

HEALTH

## ASK THE DOCTOR: SHOULD I TAKE A COLLAGEN SUPPLEMENT?

January 4th 2020 / Dr Johanna Ward / 0 comment



### COLLAGEN POWDERS ARE BOOMING RIGHT NOW - BUT HOW GOOD ARE THEY FOR YOUR SKIN AND HOW MUCH SHOULD YOU TAKE? OUR RESIDENT GP DR JOHANNA WARD HAS THE FACTS

The beauty industry has exploded with [collagen products](#): drinks, powders, capsules and creams - you name it, it's out there. While collagen might be the latest beauty 'must-have' as 'skincare from within', there are a few things that every discerning collagen consumer must know. Here's my guide.

#### What do collagen supplements do?

- \* They reduce the rate at which our own collagen breaks down (our natural ability to produce new collagen declines from age 25).
- \* They boost our body's own production (by age 40 the body's ability to produce collagen has decreased by 25 per cent and by age 60, it has plummeted by over 50).
- \* They improve skin hydration by helping the body make hyaluronic acid
- \* They reduce fine lines and wrinkles
- \* They support hair, bones and joints
- \* They help heal leaky gut

Collagen decline will result in wrinkles, thinning bones, [weak joints](#), [thinning hair](#), [leaky gut](#) and can negatively impact almost every aspect of our health. Any little helper that you can give your skin can help considerably when it comes to collagen, slowing the rate at which it declines and helping the body build more. Of course, the best way to go about it is to protect it in the first place. We can do this by [living and eating well](#) and avoiding excessive UV radiation, sunbeds, smoking and alcohol.

In recent years, all kinds of collagen and pseudo-collagen products have appeared on the market making it increasingly difficult to know which brands to trust. How they are made (being hydrolysed is important, which I'll go on to explain) and what they are made of (fish, beef, even vegan sources) can affect how they perform. You also need to make sure you take the right dose for it to be effective.

Here's what you need to know about collagen supplements:

#### How do collagen supplements work?

The collagen you ingest doesn't automatically become new collagen. It's first broken down into amino acids and peptides and then distributed to where the body needs. Some of these will then be used to make new collagen in your skin, but they could equally be directed to other places.

Once absorbed by the gut into the bloodstream, the collagen peptides and amino acids have a dual action. Firstly, the free amino acids provide building blocks for the formation of new collagen fibres and secondly the collagen peptides bind to fibroblast receptors to stimulate the production of new collagen, elastin and hyaluronic acid.

#### What type of collagen should I look out for?

There are 16 different types of collagen in the body: look particularly for Type I when choosing a supplement.

**Collagen Type I:** accounts for 90 per cent of the collagen in the body. It's the most skin-specific of all collagens and benefits the hair, skin, nails, joints and bones the most. Gram for gram is stronger than steel. Type I is considered the key matrix building protein in our skin which gives it structure and firmness. It is also the end product when skin heals and repairs.

Leaky gut responds well to Type I collagen supplementation. That's because your intestinal wall is made up of microscopic folds or 'villi' which are actually built of collagen. The amino acids in collagen quite literally, 'seal the leak' or perforations by supporting cellular health and tissue growth.

There is a link between gut health and skin inflammation. If your gut is 'leaky' or semi-permeable to toxins then it can cause low-grade systemic inflammation that can worsen acne, [rosacea](#), [eczema](#) and [psoriasis](#).

**Collagen Type II:** found mainly in joints and cartilage. Supplementation of Type II collagen may help arthritis.

**Collagen Type III:** babies and children have a lot of this type of collagen. It is also found in fast-growing tissue, especially in the early stages of wound healing. It's replaced later by Type I.

Your bones are 30 per cent collagen, which gives them their flexibility. Our bone cells are constantly turning over, and collagen has been shown to support bone health by increasing bone mineral density.

#### Why do I need to buy 'hydrolysed' collagen?

It's important to look for 'hydrolysed' collagen - it's a process whereby collagen is broken down into small peptide chains that make it more bioavailable - ie easier for your body to use and so plays a key role in how effective your supplement is. Hydrolysed collagen is thought to be the only kind of collagen that can impact the skin positively and it's what the clinical trials and data support.

#### What's the recommended daily dose of collagen?

The ideal dose from clinical trials is 10g (10,000mg) of hydrolysed collagen per day. At this dose oral collagen has been clinically proven to reduce the rate at which our own collagen breaks down, improve the skin's innate collagen production and improve skin hydration and healing.

#### Do I need to take it with other vitamins?

The best formulations couple oral collagen with vitamin C (ascorbic acid) as this helps to make it more bioavailable. Vitamin C is needed for collagen production so it's the ideal co-ingredient. Other formulations couple collagen with hyaluronic acid, vitamins, minerals, omega 3 and antioxidants for a complete all-round anti-ageing effect.

#### Which is best, meat, fish or vegan collagen?

**Bovine collagen:** collagen is often made from bovine sources, from cow bone and cow by-products such as connective tissue and cartilage. The bovine protein is notoriously difficult to 'clean up' so there is the potential risk of transmitting diseases such as brain disease CJD from the animal source.

**Marine collagen:** from fish, usually from fish scales. It is thought to have the best effect because of its high bioavailability and is less likely to transmit any diseases from the animal source. The best marine collagens are wild and deep-sea sourced rather than farmed.

**Egg collagen:** eggs also contain Type I collagen but we denature the protein when we cook eggs and obviously eggs need to be cooked to protect us from nasties such as salmonella. So the best way to take egg collagen is via a supplement. This is ideal for vegetarians.

**Vegan collagen:** made from genetically modified yeast or bacterial sources (the most common one is from the bacteria P Pastoris). Four human genes that code for collagen are added to the genetic structure of the microbes. With the added help of enzymes, they then start producing the building blocks of collagen. We don't have a lot of scientific data to support this kind of vegan collagen yet but watch this space!

It's important to choose a reputable brand. Look for ones that are manufactured under GMP (Good Manufacturing Practice codes). They will have a GMP logo on them. The Food Standards Agency regulates all supplements in the UK. Reputable brands will test their products for heavy metals and ensure things like mercury and cadmium are low. Check out their website for purity and regulatory control. They will also avoid using GMOs and avoid using any inflammatory ingredients that are harmful to the body or gut.

When I developed my own collagen powder ([Zenii Pro-Collagen Powder with Vitamin C £65](#)) and liquid supplements ([Skin Fusion £85](#)) I made sure both were a daily 10,000mg dose of sustainable farmed deep-sea marine collagen in hydrolysed form. I also ensured that all batches were heavy metal tested, hormone-free, GMO-free and made to pharmaceutical standards.

#### What does collagen taste like?

Powdered marine and bovine collagen are usually tasteless and dissolve easily. Others collagens that are combined with vitamins and minerals will often have a flavour to conceal the B vitamins which can taste yeasty. It's very much a case of personal preference and whether you want a collagen solo (which you can add to yoghurt or coffee without changing the taste) or if you want it to have other beneficial nutrients in it.

#### Should I take liquid, powder or collagen capsules?

Liquid supplements are thought to have the best bioavailability, followed by powders and then capsules. In order to get the required 10,000mg daily dose in a capsule you would likely need to take about ten a day so it's just not practical. Liquids seem to prevail here.

#### What's the difference between collagen powder and protein powder?

There are 20 different amino acids that can form a protein, of these there are nine 'essential amino acids' that the body can't produce on its own. We need to get them through food. Protein powders tend to be complete proteins - this means they contain the nine essential amino acids of the human body in roughly equal proportions and have a completely different purpose to collagen powder. They are great for post-workout recovery and for helping to build lean muscle. But they aren't going to help prevent wrinkles, improve skin elasticity or heal leaky gut.

In collagen powders and liquids, the amino acids are generally non-essential, not equally balanced and the ratio is skewed towards three of them: glycine, proline, and hydroxyproline. We need glycine to create [glutathione](#), the body's most powerful antioxidant. You don't ever want to be deficient in your master antioxidant! So collagen supplements help us replenish our master antioxidant too.

#### Do collagen skin creams work?

Collagen in skin creams are poorly regarded by the scientific community because collagen is too large a molecule to penetrate into the skin and have an impact on skin quality (what collagen skin creams seem to do well is moisturise and hydrate the skin by reducing water loss or by binding water). But there is no scientific evidence to show that they have any effect on actual collagen quality or quantity.

#### My recommended buy

I recommend taking a marine-based collagen powder of 10,000mg per day (around 2 tablespoons) if you want to boost your hair skin and nails. It will also help repair leaky gut, boost your joint and bone health and protect your vessels. For vegans, I recommend collagen boosters such as vitamin C and zinc until more evidenced-based vegan collagens are devised.

Got a medical, nutrition or aesthetics question for Dr Johanna Ward? Email us at [askthedoc@getthegloss.com](mailto:askthedoc@getthegloss.com) and we'll answer the best.

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