

THIRD ANNIVERSARY ISSUE

PRESTIGE

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The ABC of Antioxidants

808
PAGES, INCLUDING
A LUXURY TRAVEL
PULL-OUT

Vitamin C, vitamin A, green tea, white tea, selenium: who can keep track? **Mariel Rittenhouse** scrutinises the long list of antioxidants to determine which of the free radical fighters are most crucial to protecting the health of your skin

FREE RADICALS ARE everywhere. Some are created by your body's immune system to fend off pathogens such as viruses and bacteria; others are produced by environmental factors like the sun, pollution, cigarettes and herbicides. But no matter where they come from, these pesky little particles are the parasites of the chemical world.

Lacking one much-needed electron, unstable free radicals hook onto the nearest stable molecule, stealing one of its electrons and jump-starting a cannibalistic cascade of electron-snatching that can ultimately result in cellular damage. New York City dermatologist David Bank says, "Free radical damage manifests in the skin as loss of elasticity, loss of normal pigmentation, broken blood vessels, lines, wrinkles, brown spots, loss of radiance and ultimately skin cancer."

Antioxidants, which are naturally highly stable, are born free radical neutralisers. By contributing one of their own electrons to the unstable molecule, antioxidants halt the chain reaction without becoming free radicals themselves. And thankfully, skincare companies have caught on.

"Vitamins C and E, coffeeberry, and green tea" are among the most potent free radical fighters, Bank says, but there are plenty of others, and they can be found in hundreds of different products. Read on to determine which antioxidant superhero will best defend your skin from a free radical free-for-all.

Vitamins A, C and E

The primary benefit of vitamins A, C and E is their ability to scavenge radicals before they have a chance to damage DNA, lipids (fat-soluble molecules) and proteins. "Vitamin C is the most abundant water-soluble antioxidant in the body, and Vitamin E is the most abundant fat-soluble antioxidant," says Vincent Portera, a nutritionist at New York's JF Gymnastique.

Vitamin E in particular is key to rejuvenating sun-damaged skin and minimising the appearance of scars, while vitamin A repairs the skin and maintains its outer layer. Vitamin C, the workhorse of antioxidants, is required for the synthesis of collagen, the key to skin elasticity; in skincare

formulations, it works on the cellular level, warding off free radicals while rebinding skin fibres for a smoother complexion and more even skin tone. Vitamin C is also used in cosmeceuticals to counteract photo-ageing damage done to the skin by exposure to the sun – thanks to its anti-inflammatory effect. Vitamin C may bolster the protection from ultraviolet light offered by traditional sunscreens, although it isn't potent enough to replace them.

Shopping list: MIM Custom-blended Massage Cleanser; Sisley All Day All Year; Chantecaille Vital Essence With Arbutin; and SkinCeuticals C E Ferulic.

Coenzyme Q10

Topical application of Coenzyme Q10 for CoQ10 improves the skin's resistance to free radicals and the detrimental effects of photo-ageing, such as crow's feet and other wrinkles. A naturally occurring antioxidant, CoQ10 can be found in every single body cell and plays a crucial role in overall cell function and energy. When applied to the skin, CoQ10 offers protection against depletion of cell membranes from ultraviolet rays, inhibiting impairment of the collagen and elastin production process and delaying the onset of those dreaded fine lines.

Shopping list: Nivea Visage Anti-Aging Q10 Plus Daycare; and Sans Soucis Q10 Essential 24-hour Intensive Care

Coffeeberry

A relative newcomer to the antioxidant roster, coffeeberry was allegedly discovered when it was observed that coffee growers on a Mexican farm had unusually youthful-looking hands compared to their faces, despite prolonged exposure to the sun. That was enough to ignite a firestorm of attention. Rich in powerfully antioxidant polyphenols such as chlorogenic acid, condensed proanthocyanidins, quinic acid and ferulic acid, coffeeberry may possess more concentrated nutrients than pomegranate or green tea. According to the Oxygen Radical Absorbance Capacity test, coffeeberry outperforms many of its rivals when it comes

to pacifying free radicals. This potent anti-ageing extract also visibly diminishes fine lines and wrinkles, and rebalances skin tone.

Shopping list: Puri CoffeeBerry Brightening Facial Complex

Green and White Teas

Catechins, which are found in green and white teas, are used in skincare to increase the antioxidant capacity of tissues. Rather than directly blocking UV rays, green tea stabilises free radicals and reduces inflammation. "Just like we try and eat an anti-inflammatory diet, we need these same properties in our skin," says Victoria Nash, founder of **esente**. **Physicochemicals:** "If you've been in the sun too much, an anti-inflammatory like green tea will help reduce redness and ultimately help slow the formation of wrinkles." Like topical products infused with vitamin C, green tea may also enhance sun protection when used in tandem with sunscreen.

Shopping list: Estée Lauder DayWear Plus Multi-Protection Anti-Oxidant Base SPF15 or 30; Origins A Perfect World White Tea Skin Guardian; and La Mer The Moisturising Gel Cream

Selenium

An essential mineral and another natural antioxidant, selenium slows the oxidation of polyunsaturated fatty acids and preserves the elasticity of tissue. In several animal-based studies, selenium has demonstrated protection from sun damage and reduced incidence of skin cancer. When combined with vitamin E, selenium can also promote the growth rate, function and fertility of certain energy-producing cells, boosting the body's natural defences while thwarting harmful free radicals. While topically applied selenium doesn't effectively penetrate the skin, when taken orally in a supplement, it helps renew the epidermis, the skin's outermost layer, minimising wrinkles, softening fine lines and fortifying the skin's cellular structure.

Shopping list: Murad APS Youth Builder Supplement; and Nude Supplements Advanced Multivitamin ■

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