



Collagen Insights

HERE'S WHY YOU SHOULD SUPPLEMENT WITH COLLAGEN PEPTIDES AS YOU AGE

Aging brings about many changes in your body. Although slow and subtle, experts say that aging begins around the age of 25 and visible signs start to appear at the age of 30. But aging doesn't just change your skin's appearance and texture, it also affects how different parts of your body function.

Inside your body, aging also affects how different organs and organ systems work. Your organs are composed of tissues which are made up of cells, and cells naturally degenerate as they age. This means that as you grow older, your organs will start to perform less optimally, resulting in a subtle but steady decline of your overall health.

But aging doesn't have to be as punishing to your body as it sounds. You can still maintain excellent health even in your 50s or 60s and age gracefully if you take care of your body and provide it with all the support it needs. Living a healthy lifestyle that includes a well-balanced diet, regular exercise and daily collagen supplementation is one of the best ways to do this.

THE DIFFERENT FUNCTIONS OF COLLAGEN

Collagen is a structural protein with a fiber-like structure that's naturally produced by specialized cells. These cells help form your bones, dentin (the yellowish substance beneath your tooth enamel) and the connective tissues that serve as major components of your skin, muscles, tendons, cartilage and bones.

Because connective tissues have the crucial role of supporting, protecting and giving structure to many of your vital organs, they need to be strong and resilient. It is collagen, which possesses great tensile strength, that allows these tissues to withstand stretching and hold your body together.

Different types of collagen exist in nature. In fact, collagen is the most abundant protein in the human body, and at least 28 different types of collagen have been identified by studies. But among these different types, only three make up 80 to 90% of the collagen in your body. These three are classified as Type I, Type II and Type III collagen.

Type I collagen is the most abundant collagen type in all vertebrates. Type I collagen fibers form the mechanical scaffold that supports your bones, skin, tendons, cornea and blood vessel walls. Meanwhile, Type II collagen gives elasticity to cartilage, the flexible connective tissue that acts as a shock absorber protecting your bones and joints.

Type III collagen, on the other hand, is part of the extracellular matrix – a large network of proteins and molecules that helps cells attach to and communicate with each other. Type III collagen also serves as a structural component of hollow organs, such as the uterus, bowel and large blood vessels. It is also an important signaling molecule for supporting normal wound healing.

COLLAGEN AND AGING

As your body ages, your cells' ability to produce collagen naturally declines. This spells trouble for the many organs and tissues that rely on collagen for structural support. Your skin is a classic example of this.

In a 2012 study, a group of American and Indian researchers linked the degradation of collagen to ultraviolet (UV) radiation. But while exposure to UV rays does contribute to the breakdown of collagen, there's another reason behind the structural degradation of your skin's collagen matrix: aging.

According to a report published in Archives of Dermatology, the collagen that supports your skin naturally becomes fragmented as you age, thanks to a combination of internal and external factors. This fragmentation prevents skin cells called fibroblasts from attaching to the collagen matrix. Without this attachment, fibroblasts eventually collapse.

Collapsed fibroblasts secrete fewer structural proteins like collagen and elastin. At the same time, they produce more enzymes that break down collagen. The resulting loss of collagen and elastin, the proteins that keep your skin smooth and firm, is what ultimately causes skin to start sagging and advances the skin's aging process.

Collagen loss is also linked to poor bone health, especially in the elderly. Research has found that, like in skin, bone collagen decreases with age, and this actually contributes to the development of osteoporosis.

Clinical studies have also found that people with disordered collagen production typically have low bone density, suggesting that healthy collagen levels is important for the maintenance of strong bones. With collagen's prominent role in bone architecture, this finding is not surprising.

Collagen comprises more than 90% of your bone's organic matrix, so it follows that bone strength is greatly influenced by this protein. Indeed, numerous studies have reported that in people with brittle bones, problems related to collagen, such as disorganized packing or fragmentation, is frequently observed.

Aside from skin and bone health, collagen also affects the health of your joints. Mutations in the genes that code for Type II, Type IX and Type XI collagen have been associated with the age-dependent degeneration of articular cartilage – the smooth tissue that covers the ends of your bones. This deterioration of cartilage is a hallmark of degenerative joint disease, more commonly known as osteoarthritis.

In a 2005 study, researchers from Duke University Medical Center found that another type of collagen, Type VI collagen, is involved in the development of osteoarthritis. They reported that mice missing the gene that controls the production of Type VI collagen developed the disease five times faster than mice with the functional gene.

Age-related collagen loss also has a negative impact on your tendons. These strong, flexible tissues connect your muscles to your bones, allowing you to move your limbs. According to a study published in Biomedical Reports, aging causes changes to the distribution and production of Types I and III collagen that could lead to the degeneration of tendons.

WHY COLLAGEN SUPPLEMENTATION IS IMPORTANT FOR HEALTHY AGING*

Your body requires raw materials, specifically amino acids, to synthesize collagen. You can get these raw materials by eating protein-rich foods like chicken, beef, eggs, nuts, legumes and whole grains. Since protein is made up of amino acids, high-protein foods are a great source of materials for collagen production. Vitamin C is another essential nutrient that you need, as it serves as a cofactor for enzymes involved in collagen synthesis.

But as mentioned earlier, your body's ability to produce collagen decreases with age. Other factors like poor diet, smoking and excessive UV exposure also reduce collagen production because they cause oxidative stress. According to studies, oxidative stress destroys collagen, and not having enough collagen can cause weak bones, poor digestion, brittle nails, premature skin aging, stiff joints and slow wound healing.

For adults in need of collagen, collagen peptides offer an easy yet effective way of boosting your collagen levels. Because collagen peptides are broken-down (hydrolyzed) pieces of the protein, they're much easier for your body to absorb than whole collagen. You can take collagen peptides to support optimal collagen levels or your body's natural production of other proteins.

Supplementing with collagen peptides also brings plenty of health benefits. Here's what regular supplementation can do for you: *

- Supports healthy bones and joints – According to a study published in the Brazilian Journal of Geriatrics and Gerontology (RBGG), supplementing with hydrolyzed collagen is a great way to support strong and healthy bones and cartilage. When combined with regular exercise, researchers also found that collagen peptide supplementation can help you maintain optimal joint health and mobility.

- Supports a healthy digestive system – Collagen, regardless of its source, contains 19 different amino acids, including glycine, glutamic acid and proline. These amino acids are known to support healthy digestion and mucin formation. Mucin is a protein that helps protect the walls of your small intestine from threats, digestive enzymes and abrasion by food particles.

- Supports a healthy cardiovascular system – Extracellular matrix proteins like collagen and elastin form the basic structure of your blood vessels. As such, they are integral to the health of your arteries, which carry blood to and from your heart to other parts of your body. Supplementing with collagen peptides can help you maintain healthy blood vessels, which are important for a healthy heart.

- Supports healthy muscles and tendons – Collagen peptides are an excellent source of glycine and arginine, two amino acids involved in the synthesis of creatine. Creatine is naturally found in muscle cells and is said to support optimal muscle strength and performance. Two studies published in the journal Amino Acids also found that collagen peptides can support healthy muscle recovery after exercise. Therefore, supplementing with collagen peptides can benefit athletes and people with an active lifestyle.

- Supports healthy, glowing skin – As a structural protein, collagen helps keep your skin firm and supple. A study published in the journal Skin Pharmacology and Physiology also found that supplementing with collagen peptides can support your body's production of elastin and fibrillin. These proteins help keep your skin healthy and glowing.

- Supports healthy hair and nails – According to research, your body can use the amino acids in collagen to create hair proteins that can help strengthen hair strands. Meanwhile, a study published in the Journal of Cosmetic Dermatology found that supplementing with collagen peptides helps support strong and healthy nails.

- Supports sensible weight management plans – Consuming more protein has been shown to naturally help curb appetite. Collagen peptides, in particular, have been found to support satiety better than many other types of protein. When combined with a well-balanced diet and regular exercise, supplementing with collagen peptides can help you achieve reasonable weight management goals.

- The role of collagen as a structural protein makes it impossible for your body to do without. Unfortunately, your body's production of this all-important protein inevitably declines with age. This is why incorporating healthy sources of protein into your diet and taking collagen supplements are very important, especially for older adults.

- But to truly benefit from supplementation, not just any collagen supplement will do. The sad truth is, the market is saturated with supplements that are derived from genetically modified sources. Many commercial supplements also contain ingredients that can do more harm than good to your health in the long run.

*These statements have not been evaluated by the FDA. This product is not intended to treat, cure or diagnose any diseases.