

# Holding back the years?

We take a look at the active ingredients in the plethora of anti-ageing creams and tell you whether they're likely to make a difference

**W**ith the party season approaching, you'll want to look your best, so this time of year is a good opportunity to brush up on your beauty routine. And with anti-ageing creams listing impressive-sounding ingredients such as 'nanosomes of Pro-retinol A' and promising 'visibly younger looking skin', it's almost impossible to resist splashing out on some youth in a jar.

Holding back the years from the outside in is certainly big business. In 2005 we spent £327 million on moisturisers alone. But can skin creams really make you look any younger?

## Nanotechnology

This developing technology uses tiny particles – around 80,000 times smaller than the width of a strand of your hair. Some cosmetics contain nanoparticles – for example, labels may advertise 'nanosomes of pro-retinol A'.

'Nanoparticles tend to penetrate more deeply into skin,' says our cosmetic chemist. 'In theory, they should be more effective than regular ingredients. But the jury is still out regarding their safety.'

The Royal Society wants an independent safety committee to approve consumer products containing 'manufactured nanoparticles' before they go on sale. But the US Cosmetic Toiletry and Fragrance Association says the science 'strongly indicates' that nanoparticles in creams and lotions are safe when applied to skin.

## ASSESSING EFFECTIVENESS

Products often include more than one active ingredient, so claims on the pack may refer to their combined effects as well as the moisturising action of the basic cream. A product's effectiveness also depends on how much of an active ingredient is present. But the amount doesn't have to be labelled – without this information it's impossible to compare different products.

With the help of a dermatologist and a cosmetic chemist, we've looked at six active ingredients in anti-ageing products. We've ranked these ingredients based on our experts' assessment of the strength of the available evidence for their effectiveness.

### 1 Pro-retinol/vitamin A

Found in products such as L'Oréal Revitalift, RoC Retin-Ox+ Intensive Anti-Wrinkle Moisturiser and Olay Provital Energising Day Cream

The ingredients list may include retinol, which is Vitamin A, or pro-retinol, which your body converts to retinol. Vitamin A improves the elasticity of your skin by stimulating the formation of collagen – a protein that holds and supports skin cells. It also helps your skin shed dead cells and push new ones to the surface. Vitamin A controls the production of keratin, another skin protein – when too much is produced, your skin can feel dry and rough. And it reduces the effects of sun damage.

Vitamin A from your diet is also useful for your skin. Cheese, eggs, oily fish, milk, margarine and yogurt are good sources, while yellow and orange fruits and vegetables are rich in beta-carotene, which your body converts to vitamin A. But too much of the vitamin can be harmful – don't take supplements if you're pregnant or you eat liver every week.



Anti-ageing creams may not keep you totally youthful – but the right

**Vitamin A reduces the effects of sun damage, which can cause wrinkles**

**VERDICT** Of the six ingredients considered here, vitamin A is likely to be the most effective. But it can irritate your skin even at relatively low levels. Pro-retinol, and vitamin A contained in nanosomes (see 'Nanotechnology', below left), are less likely to irritate skin.

### 2 Vitamin E

Found in products such as Nivea Visage Pure Energy Moisturising Day Crème, Olay Total Effects 7x Day Moisturiser and Olay Regenerist Replenishing Cream

The sun's action on your skin produces free radicals, which damage cells and can age your skin. Using a vitamin E cream can help reduce their effect, because it's an antioxidant that mops them up. However, more research is needed to prove that using this ingredient in a skin cream can reduce wrinkles – one of the signs of ageing.

There's less evidence that your skin will benefit from eating food rich in vitamin E. But it's a good idea to eat vegetable oils, nuts, seeds and wheatgerm – they're all sources of vitamin E.

**VERDICT** Vitamin E can help protect your skin from sun damage, although the evidence is not as extensive as for vitamin A. The vitamin E in skincare products is unlikely to irritate your skin.





combination of products and diet can help

### 3 Vitamins B3 and B5

Found in products such as Olay Total Effects 7x Day Moisturiser, Nivea for Men

Active Firming Moisturiser and No7 Advanced Hydration Day Cream

Both B vitamins improve the skin's effectiveness as a barrier – helping to stop water from getting out and infections from getting in. They also protect it from damage by free radicals. Vitamin B3 (niacin or nicotinamide) decreases the signs of sun damage and improves skin tone as well as reducing over-production of sebum. This oily substance

keeps your skin supple but can make it look shiny and encourage spots.

Vitamin B5 (panthothenic acid or panthenol) helps to keep skin moist and supple as well as aiding growth and repair. It also soothes skin, so it's useful for sunburn.

Eating foods containing these vitamins may benefit your skin. For B3, eat beef, pork, chicken, wheat flour, maize flour, eggs and milk. Good sources of B5 include chicken, beef, potatoes, porridge, tomatoes, kidney, eggs, broccoli and wholegrain foods.

**VERDICT** These B vitamins are non-irritating and vitamin B5 is soothing. But there's less published evidence than for vitamins A and E that these B vitamins effectively reduce signs of ageing.



### 4 Peptides

Found in products such as No7 Refine and Rewind Intense

Perfecting Serum, Olay Regenerist Replenishing Cream and L'Oréal Dermo Expertise Age Perfect Day Cream

Peptides are small building blocks of protein. They're much newer ingredients in skincare products than vitamins, so less research has been carried out on them. But small studies in the laboratory show that peptides can increase production of collagen and reduce inflammation – this could help minimise ageing caused by the sun.

There are fewer published studies on people, so more studies are needed to show that using peptides on your skin will definitely make it look better. But there is some evidence that peptides soften the appearance of wrinkles and firm skin.

**VERDICT** The evidence is limited. Peptides are unlikely to irritate your skin, but because they are short sections of protein they could potentially cause an allergic reaction in some people.



### 5 Active copper

Found in products such as Neutrogena Visibly Young

Copper is linked to a peptide (see 'Peptides', above), which carries it into the skin. Active copper is thought to increase production of collagen and it may also act as an antioxidant, which could reduce the effects of ageing on skin.

Some small studies have shown that copper peptides can modestly improve the appearance of fine wrinkles, age



## CREAMS FOR MEN

A quick shave and a slap of aftershave may be the extent of your morning routine. But moisturisers for men are now common, and specialist products that claim to 'revitalise', 'firm', and 'de-crease' are becoming increasingly popular.

There's no need to buy from a men's range if you're happy using a

general product or one that's marketed for women. Our cosmetic chemist told us: 'Men's skin tends to be somewhat thicker, while women's skin tends to age more quickly. But there are no significant differences that would mean a man couldn't use a woman's product and vice versa.'

spots and sun damage. But there's no evidence that taking copper as a food supplement has a similar effect.

**VERDICT** Again, the evidence is limited. Active copper is unlikely to cause any irritation.

### 6 Pro-tension

Found in products such as L'Oréal Revitalift Intensive Re-tautening Gel + Anti-wrinkle Cream

These minerals dry out on your skin – the film left behind is likely to make your skin feel tighter. You'll feel the effects immediately but, unlike the other ingredients we looked at, it's unlikely to provide longer-term benefits.

**VERDICT** A quick fix to temporarily tighten sagging skin. It's unlikely to cause any irritation.



## Checklist

Skin-saving advice to help keep wrinkles at bay

- **Watch your diet** Healthy skin starts from within. Eat a healthy balanced diet with at least five portions of fruit and veg a day and plenty of fluid. Don't smoke, and limit the amount of alcohol you drink: a maximum of 21 units a week for men and 14 units for women.
- **Use sun screen** Always use a sun screen or moisturiser with an SPF of at least 15.
- **Cleanse thoroughly** Cleanse skin morning and night – never hit the pillow if you're still wearing make-up. Use a facemask at least once a month to deep cleanse.
- **Exfoliate** Exfoliate once a week with a gentle product that's suited to your skin type.
- **Use the right products** Know your skin type and use products formulated for it. If you've got dry skin use a rich moisturiser that absorbs well.