



Collagen Supplements *the facts*



with Alice Hart-Davis

There is an increasing number of collagen supplements available, which claim to boost collagen production within the body, for the benefit of the hair, skin, nails and joints. Do they work? What do I think about them? And which ones do I take? *Here are the answers...*

Contents

1. What is collagen?
2. Do collagen supplements work?
3. What is hydrolysed collagen?
4. How much hydrolysed collagen should you take?
5. Collagen drinks, powders or pills?
6. Know your daltons!
7. Other supplements that stimulate collagen
8. How long before you see results?
9. How long do I have to take collagen supplements for?
10. Can you take too much collagen?

1

What is collagen?

Collagen is a protein that gives our skin its structure and firmness and that forms the scaffolding of the skin. Our skin makes its own collagen in cells called fibroblasts, and this process of producing and renewing collagen goes on very efficiently until we hit 30, at which point the production line starts to slow down. That means our skin doesn't repair itself as fast or as well as it did before and it is less resilient. Then, the expression lines that show up when we crinkle our eyes, smile, or frown start becoming embedded.

Collagen production keeps on ticking over in our 40s, but for women, the tipping point comes with the menopause. One surgeon told me that if you're looking at a graph showing collagen production and how it declines with age, that line slopes downwards fairly gently — until the point of menopause, at which point it more or less stops. 'Imagine a car hitting a brick wall,' he said.

(It's not so bad for men. In male skin, collagen production just continues to decline gradually with age.)

Worse, our lifestyle choices don't always help preserve our collagen supplies. UV light — that's good old daylight, not just bright strong sunlight — gradually wears down your collagen if you don't protect your skin with sunscreen. Smoking accelerates collagen breakdown, and so do free radicals, the unstable molecules that are created in the body by the effects of pollution, smoking, and ultraviolet light. Collagen breakdown matters because when the skin loses its collagen-based structure, it starts to look frail and collapses more easily into folds.

So, collagen is fundamental to the look and the quality of the skin, which is why so many tweakments focus on boosting collagen production in the skin. And hence the increasing interest in supplements — drinks, powders and capsules — that aim to stimulate collagen production in the fibroblasts, and improve the tone, strength and texture of the skin. If you're already using collagen-boosting skincare, and trying collagen-boosting tweakments, why not add in a third dimension to collagen stimulation with these 'nutraceutical' supplements, which help the process from the inside-out?

2

Do collagen supplements work?

Many people are sceptical about the potential of collagen supplements, and I used to be hugely sceptical about collagen supplements too, but became a convert a few years ago. Collagen drinks and collagen powders are of a class of newish arrivals on the beauty scene that look a lot like snake oil — Drink this potion! Look more lovely! But the brands which contain enough of the right sort of collagen can make a measurable difference to your skin, and several brands have conducted clinical trials which demonstrate the improvements that their products can make.

Also — it's less scientific but emotionally more compelling — many friends and colleagues in the beauty business have been scoffing these supplements from their earliest days, and their anecdotal evidence alone, plus the new dewy look of their skin, was enough to pique my interest in the area.

3

What is hydrolysed collagen?

The new collagen drinks and supplements contain 'hydrolysed' collagen — that is, collagen that has been broken up into tiny fragments. What I couldn't understand at first was why consuming collagen supplements would do you more good than eating lots of lean protein, or bone broth, which would be broken down into protein/collagen fragments in your stomach. But then I learned that providing the body with a ready supply of hydrolysed collagen works by an unusual route. When our bodies detect a lot of these hydrolysed collagen fragments in the blood, it presumes there has been some trauma to the skin that is needing repair, so it starts to make more of its own collagen.

The hydrolysed collagen in these supplements is usually marine collagen, from, say, the skin of freshwater fish; sometimes it is bovine collagen, from cowhides.



4

How much hydrolysed collagen should you take?

In order to make a difference, trials have found that you need to consume somewhere between 3,000mg and 10,000mg a day of this hydrolysed collagen.

Lots of supplements offer this — including Totally Derma, Skinade, Absolute Collagen, Pure Gold Collagen, Pink Cloud Beauty, Rejuvenated Collagen Shots, LQ Liquid Health Hair, Skin and Nails, Ingenious Collagen and Zenii ProCollagen.

There are new ones joining the list the whole time - tennis champ Andy Murray is involved with a new collagen supplement called TTR nutrition, and there's another called Aethern which is popular with cosmetic doctors.

5

Collagen drinks, powders or pills?

Some research has been done that shows that liquid collagen supplements are more readily absorbed by the body. Collagen is pretty delicate and a lot of the scepticism in scientific circles regarding the efficacy of collagen supplements revolves around the theory that stomach acid breaks down the collagen before it can pass into the blood. When it's in liquid or gel form, it has more opportunity to pass into the blood, particularly if it is held under the tongue. That can be a bit challenging on the taste buds, though, so be warned...

6

Know your daltons!

The other consideration, to get technical for a sec, is the molecular size of the hydrolysed collagen — because the smaller its molecules are, the better they will be absorbed by the body. Molecular size (or, more accurately, molecular weight) is measured in units called daltons, with larger molecules being measured in kilodaltons (kDa) — thousands of daltons.

Several of the supplements mentioned above have a molecular size of 2 or 3 kilodaltons, which is the sort of range you want to look out for, with some brands boasting clinical studies to show how well their products work. You can take a look at their websites for further information, and email them if any of the information isn't clear.

7

Other supplements that stimulate collagen

If you are familiar with the world of beauty supplements, you might be wondering whether Imedeen should be on this list. It's not, just because its key ingredient is a patented 'marine complex' that contains fish extract including collagen, but it isn't totally collagen-focussed like these other supplements.

However, it also improves the skin measurably; the company has a good deal of data on its website detailing all the studies they have conducted to prove this. Imedeen also had 'Advanced Beauty Shots' which offer 2,500mg of hydrolysed[AH1] porcine collagen – i.e. not as much collagen as the other supplements, though it should be enough to show some skin smoothing over time, and it is derived from pigs, which won't suit everyone.

I will happily consume any of the above. They're not cheap and, depending on which you choose, will add up to £100 a month to your skincare bill. If that's within your budget, they are worth considering, in order to firm up your beauty-from-the-inside-out strategy.

8

How long before you see results?

It takes time for results to show, so be patient. The supplements will kick-start production of more collagen within your body, and the impact on the skin will be to improve the firmness and elasticity in the dermis, the lower layer of the skin. So you will need to take the supplements for two or three months before you can expect to see a result.

9

How long do I have to take collagen supplements for?

Think of this like exercise, or meditation, or breathing; you have to keep doing it to reap the benefits. Taking collagen supplements doesn't change the rate at which your body produces collagen, it just gives you more collagen for your skin to play with. So, if you stop completely, you'll still be producing the same amount of collagen you did before and you'll therefore end up back at square one after a couple of months.

10

Can you take too much collagen?

Don't go over the top and take more than the recommended dose of collagen supplements. While doses of up to 10,000mg a day have been shown to be effective, it is thought that taking too much collagen could have a negative effect on collagen building, though the chaps who are working on the studies for this can't yet say how much is too much. Just so you know.

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