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ConsumerLab.com Answers

Question:

Does collagen taken as a supplement help with arthritis? I'm seeing it in products for joint health.

Answer:

Collagen hydrolysate (enzymatically hydrolyzed collagen or collagen peptide), which is often derived from collagen from pig skin or cow bone, may help reduce the pain of osteoarthritis (worn joints) according to some preliminary studies, although, according to an independent review in 2012, the evidence is not conclusive and it is unclear how much it effects other symptoms, such as stiffness and swelling (Van Vijven, Osteoarth and Cartil, 2012). A possible scientific basis for a benefit is that collagen supplements are a rich source peptides and amino acids (glycine, proline, and hydroxyproline) needed to make the collagen in joint cartilage.

Two other types of collagen which are also sold are collagen in its more raw "undenatured" form and gelatin -- which is derived from collagen but is not broken down as completely to peptides as enzymatically hydrolyzed collagen. Although undenatured collagen, gelatin, and collagen hydrolysate may all be broken down in the gut to yield absorbable amino acids, studies in mice suggest that absorption may be greater with collagen hydrolysate, due to its smaller molecular size.

Most clinical studies have focused on osteoarthritis of the knee and have used hydrolyzed collagen or, to a lesser extent, gelatin and there is some evidence that either may reduce pain associated with osteoarthritis. In fact, one study suggested greater benefit with collagen hydrolysate than with glucosamine sulfate (Trc, Intl Orthop 2011). Nevertheless, one form of patented undenatured collagen, UC-II, has been shown to significantly increase knee extension compared to placebo, and improve symptoms of knee osteoarthritis compared to glucosamine and chondroitin.

One of the largest studies with collagen hydrolysate found that, after 3 months, it was not statistically more effective than placebo in reducing pain in knee osteoarthritis. However, after 6 months there was a statistically significant difference: 51.6% of people taking the collagen (*Genacol*, **Genacol Corporation Inc.**) reported a reduction in pain compared to 36.5% of those taking placebo (<u>Bruyere</u>, <u>Comp Ther in Med 2012</u>).

Research in this area continues. For example, a small study published in 2014 in people with knee osteoarthritis found that taking 5 grams of collagen hydrolysate (collagen peptide) dissolved in a cup of water or milk in the morning and at night after food for 13 weeks significantly improved symptoms compared to taking a placebo (Kumar, J Sci Food Agric 2014).

There is also some evidence collagen may help to build muscle and increase **muscle strength** in older adults when combined with exercise. In a study among older men (average age 72) with sarcopenia (age-related muscle loss) who participated in a strength training program three days per week for 3 months, those who consumed a daily drink containing 15 grams of collagen peptides (*BODYBALANCE*, *GELITA AG*) had significantly greater increases in lean muscle mass and muscle strength compared to those who consumed a placebo drink (Zdzieblik, Br J Nutr 2015).

Safety and side effects: Collagen-based supplements appear to be safe but be aware that some people report mild gastrointestinal symptoms (<u>Vijven</u>, <u>Osteo and Cartl 2012</u>).

The bottom line: Supplements with collagen hydrolysate (typically 10 to 12 grams per day) or gelatin may help reduce pain associated with osteoarthritis when taken for several months (preferably at least 6 months). However, larger studies are needed to confirm this effect and some people may experience mild gastrointestinal side effects.

For information about other supplements used for joint health, see the Glucosamine, Chondroitin, MSM and Boswellia Supplements Review >>

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Christine11341 October 16, 2016

Make your own Bone Broth from organically & pasture-raised animals. It's easy to make. Or, order it from Dr. Kellyanne Petrucci's website. I have no affiliation with this, just a satisfied customer. Her book has great healthy recipes. It's the only way to get Organic that I know... and making your own is a way to obtain collagen/gelatin & marrow that is Organic and fresh. Even though I was a vegetarian for a very long time, adding homemade bone broth to soups, stews, sauces,....to my diet was medicinal and worth the change. It really is easy to make-honestly! Just follow one of Dr. Petrucci's many recipes. I definitely prefer making it fresh over a supplement ?? Comment on Post

Suzanne8102 November 29, 2015

Does one need to take collagen in liquid form for the benefits mentioned here? Any evidence that taking it by capsule produces similar relief? Thx, Suzanne

Comment on Post

ROBERT6950 September 14, 2015

Is there any type of plan collagen that can substitute for the bovine or other animal type of hydrolized collagen?

THx

Comment on Post

ConsumerLab.com November 16, 2015

Hi Robert - Some supplements are labeled as containing "marine collagen," typically derived from fish -- but we are not aware of any plant-derived collagen products.

Comment on Post

ROBERT6949 September 14, 2015

Hello.

I have a fear of getting spongiform encelapathy, or MAD COW's disease from cows because I saw a warning of it.

I don't like vitamins or medications that are obtained from animals or sea creatures, even though my medication caplets may have it in it.

I'm thinking that the processing should kill any virus that is in the products, however its scary to think about.

Comment on Post

Isabelle7958 September 18, 2015

Same here. I don't think during the process it is heated that much or else it would be denatured. The best way to stay away from that is to look at the

country of origin. Some country are safer than other. Can consumer lab comment on this?

Comment on Post

Marilyn696 April 29, 2015

Marilyn 43

I would like to find collagen hydrolysate certified as organic. Does anyone know of any?

Comment on Post

mary6945 September 13, 2015

Great Lakes Hydrolyatsate Collagen is recommended by my nutritionist. She believes in doing organic when possible so I don't think there is an organic collogen on the market yet or she would have recommended it...its non GMO, GF. I'm taking it to heal leaky gut. This form of collogen is suppose to be easily absorbed by the body.

Hope that helps.

Comment on Post

Christine 11340 October 16, 2016

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Melanie104 August 18, 2014

I have been taking collagen supplements since my early 40s, first in the form of gelatin and than as hydrolyzed collagen. I began taking it because I had creaky knees after jogging along with some shin splints and accompanying pain. The noisy knees and shin splints went away. I am now in my 60s and my hair, skin, and nails appear in good shape and I look and feel in much better shape than my peers. I am still able to get up and down off the floor with no trouble. My joints feel good and I would recommend the supplement to anyone over 30. I use a powdered form (Nutrajoint from Knox) and take a scoop a day which provides about 10 grams of hydrolyzed collagen. Since it also has calcium in a form that is easily digested, it's definitely a win-win for supplements

Comment on Post

I'm 73 years old. I have been taking hydrolyzed collagen regularly for years (about 6.6 grams per day. Many years ago my podiatrist prescribed it for bursitis pain in one of my feet. The pain practically immobilized me. The pain is long gone but I continue to take it. Some of the benefits may be no joint pains, less than typical facial aging or wrinkles minimum loss of head hair (baldness is typical with most of the men in my family).

Comment on Post

ruth6948 September 14, 2015 What brand do u take Comment on Post

anthony 7968 September 23, 2015 Great Lakes Hydrolyatsate Collagen Comment on Post

Jeanne 7997 October 7, 2015

Agree completely! I recommend it to my nutrition clients and take it myself.

Be aware that there are three different colored cans. The green can doesn't gel up in liquids, the red can does. The orange can is Kosher, but Im not sure if it gels or not.

The Great Lakes website should have the answer.

Comment on Post

Teresa 8178 December 11, 2015

Does it help with stiffness? My husband (68) and I (66) are both very stiff so I would really like something that would help with that. We are both very active and would like to be able to get up and down easier. Comments please!!

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