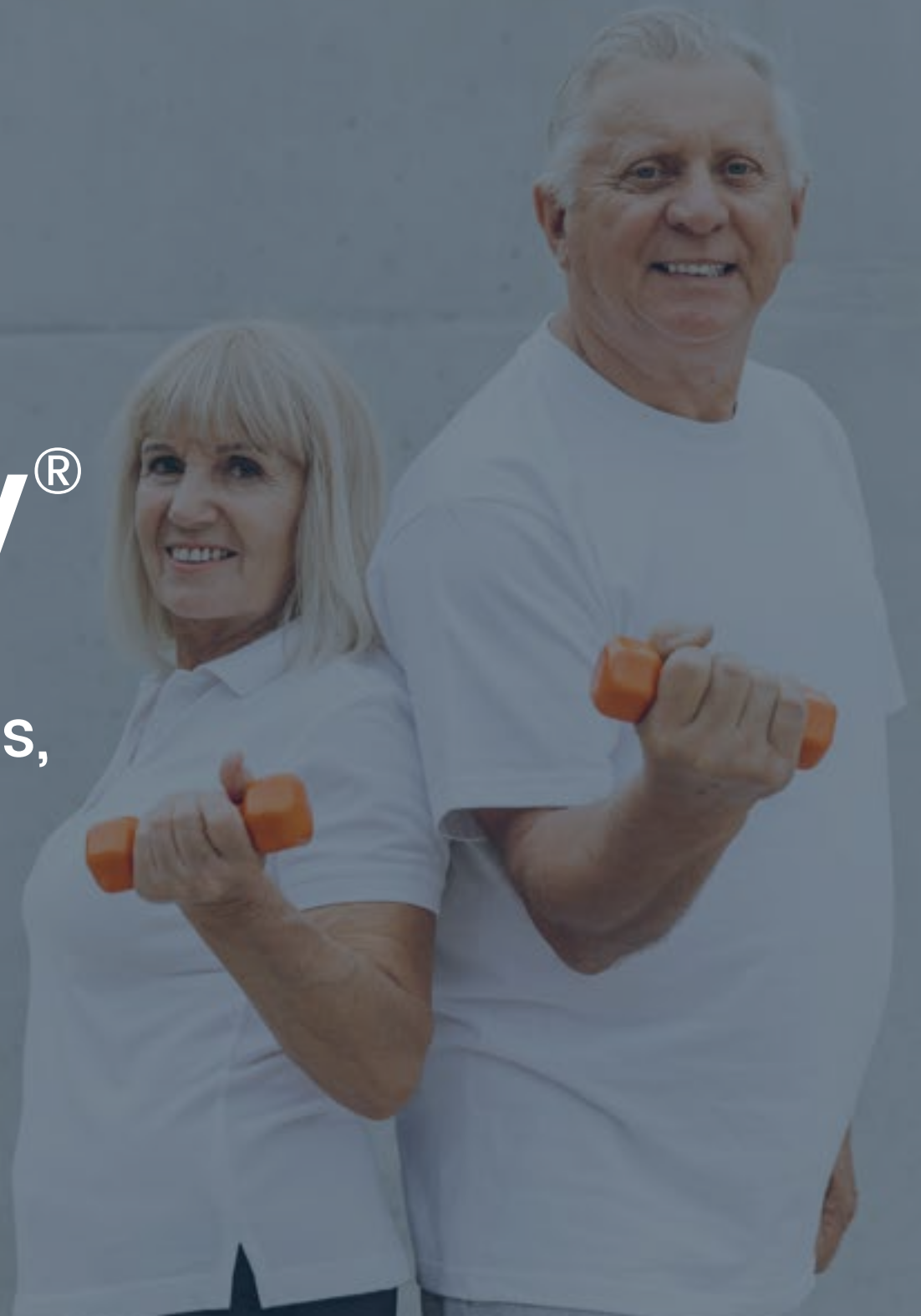
**Based on the
clinical evidence:**

- Hydrolyzed Collagen improves Osteoarthritis symptoms almost 2 times better than Glucosamine/Chondroitin in terms of Total WOMAC score, Patient's global assessment, Total Score Index for Painful joints, and Total Score Index for swollen joints.
- CollaMouv[®] can prevent OA progression and further damage to cartilage due to the proven anti-inflammatory and anti-oxidant effect of the Rosehip.
- The hydrolyzed collagen type II in CollaMouv[®] can increase bone mineral density and muscle mass.
- Rosehip showed documented analgesic effect against arthritic pains.
- The placebo effect has shown positive effect on moral and mental state of OA patients that would lead to decrease in pain perception and improvement of Quality of Life.
- Vitamin K2 has very important role in joint and bone protection by removing the calcium deposits from the cartilage to the bones, besides its role in maintaining healthy cardiovascular system.
- Selenium and Vitamin C are essential anti-oxidants that can prevent the harmful effects of free radicals on the joint bones and cartilages.
- CollaMouv[®] meets all the goals of therapy of Osteoarthritis and can even be used as a safe preventive measure in high risk population to prevent or decrease the risk of having OA.

COLLAMOUV[®]

at the Glance

(Safety, Effectiveness,
and Uniqueness)





Practical, Delicious and Easy to drink



Safe for all age Groups and for long-term use



Collagen Hydrolysate is rapidly absorbed and accumulates in joint cartilage to Stimulate the regeneration of cartilage substance



One Drinkable shot contains 10 g Collagen Hydrolysate, 500 mg Rosehip Extract, 20 mcg Vitamin k2, 60 mg Vitamin C, and 35 mcg Selenium.



Represents a unique combination of not only cartilage-repairing but also cartilage- and bone- protective ingredients: Collagen, Vitamin K2, Vitamin C, and Selenium



NSAIDs appear to suppress the symptoms of osteoarthritis but accelerate its progression.
The rosehip extract provides clinically-approved anti-inflammatory effectiveness without causing serious NSAIDs-related side effects.



Administration of CollaMouv® Drinkable Shots could have positive psychological effect on depressed and desperate patients that would help reducing the perception of pain.



Scientifically tested and proven to promote joint health and alleviate pain in OA Patients



Is made from the finest Sources of Collagen with the Highest Standard of German Quality that earned it a Global reputation.



According to the most recent guidelines of the American College of Rheumatology (ACR), the Glucosamine- and Chondroitin sulphate-containing products are recommended against their use to treat OA due to lack of effectiveness.

An elderly couple is practicing Tai Chi in a park. They are both wearing light blue t-shirts and are in a similar pose, with arms extended horizontally. The man is wearing white shorts and the woman is wearing grey leggings. They are standing on a grey mat on the grass. The background shows a lush green park with many trees and a path.

COLLAMOUV[®]

is helping millions of people around the world to stop burdening themselves either with serious side effects that could result from NSAIDs use or with financial costs of ineffective treatments like glucoamine/chondroitin sulphate.



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