Xenca® Collagen Scientific Studies

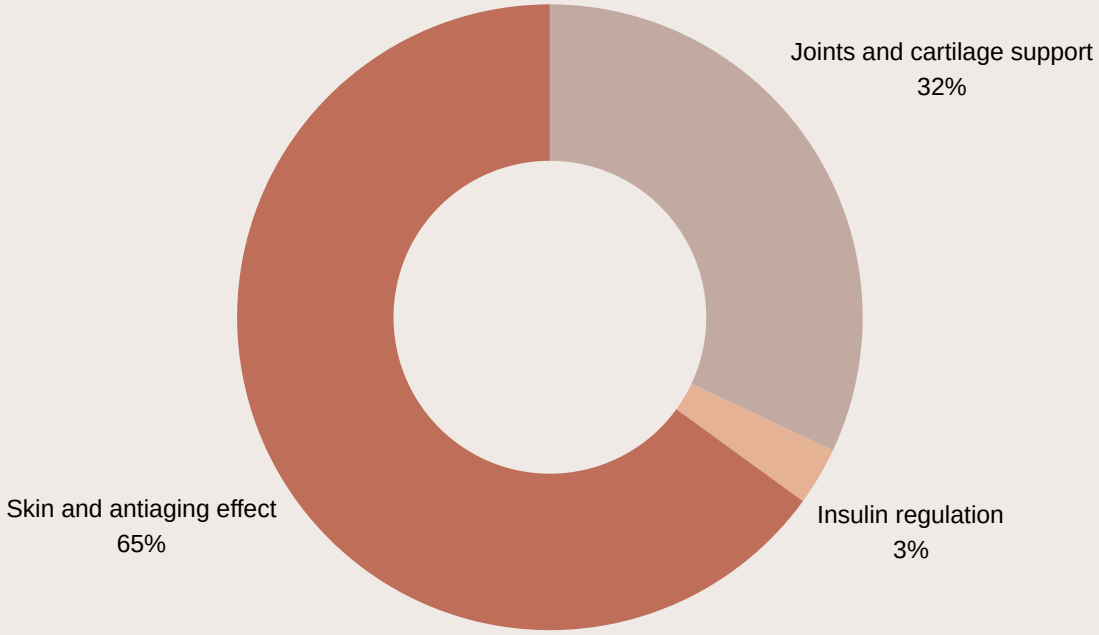
Scientifically-proven bioavailability

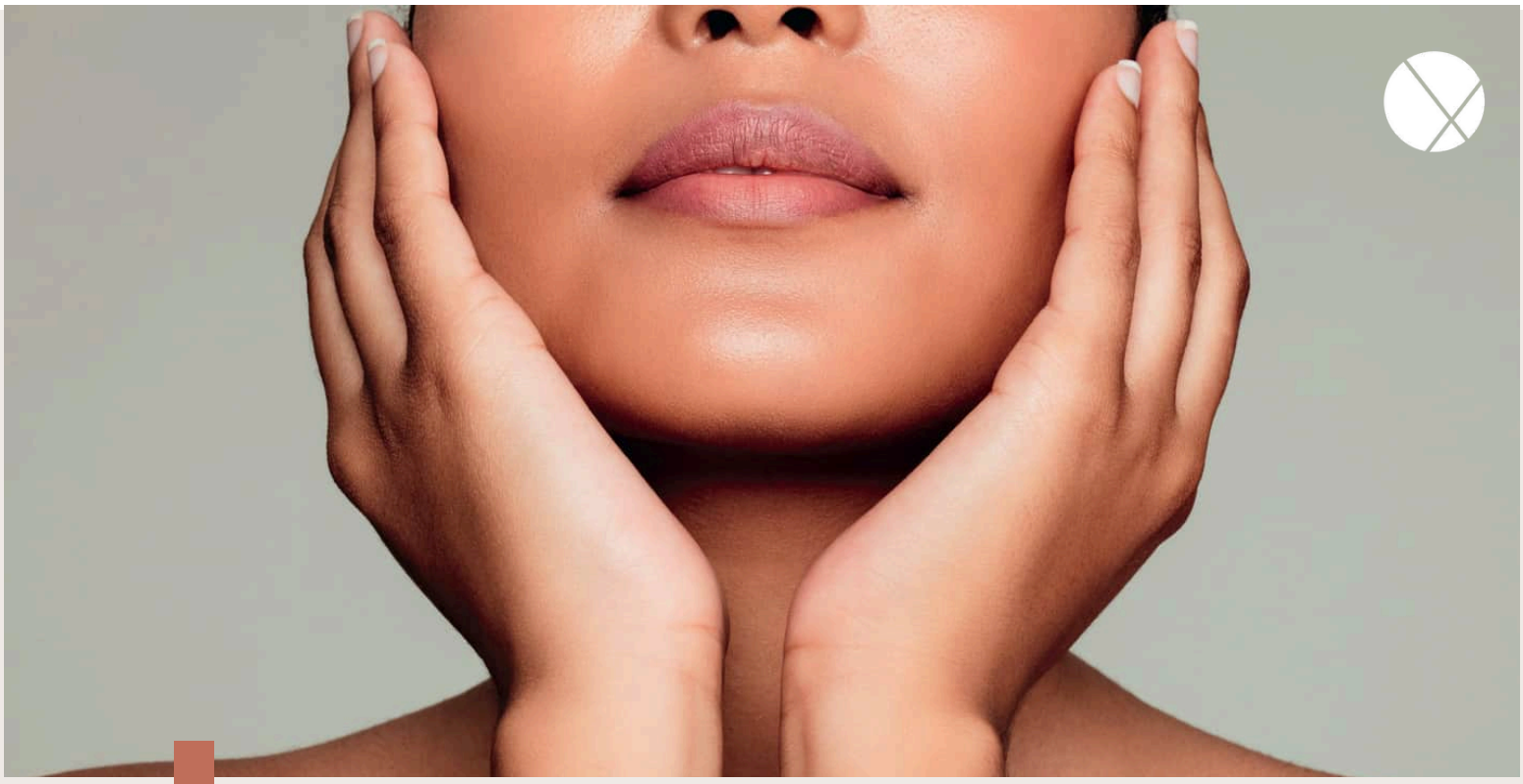
Xenca's Revitalise Collagen peptides are a pure and highly bioavailable protein source, formulated to improve our wellbeing in a wide range of areas, focusing on skin and joint health.

Bioactive peptides are encrypted within Xenca's peptide sequences that can be released during intestinal digestion.

Specific protein fragments are reported to have the potential for improving human health and preventing metabolic diseases through their impact on different factors, such as **skin degradation, joint and cartilage diseases,** blood pressure, **and type-2 diabetes**.

With our study, we aim to demonstrate the bioactivity and bioavailability of Xenca's collagen peptides scientifically.



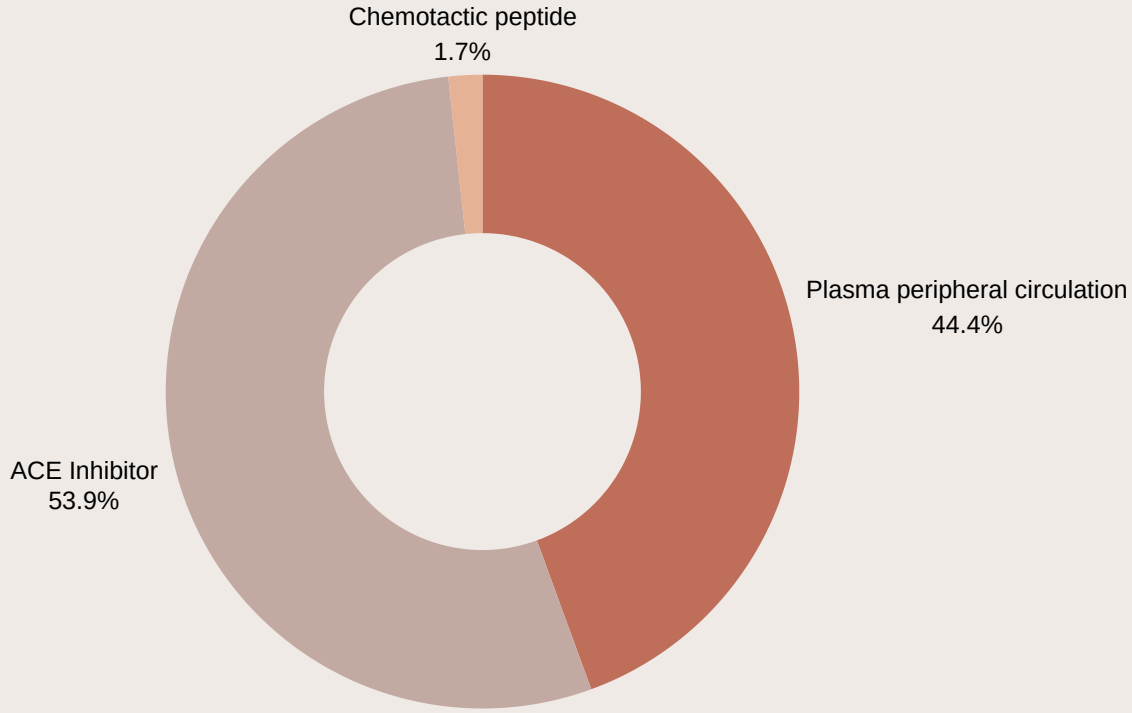


Bioavailability shown on the skin

As we can see in the chart, the study demonstrates the positive effect on the ACE inhibitor, chemotactic peptide, and plasma peripheral circulation.

The ACE inhibitor effect increases the production of collagen type 1 and 3 in the body, provides venous protection and reduces blood pressure. This **increases the availability** of peptides for skin and venous repair.

Simultaneously, the chemotactic peptide supports connective tissue regeneration and the plasma peripheral circulation is improved, providing more blood circulation and increasing the availability of collagen to enhance the **anti-aging effect**.



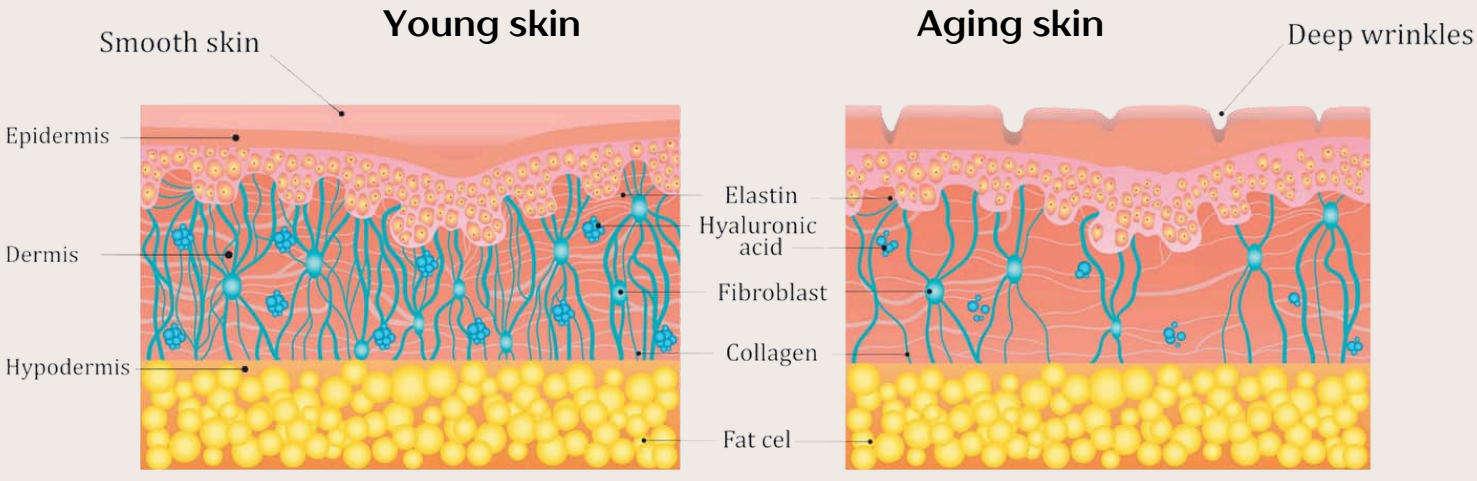
Skin aging prevention

Skin appearance is the primary visual indicator of health and is the part that first presents the external symptoms of aging.

Skin is the largest organ in the body, accounting for approximately 15% of body weight. It is made up of 3 layers: the epidermis, the dermis, and the subcutaneous tissue. The dermis is the central barrier of the skin. It is made up of collagen and elastin.

A significant component of the dermis is collagen, which is responsible for the **structural support of the skin**. With age, the amount of collagen in the skin decreases and leads to the formation of thin wrinkles. Maintaining the amount of collagen is the key to preventing the signs of skin aging.

With our clinical study (NCT05235997), we aim to demonstrate that our collagen peptides – with a consistent intake – can improve the general and structural condition of the skin as well as prevent skin aging.



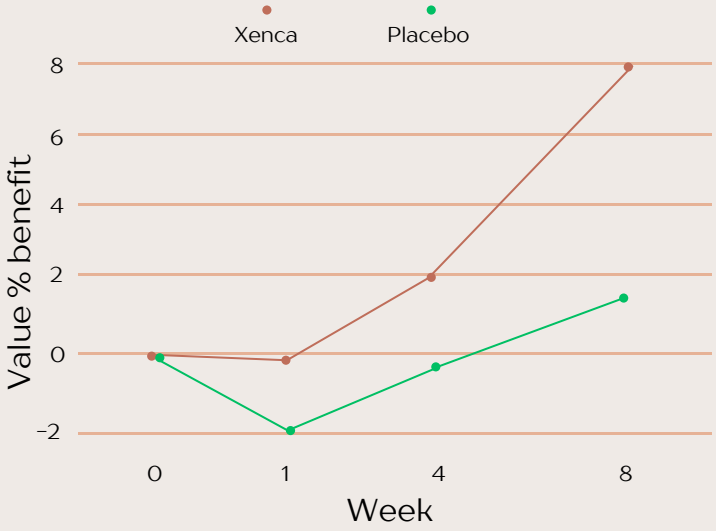
Skin elasticity

As shown in the graph, the improvement of skin elasticity is statistically significant immediately at the beginning of Xenca collagen peptides intake.

When comparing Xenca collagen peptides to the placebo group, the **notable difference** in efficacy is **clearly visible** after a short period of 4 weeks.

Considering these results, the longterm use of Xenca collagen peptides provides a significant benefit to skin elasticity in comparison to the placebo group.

According to the table, the benefit provided by Xenca collagen peptides exceeds 15%, compared to the placebo. The benefits of a regular Xenca collagen intake start from week 1, while it shows a **progressive improvement** until the full potential recovery in week 8.

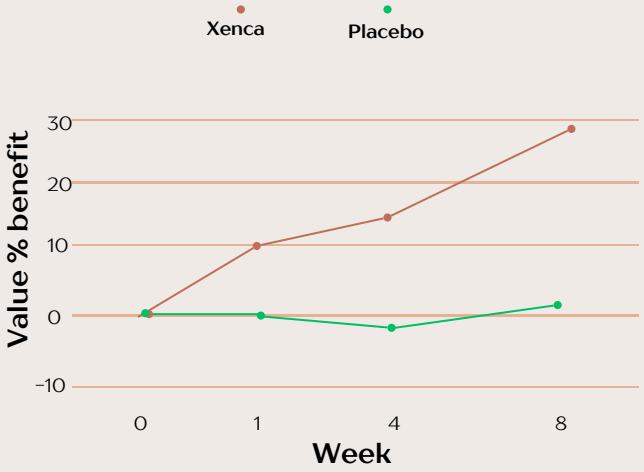


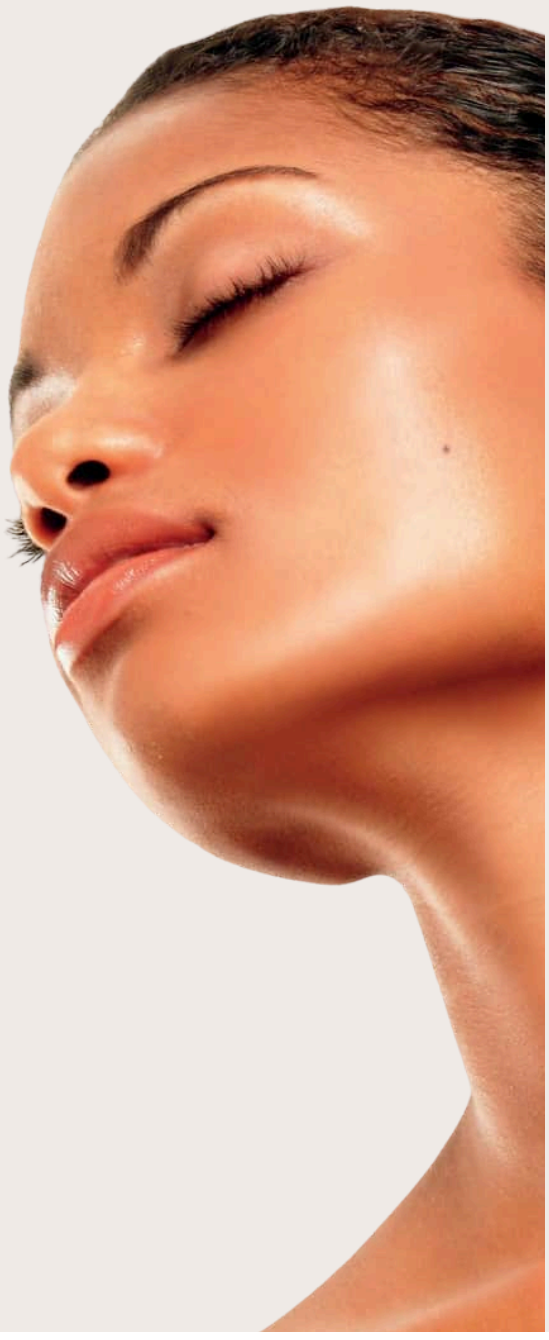
Week	Xenca	Placebo	%
0	39.9474	39.9091	
1	39.8596	39.1296	11.25
4	40.7193	39.6909	28.30
8	42.9825	40.3455	14.39

Skin hydration

As demonstrated in the table below, Xenca collagen peptides have a positive impact on skin hydration. Compared to the placebo, Xenca's collagen beneficial results can first be seen after only one week of regular intake.

The use of Xenca's collagen peptides **increases skin hydration** by roughly 30% in comparison with the placebo group. Especially remarkable is the **exponential improvement** of skin hydration.



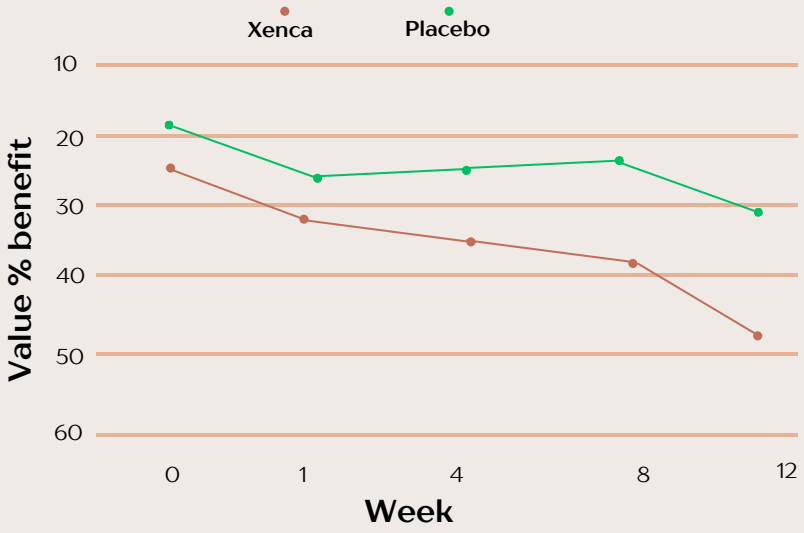


Week	Xenca	Placebo	%
0	52.1930	54.8000	
1	57.4386	55.0370	4.30
4	59.0000	53.4727	18.57
8	65.7895	53.0545	12.23

Skin roughness

According to the graph, a statistically significant improvement in skin roughness can be observed from week 1 during a consistent intake of collagen peptides.

With the use of Xenca's collagen peptides, we find a visible benefit in comparison to the placebo group: **more than 50%** of **skin roughness** is **reduced.**

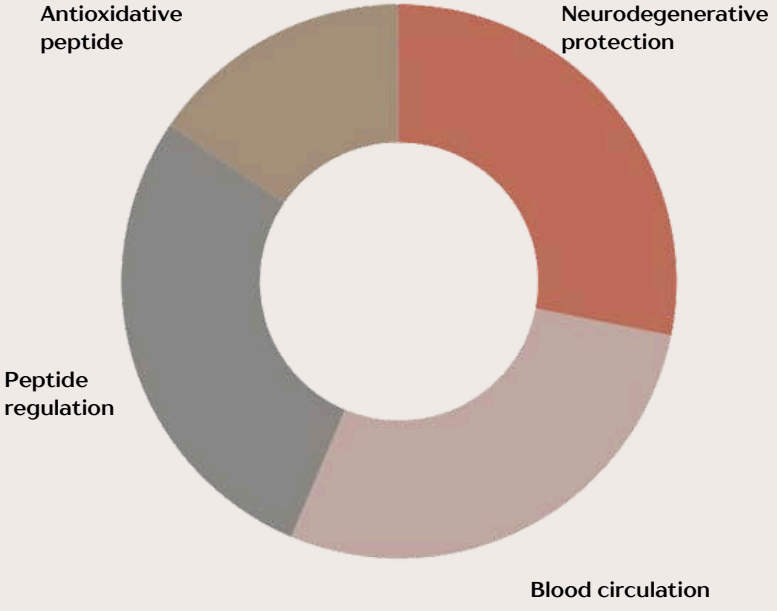


The **gradual improvement** of benefits related to skin roughness can be observed up until week 12. Thus, the efficacy of Xenca's collagen peptides on skin roughness is of **utmost consistency** and supports decrescent improvements in the roughness of our skin.

Week	Xenca	Placebo	%
0	25.1538	22.0000	
1	35.4038	28.4286	71.71
4	39.7358	26.3208	33.88
8	42.6154	25.3774	22.11
12	53.2115	35.4906	54.97

Bioavailabilty on joints and cartilage

As demonstrated in the chart, the study proves the anti-aging effect of neurodegenerative protection inside the body. This provides more blood circulation and increases the availability of collagen to improve the anti-aging effect.



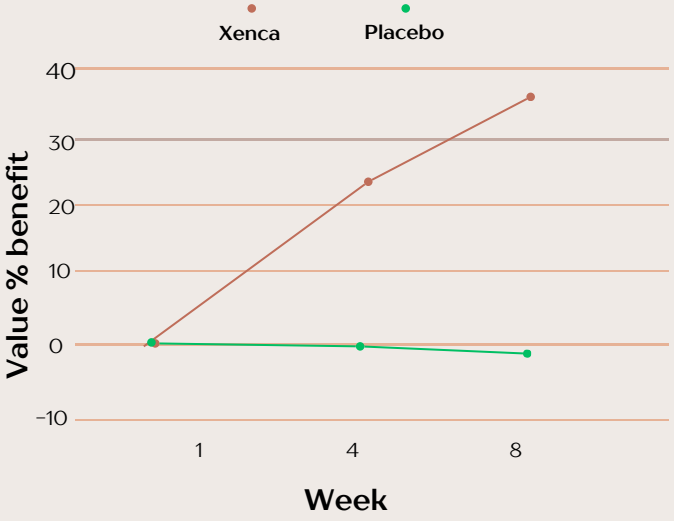
Xenca's collagen peptides provide intestinal mucosa protection, which improves the adsorption of the peptides. Simultaneously, it provides connectivity for better blood circulation, which **increases** the **benefit reaction speed.**

Antioxidant peptides are specific protein fragments possessing antioxidant activity, thus, can be utilised to maintain human health, and food safety and quality by mitigating oxidative stress and lipid peroxidation caused by free radicals generated during oxidation reactions of a human body and food product.

Amelioration of osteoarthritis

A multiple-dose, randomised, double-blinded, placebo-controlled trial to evaluate the efficacy of hydrolysed collagen peptide on knees, hips, and ankle pains in adults with osteoarthritis.

The aim of this study was to evaluate the effectiveness of Xenca's collagen peptides on joint pain, stiffness, and physical function in adults with osteoarthritis who have complaints of knee joints together with hip and ankles. A single dose of 10g Xenca collagen peptides or placebo was orally administered to adults.



Amelioration of knee joint pain, stiffness, and physical function according to WOMAC (The Western Ontario and McMaster Universities Osteoarthritis Index) score.

As the graph shows, the use of collagen **increases** its **physical functions** during its use. At the same time, the placebo group does not portray any benefits.

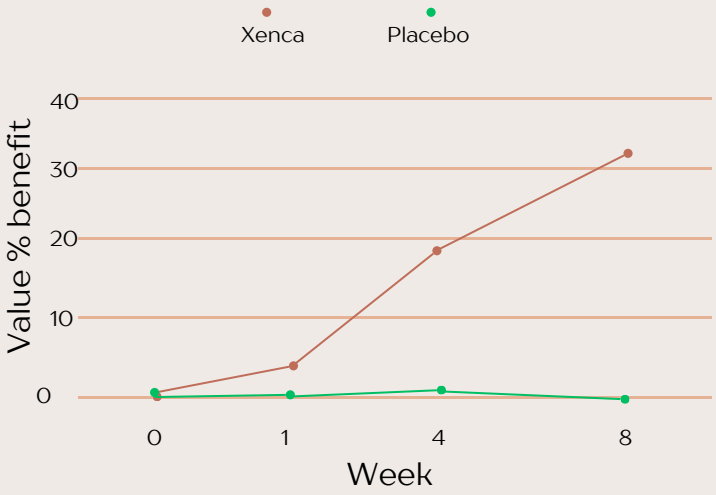
The efficacy of collagen on the **amelioration** of osteoarthritis commenced **from the first week** of regular intake.

Week	Xenca	Placebo	%
0	53.6500	52.6750	
1	50.4750	53.1750	105.35
4	40.7250	52.7750	129.59
8	33.7875	54.1772	160.35

The results show that the benefits of collagen are noticeable within a week and linearly increase up until week 8.

Furthermore, there is a significant improvement between week 4 and week 8 of Xenca's collagen peptides intake. When compared to the placebo group, the difference is statistically significant.

Joint physical function improvement

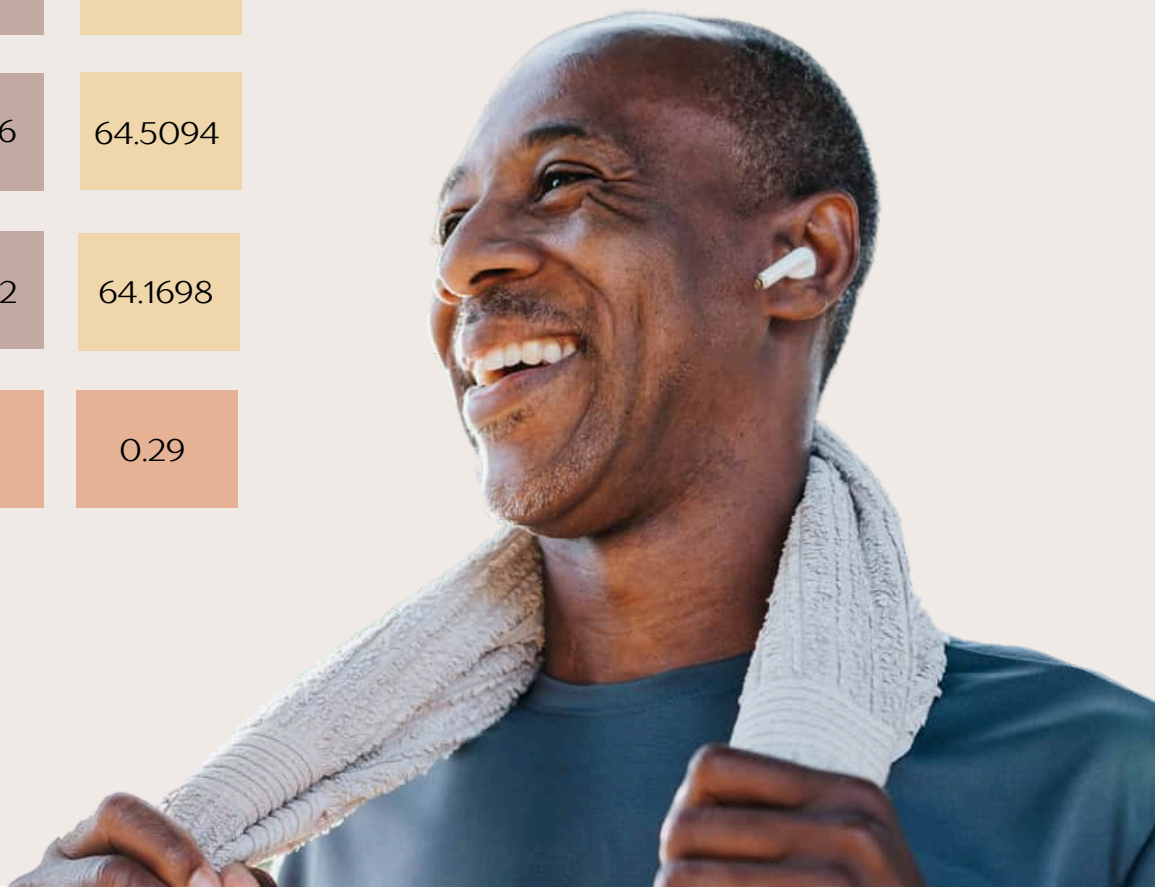


Week	Xenca	Placebo
0	61.7778	64.1698
1	64.2222	64.3962
4	73.5556	64.5094
8	80.8222	64.1698
% Mean	17.95	0.29

As shown in the graph, collagen positively contributes to a **beneficial amelioration** of pain and physical functions of ankles according to the AOFHAS-AHFS (American Orthopaedic Foot and Ankle Society Ankle-Hindfoot Scale). Thus, the perceived benefit positively contributed to the quality of life of the study participants.

The perceived advantage of collagen compared with the placebo is remarkable. The **placebo group** could not determine **any perceived improvements**, compared to the linear, perceived benefits of collagen.

As per the graph, **immediate results** are being reported from collagen on the perceived benefit on quality of life.



Xenca collagen uniquely substantiated nutraceutical

1 **Xenca collagen** is the only clinically studied collagen peptide that combines joint and skin claims.

2 **Xenca collagen** avails of a technical bioavailability study to support the clinical study claims, thus providing technical proof of the claimed benefits.

3 **Xenca collagen** efficacy is measurable from the first week after a regular intake of 10g/day.

4 **Xenca collagen** is the only clinically studied collagen peptide complying with JAKIM, MUI, MUIS, CICOT, etc. (HQC & SMIIC Halal Certified).

Xenca scientific studies

Joint

Title of the study: A Multiple-Dose, Randomised, Double-Blinded, Placebo-Controlled Trial to Evaluate the Efficacy of Hydrolysed Collagen Peptide on Knees, Hips, and Ankle Pains in Adults with Osteoarthritis

Coordinator Investigator: Savaş Gürsoy, MD Study centers: Gaziantep Üniversitesi Tıp Fakültesi Hastanesi, Gaziantep-Turkey Akdeniz Üniversitesi Tıp Fakültesi Hastanesi, Antalya-Turkey ClinicalTrials.gov Identifier: NCT05369780

Skin

Title of the study: A Multiple-Dose, Randomised, Double-Blinded, Placebo-Controlled Trial to Evaluate the Efficacy of Hydrolysed Collagen Peptide In Adult Females

Coordinator Investigator: Hüseyin Serhat İnalöz, MD Study centers: Gaziantep Üniversitesi Tıp Fakültesi Hastanesi, Gaziantep-Turkey Akdeniz Üniversitesi Tıp Fakültesi Hastanesi, Antalya-Turkey ClinicalTrials.gov Identifier: NCT05235997

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