FOR EXCLUSIVE PROFESSIONAL USE

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Colpropur®
For skin health

COLPROPUR D® FOR SKIN HEALTH

Hydrolyzed collagen powder that provides the essential bioactive collagen peptides to supplements, functional foods and beverages for skin care health.

Importance of collagen in the skin

The skin is the largest organ in the body and acts as a protective barrier. Collagen is the main component of the skin, 75% of its dry weight. Collagen fibres form a dense three-dimensional mesh that gives the skin thickness, resistance and flexibility. Skin's health and appearance largely depend on the status of the skin collagen network.

Dermal aging is classified into two categories: intrinsic and extrinsic[1]. The first is caused by age and the second is mainly due to sun exposure (photo-aging). Both lead to deterioration and loss of dermal collagen, which causes skin slimming, appearance of wrinkles and sagging, and loss of dermal elasticity and density. In women, the progressive decrease in the level of oestrogens that begins in the perimenopause (from 40-45 years) accelerates this process[2] due to a slow-down production of collagen.

Colpropur D, an effective aid for the skin

COLPROPUR D® is hydrolyzed collagen powder, a high-quality natural protein ingredient, with an effective health functionality, high purity, highly assimilable, bioavailable[3] and soluble.

It provides the bioactive peptides and specific amino acids of collagen which, among other health benefits, stimulate and facilitate dermal regeneration from the inside. Thanks to that, a daily and continuous intake of COLPROPUR D® helps to:

- Increase the degree of dermal hydration and elasticity.
- Prevent the appearance of wrinkles and reduce the existing ones.
- Protect the skin against the damage caused by photo-aging.

Mechanism of action on the skin

COLPROPUR D® enhances the regeneration of the skin from the inside preventing, slowing down and attenuating the skin aging manifestations and its fragility.

These beneficial effects are the result of the activity of specific components of hydrolysed collagen at cell level, as revealed in vitro studies[4-7]:

- Bioactive peptides induce fibroblasts (dermal-forming cells) to increase the synthesis of the components of the skin (collagen and elastin fibres, hyaluronic acid…).
- Free amino acids provide the main structural components to produce collagen and elastin fibres.

Checking the effectiveness of COLPROPUR D® [15]

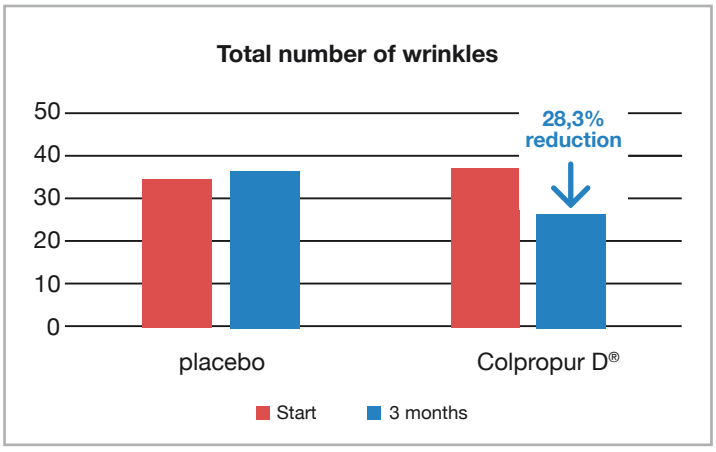
Randomized, double-blind, placebo-controlled study to analyse the evolution of the expression wrinkles of 50 healthy postmenopausal women divided into 2 groups: one receives 10g daily of COLPROPUR D® and the other, placebo for 3 months.

The assessment of wrinkles is carried out in the periocular area ("crow's feet") using moulds silicone and the following wrinkle parameters are quantified:

- Total number
- Total length
- Total area
- Depth

It is observed that all the parameters improve markedly by the ingestion of COLPROPUR D® versus placebo, as can be seen in the following graphs:

- **Total number of wrinkles:** After 3 months, the total number of wrinkles increases in the placebo group, while the Colpropur D® group obtained a 28.3% reduction.



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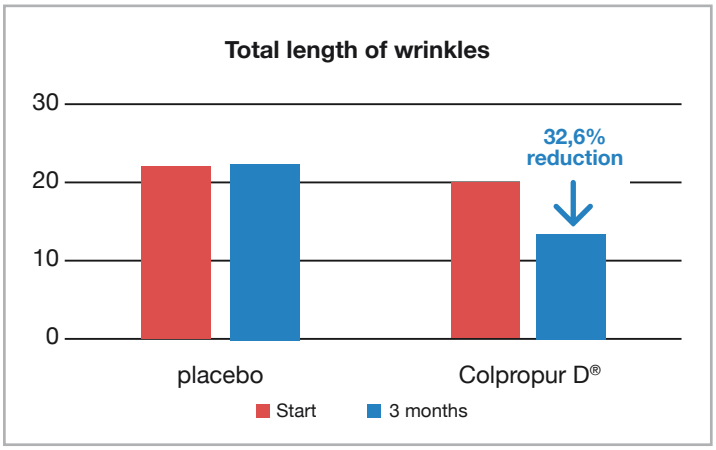
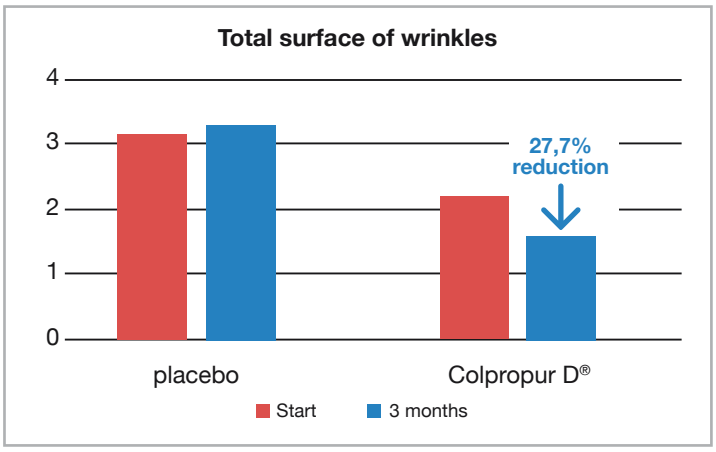
- **Total length of wrinkles:** After 3 months, the length of the wrinkles increases for the placebo group, while it was reduced by 32.6% at the COLPROPUR D® group.



- **Total wrinkle area:** After 3 months, the placebo group increases while the COLPROPUR D® group obtained a reduction of 27.7% of the total wrinkle area.



- **Wrinkles Depth:** After 3 months, COLPROPUR D® group obtained an improvement on wrinkle depth over 3 times better than placebo group.

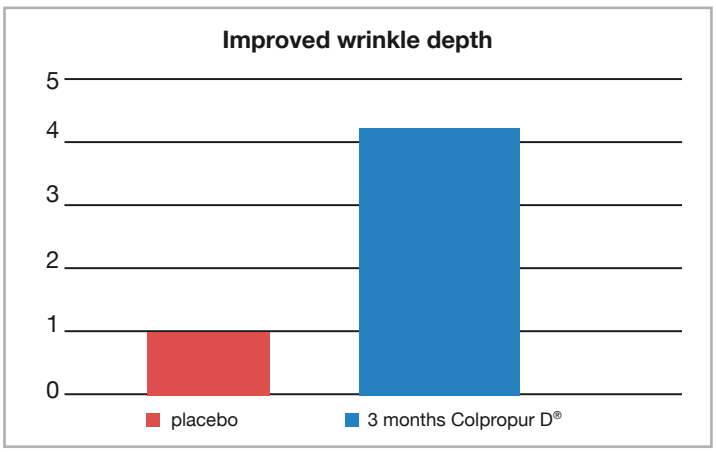


Image of silicone replication at beginning, and after 3 months taking daily 10 g of COLPROPUR D®.

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Recommended dose

The beneficial dermal effects of hydrolysed collagen are dose-dependent and only occur from a certain concentration of amino acids and bioactive peptides of collagen, being 10 grams the daily dose that achieves the best and maximum results efficacy [8-11].

Lower amounts can achieve some degree of improvement in some dermal properties, but they do not protect against photo-aging caused from damage caused by the chronic action of UV-B radiation[12-14].

Indications

COLPROPUR D® stimulates dermal regeneration from the inside, helping to prevent, slow down and attenuate dermal aging, both intrinsic (loss of hydration and elasticity, appearance of wrinkles ...), due to age, and extrinsic, mainly due to sun damage (photo-aging).

It is indicated for all ages, but the sooner you start, the greater antiaging effect.

Around age of 25 begins the progressive deterioration of dermal collagen.

It is especially important for women at 40's, when during menopause, they will face a decrease in the level of oestrogens, causing a loss and deterioration of skin's collagen and, therefore, aggravate dermal aging.

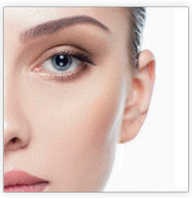
Food safety

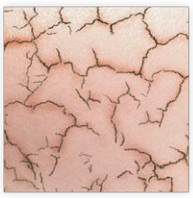
COLPROPUR D® is a safe food ingredient. At the recommended daily dose, it is free of adverse effects, food intolerances and allergies (lactose-free, gluten, sugars, fats, additives and other allergens).

It is compatible with supplements, ingredients (vitamins, minerals, phytotherapeutic components ...) bases or food additives (aromas, sweeteners ...).

Applications

COLPROPUR D® is an ingredient that combines easily as food ingredient in different presentations: powder, tablets, bars, drinks, mousses….






EXTENDED INFORMATION

What is collagen?

Collagen is the most abundant and widespread protein in human body. It constitutes about 30% of the total protein weight. It is the main structural component of numerous tissues such as cartilages, bones, skin, tendons and ligaments, as well as connective tissue that surrounds and protects organs and muscles. It is also a fundamental part of the gums, teeth (dental pulp), cornea and blood vessels, and some organs (lungs, kidneys and liver).

Collagen performs multiple functions in the body, especially structural and locomotive, since it provides resistance and flexibility to musculoskeletal system tissues, thanks to which movement and displacement are possible. It also has important immunological, hemodynamic and filtration functions.

To perform its functions, collagen has a fibrous structure, based on a triple helix (the tropocollagen molecule) which has the ability to associate forming fibrils, fibers and, finally, a very resistant fiber network. It also has a very particular amino acid (AA) composition: 18 AAs among which glycine, proline and hydroxyproline make up almost 50%, being hydroxyproline and hydroxylysine exclusive of collagen. Regarding its nutritive value, collagen has a 16% of essential AA plus a 60% of conditional AAs, wich become essential in aged or worn tissues.

Collagen is synthesized by specialized cells, capable of capturing and assembling the specific amino acids of this protein, such as chondrocytes in cartilages, osteoblasts in bones, and fibroblasts in skin and connective tissues.

According to the length, thickness and arrangement of the fibers, there are more than 20 types of collagen, adapted to the functions of the tissue they constitute. They all share the same amino acids and in a similar proportion. Type I collagen makes up more than 90% of all collagen in the body and is abundant in skin and bones. Type II collagen is found mainly in cartilages and type III in blood vessels walls.

Hydrolysed collagen

Loss of collagen due to age, overuse or menopause results in the gradual degradation of the collagen network that forms the structure of collagenous tissues and, as a result, these tissues lose thickness and resistance. The main consequences are: joint pain from wear (osteoarthritis), loss of bone mass (osteoporosis) and the appearance of wrinkles (dermal aging).

Scientific studies and the results obtained by the millions of consumers and patients who take it regularly show that all these effects can be slowed down by taking 10g daily of a quality CH, such as Colpropur D®.

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