

# What is Collagen and Why Supplement it?

## A Dietitian's Perspective

Great Lakes Gelatin's collagen is an oral supplement and there are several different products to choose from: Collagen Hydrolysate, Collagen Endurance Plus, Collagen Endurance and Gelatin. Collagen is a protein that is made up of essential and non-essential amino acids with incredibly high amounts of the amino acids glycine and proline. Some nutrition experts state that collagen is not a great protein source because it is not a complete protein. But taking collagen as a nutritional supplement truly has numerous health benefits.

Amino acids help support tissue repair and help to speed up the healing process after an injury. They are also needed to help repair the gut, improve digestion, help to reverse atherosclerosis, facilitate the removal of waste from the kidneys, improve muscle development, lubricate the joints and may also improve sleep and reduce anxiety [4,6,7,10,11]. By taking a collagen supplement, it may also aid in tighter skin, resulting in less wrinkles and cellulite [1]. Collagen helps to repair and maintain cartilage weakened by overuse through impact and stress. It has also been shown to strengthen the membranes which hold synovial fluids between the joints [8]. A 24-week randomized trial study showed that just 10g of collagen hydrolysate significantly reduced collegiate athletes knee pain [2]. Another clinical study found that a daily dose of 10g of collagen hydrolysate reduced the osteoarthritic pain in patient's knees and hips [6]. Great Lakes Gelatin recommends a minimum daily dose of 12g per day. Collagen is really the missing link in supplying amino acids like glycine and proline that are required by the body to build connective tissue to help regulate cell growth.

There are several types of collagen, 80-90% of collagen found in the body is type I, II and III. Great Lakes Gelatin Collagen is a type I collagen. Type I collagen is essential for building connective tissue (skin, ligaments, cartilage, bones). Collagen supports, shapes and provides bulk to blood vessels, bones and organs such as the heart, kidneys and liver. Collagen is also needed and required by our bodies to repair blood vessels, bruises, cuts and broken bones [3].

My personal experience with taking collagen was surprising. Before trying it, I was skeptical and hesitant. I was given a sample of collagen hydrolysate and decided to

try it. Within one month I noticed the hip and knee pain I once had was subsiding and my restless nights of sleep were happening less and less. I also noticed that the collagen hydrolysate helped to suppress my appetite. I observed that the days following a workout, my muscles were not as sore as they were before I started taking collagen. I now add 2 tablespoons to my coffee every morning and on most evenings, I put 2 tablespoons in my tea. I am beyond thrilled with the outcome.

I'm often asked, "Why should I supplement collagen when I can get it through food?" Yes, amino acids can be found in foods, but as our diets have changed over the centuries, the diet of eating nose-to-tail such as skin, tendons, and other gelatinous meats does not typically occur anymore. We do not consume the necessary amount of essential and conditionally essential amino acids that we once did through our food [11]. Another reason to supplement with collagen is as we age, the body's natural ability to produce collagen diminishes. Eating an unbalanced and unhealthy diet and aging play a significant role in the amount of collagen our bodies can produce. One research study concluded that pure collagen is absorbed at a much higher rate compared to the amount of collagen absorbed from food alone [9]. With this information it only makes sense to supplement our diets with collagen.

What happens when we don't consume or produce enough collagen? We begin to lose bone density, joints and ligaments may become less elastic and become weaker, cartilage also becomes thinner in areas where it is supposed to act as a cushion and arteries may weaken and become less likely to resist plaque formation. Some other side effects of decreased collagen are hair may lose its shine, wave or curl, skin may become thinner and more wrinkled and skin and muscles may begin to sag [12].

Collagen makes up about one third of the total protein in our bodies. It is recommended to supplement one third of your total daily protein intake a day with collagen to help balance out the amino acids that are necessary for good health [7]. If your total protein intake for the day is 60g – you should supplement 20g of your daily protein intake with collagen.

To obtain a therapeutic level it is recommended to take a minimum of 20-60g a day of collagen (2-5 tablespoons/day) and for daily maintenance 20-45g of collagen a day (2-4 tablespoons/day). It's best to take a dose in the morning and a dose in the evening. It is important to note that our bodies do a lot of repairing while at rest.

Great Lakes Gelatin's Collagen is easily digested and absorbed within about 30 minutes. They recommend that when you start taking collagen as a supplement, you start slowly and increase your dosage to your goal amount over a 1 to 2-week period. It is also very important to eat a well-balanced diet consisting of lean proteins, whole grain carbohydrates, healthy fats, fruits and vegetables and drink at least 48-64 fluid ounces of water daily. Make sure to eat a lot of foods that contain vitamin C or supplement with vitamin C while taking a collagen supplement. Vitamin C is needed to help turn proline into hydroxyproline. Hydroxyproline is the form of proline that our bodies use to make collagen [5].

As a side note, diets high in meat protein can elevate methionine levels. Methionine is an essential amino acid that we need to aid in the growth of new blood vessels, but elevated methionine levels can lead to high homocysteine levels. High homocysteine levels can cause inflammation and is a risk factor for coronary heart disease [4]. Balancing your diet with glycine (found in collagen) is very beneficial to aid in the reduction of inflammation and may help to prolong your life.

Great Lakes Gelatin's Collagen Hydrolysate can easily be added to your favorite recipes, beverages, soups and cereals. The amazing thing about this product is that it does not alter the taste of your food. Many other powdered collagen supplements leave a less than desirable aftertaste. Because Great Lakes Gelatin's collagen is hydrolyzed it easily dissolves in cool or hot liquids. By adding collagen to your food, you increase the nutrients in your favorite foods with the addition of essential and non-essential amino acids. Check out some of their favorite recipes on their website [www.GreatLakesGelatin.com](http://www.GreatLakesGelatin.com).

If you are experiencing muscle soreness, joint pain or difficulty sleeping give Great Lakes Gelatin's Collagen a try and see if you notice a change in your symptoms. Their products are all natural, it is not genetically modified, nor does it contain any allergens, plus it is gluten free and kosher. I hope you enjoy the incredible health benefits collagen can add to your life. Great Lakes Gelatin has a great Customer Service team ready to assist you Monday-Friday 8:30-5:00 CST. For more information, questions or comments they can be reached at [contactsales@greatlakesgelatin.com](mailto:contactsales@greatlakesgelatin.com) or by phone at 847-223-8141.

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