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HE EXPERTS

t's the most abundant protein in the body; a major building block of bones, muscles, tendons and ligaments. We are, of course, talking about collagen. You're probably already aware that this veritable workhorse is also of the utmost importance for healthy skin - in fact, there's little that it doesn't do. As a key component of skin, collagen provides structure, acting as a springy scaffold for a smooth, supple complexion. It gives skin strength and elasticity, as well as stimulating production of hydrating hyaluronic acid.

Collagen is also naturally present in hair and nails. And it's rich in the amino acids that the body needs to build keratin – the protein that gives hair its structure. In short, there's no need to convince us how crucial collagen is to getting our glow on. But when it comes to supplements, things aren't so clear. So with the help of some collagen connoisseurs, we've answered your questions.

# WHY TAKE COLLAGEN SUPPS?

As a market, nutricosmetics is booming, predicted to double globally from its value in 2016 to reach £4.9 billion by 2024. Ingestible beauty is fast becoming a popular natural alternative to invasive treatments and expensive anti-ageing products. Topical products address only 20% of skin, while the remaining 80% is mostly influenced by what we eat and drink - so it stands to reason that we might benefit from a boost.

'Age-related decreases in collagen, elastin and hyaluronic acid within the skin start to occur around 25 years old and progressively worsen with time,' says facial aesthetician Dr Benji Dhillon. Associate Registered Nutritionist Isabel Tarrant agrees: 'In

particular, post-menopausal women's collagen production declines. And other factors such as excess sugar, UV exposure and smoking can further decrease production, which leads to sagging skin, wrinkles and ageing.' So even the healthiest lifestyle will only help

you fend off ageing for so long. 'A balanced diet in our 20s and 30s, as well as sun protection, should be sufficient to maintain skin quality. However, from 40 years onwards, our ability to repair damage in our skin reduces, which is why we might benefit from supplements,' says Dhillon.

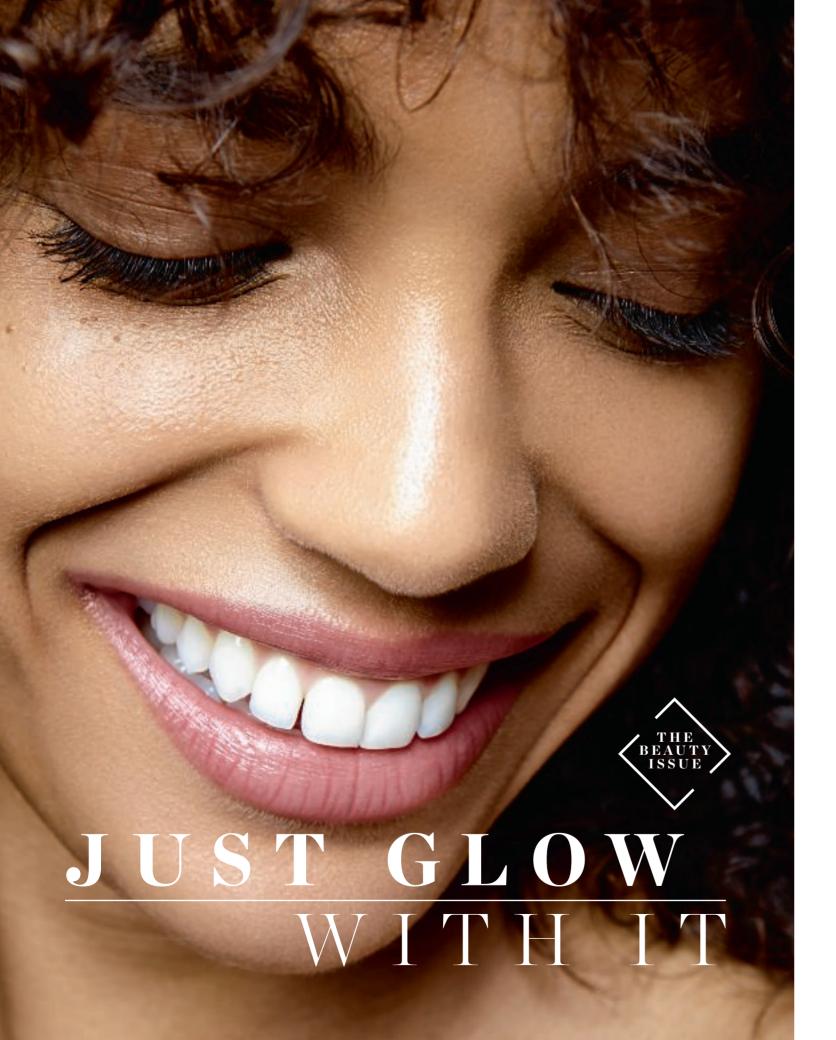
## HOW DO THEY WORK?

While we can't totally prevent collagen decline, supplements can certainly help to slow it down. However, note that the collagen we ingest doesn't automatically become new collagen.

'Collagen supplements deliver the building blocks for our bodies to produce our own collagen,' says Dhillon. First, they're broken down into amino acids and peptides. 'These are absorbed by the body through our digestive system, then built into collagen and delivered to our skin, hair, nails and teeth.'

But when collagen is so abundant in all areas of the body, how can we be sure it's reaching these areas? 'The body is a very complex machine,' says trichologist Guy Parsons. 'When it takes in nutrients, it prioritises systems and organs first. Hair is a non-essential tissue, so it's way down in the pecking order. But if there are extra nutrients to go around, it will get a look in, and that's why I recommend supplementation.'

Tarrant agrees, adding: 'Areas such as hair, skin and nails are further down on that priority list. Even if you have a balanced diet, it is common to be low in certain vitamins and minerals, so beauty supplements can give you that top up you need.' •>



## clean beauty

#### WHO CAN BENEFIT?

'More and more people do not have a balanced diet, and this can have a profound impact on the quality of skin and hair,' says Dhillon. 'For many people, supplements can provide a quick and easy way to deliver nutrients to restore hair and skin quality.' Likewise, Parsons believes our modern lifestyles mean 'sometimes we all need to top the system up.' More specifically, Tarrant says those with vitamin deficiencies and restricted diets including vegetarians, vegans and the lactose intolerant - should consider a supplement, as should menopausal and post-menopausal women.

## WHAT IF I'M PLANT-BASED?

Vegan or veggie? We've got you. Until recently, scientists thought collagen could only be derived from animals, but vegetarian and vegan collagen supplements have been developed. Ovoderm is extracted from membranes of eggs, while vegan collagen is made from genetically modified yeast or bacterial sources. More research into vegan sources is needed, but there are other ways to boost your collagen production. 'Plant-based nutrients. such as vitamin C, silica, zinc and amino acids can all support collagen production,' says Tarrant.

"One study showed that taking a collagen supplement for eight weeks led to a marked reduction in wrinkles"

## WHAT DOES THE SCIENCE SAY?

So, does the science behind collagen supplements stack up? Increasingly, yes. 'Of all the supplements with the greatest amount of scientific evidence behind them, I would say vitamin D and collagen are top of the pile,' says Dhillon. A 2019 systematic review found that oral collagen supplements increase skin elasticity, hydration and dermal collagen density, and showed promising results for wound-healing and skin-ageing. Meanwhile, clinical trials have shown that taken daily, a collagen supplement can slow the body's breaking down of its own collagen. One study, in which 114 women aged 45-65 took a collagen supplement for eight weeks, saw a marked reduction in the depth of lines around the eyes.



## COLLAGEN-BOOSTING BUYS

## Dose & Co Dairyfree Vanilla Creamer

collagen and healthy fats from coconut milk, this naturally flavoured creamer is free from dairy, soy, gluten and artificial

## LQ Skin Hair Nails Collagen Passion **Fruit Flavoured Liquid Supplement**

76 points) This highstrength formula

contains marine collagen and hyaluronic acid in an easy-to-drink shot.

#### **Bioglan Beauty** Collagen Effervescent (£8.99,

20 tablets, 32 points) Dissolve in a glass of water for a tastv berry-flavoured drink, providing hydrolysed marine collagen, plus biotin, vitamin C and selenium.

All at hollandand barrett.com

## WHAT DO I NEED TO KNOW?

#### **TYPES**

There are three types of collagen, two of which are more important when it comes to skin. 'Type 1 collagen is abundant in the body and helps skin health, and type 3 improves skin elasticity and hydration,' says Tarrant.

#### SOURCES

'The main sources are marine (fish), bovine (beef), then egg collagen,' says Tarrant. 'Bovine contains type 1 and type 3 collagen, and tends to be taken for joint pain, as well as for anti-ageing and other health benefits.' Eggs and marine both contain type 1 collagen. 'Marine collagen is more easily absorbed,' says Tarrant. 'It's also considered more ethically sourced, as it's from parts of fish that otherwise would be thrown away. The main benefits of marine collagen are skin health - it rebuilds skin tissue to increase elasticity and reduce wrinkles, helps to increase moisture and is rich in antioxidants.

#### **FORMATS**

Collagen comes in many forms – from powders to gummies (see above). 'It depends on the supplement, but larger compounds such as collagen are better absorbed in liquid form,' says Dhillon. However, 'hydrolysed' collagen has been broken down into small peptide chains, making it more bioavailable. Most importantly, always buy from a reputable retailer to ensure quality. •