

# Thinking about trying collagen supplements for your skin? A healthy diet is better value for money

5 March 2021, by Clare Collins



An artistic depiction of the collagen triple helix structure. Collagen is the human body's main structural protein. Credit: Shutterstock

Celebrity <u>testimonials</u> abound for pills, potions and creams that purport to make you look younger.

This time <u>collagen</u> supplements are in the spotlight, after Jennifer Aniston became the face of one wellness brand's <u>collagen campaign in late</u> 2020.

While some research has found benefits of collagen supplementation for some aspects of skin health, it's a case of buyer beware. The evidence is generally weak, with many of the studies claiming to find positive effects from collagen supplementation funded mostly by industries that manufacture these products. Therefore, the results need to be interpreted with caution.

When you're reading articles promoting these products, be especially wary of phrases such as

"we may receive compensation for some links to products and services". These statements often mean the publication has negotiated some kind of payment for featuring products in its editorial coverage. Therefore, what you're reading isn't necessarily an independent evaluation of the product's effectiveness.

Rather than spending a lot of money on collagen supplements that promise to defy signs of aging, smooth wrinkles and renew your skin, spend it on healthy food. You will get better value in terms of your health and well-being in the long-term.

# What does the science say?

Normal aging is associated with <u>loss of connective</u> <u>tissues within the skin, leading to a reduction in</u> <u>elasticity</u> and development of wrinkles and creases.

A <u>2019 review of collagen supplements</u>, conducted by US university researchers, found four of the five studies included had reported some degree of improvement in some skin variables.

This included improvements in: skin moisture and collagen density; skin hydration, wrinkling and elasticity; skin elasticity but not moisture content; and skin moisture, elasticity, wrinkles and roughness.

Across the studies, closer scrutiny of the methods by the reviewers found many were rated as being of low methodological quality. The reviewers flagged a number of limitations of the studies. These included that the supplements differed across the trials, as did the types of people included in the studies, meaning you can't compare results between trials.

It also wasn't clear how the results translated to



actual changes in skin appearance and whether this A bottle of collagen supplements costs anywhere was noticeable to other people.

Amino acids needed to make collagen can be found in other foods containing protein. There's no reliable evidence amino acids in collagen supplements speed up the process by which the body makes collagen.

What's more, most of the studies were either fully or partly funded by cosmetic or supplement companies. This means the results of the research should be interpreted with caution, especially when the affiliation statement shows the study authors were also employed by the supplement manufacturer. Further high quality, independent research studies are needed.

Collagen is the major structural protein in skin and other connective tissues such as cartilage, bone, tendons and ligaments.

It has a triple helix structure. Imagine three slinkies coiled around each other, and that's roughly what collagen looks like.

The triple helix shape makes it very strong and flexible.

Vitamin C is essential for the chemical pathway that makes collagen in the body. Without adequate vitamin C, the collagen would be unstable, meaning the coils would unfurl, and you would develop scurvy.

Before you grab a bottle of collagen supplements, you may want to consider where it came from. Rich sources of collagen include pig skin, cattle hide, pork and cattle bones, tendons and cartilage, chicken cartilage and fish scales.

# A complete diet is better value for money

A 2019 survey reported 37% of Australians spent up to A\$20 a month on cosmetics and personal care, with 26% spending between \$21-50 and 15% spending \$51-200 a month.

between roughly A\$15-20 to over \$100. Each capsule, or per serve, contains roughly between half a gram up to five grams of collagen.

By comparison, you can get better value for money by eating foods rich in protein like meat, chicken, fish, eggs, milk, cheese, nuts, tofu, dried beans and legumes. This will provide the amino acids your body needs to make collagen.

Because collagen would be unstable without vitamin C, it's also important to regularly eat foods rich in it. Good sources include broccoli, Brussels sprouts, capsicum, tomatoes, spinach, kiwifruit, lemons and oranges.

Also aim to regularly eat foods rich in other What is collagen and where does it come from? nutrients needed to help keep skin healthy. This includes:

- zinc, which is found in seafood, meat, chicken, dried beans and nuts. Inadequate zinc intake can lead to skin conditions including acne and some types of dermatitis
- vitamin A, from oily fish, egg yolks, cheese, tofu, nuts, seeds, whole grains and legumes. Vitamin A helps immature skin cells develop into a mature skin layer which forms the body's first layer of protection. "Beta-carotene" found in vegetables can be converted into vitamin A in the body. Good sources include pumpkin, carrots and leafy green vegetables.
- and foods rich in polyphenols. These are small chemicals found in vegetables, fruit, herbs and spices that help plants grow well or protect them from pathogens. Studies suggest higher intakes are associated with slowing some of the skin damage caused by exposure to the sun.

If you're interested in recipes that are fast, inexpensive and designed to help promote healthier skin, check our No Money No Time website, which we developed at The University of Newcastle.

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