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# The truth about dark eye circles

**T**hose dark circles under the eyes? Must be a tell-tale sign of tiredness and poor lifestyle choices, right?

Actually, this conventional wisdom couldn't be more wrong.

It is a misconception that poor sleep is a cause of dark eye circles, although epidemiological studies suggest sleep deprivation may be an aggravating factor in individuals who are prone to them.

Generally, they cause enough distress that sufferers want to try various remedies sold by beauty companies.

Most of these claim to treat hyperpigmentation and congestion of the eyelids, which allegedly cause the dark circles.

But we now understand that the development of dark eye circles is caused by many factors.

Among the possible causes are excessive pigmentation that is a result of one's own constitution, thin and translucent lower eyelid skin, shadowing that occurs when skin loses its tautness and congestion of the veins.

The skin over the lower eyelid is thinner and looser than elsewhere as it contains less collagen and elastin.

In my practice as a dermatologist at the Raffles Skin and Aesthetic Centre, I see patients every day who are desperate to rid themselves of the dark shadows under their eyes.

One of them, Mr C, has had a brownish curved band with a velvety texture on the skin of the lower eyelids for as long as he could remember.

His workmates teased him often for not getting enough sleep but, in truth, he had a congenital condition which was shared by his father and siblings.

Such constitutional or hereditary hyperpigmentation around the eyes affects mainly people of darker skin.

The darkening around the eyes typically appears in early adulthood and, unfortunately, responds poorly to treatment.

Pigment-specific lasers and intense pulsed light devices have been used with varying degrees of success.

Mr C tried laser treatments but did not see much improvement.

The best strategy for such individuals is to use a broad spectrum sunscreen regularly to block out ultraviolet radiation, which aggravates the hyperpigmentation.

Another patient, Mrs P, suffers from eczema and developed a dark discoloration on her eyelids when she was in her 20s.

She battled facial eczema for years and constantly rubbed her eyelids, which led to the thickening of the skin around her eyes and thus the appearance of dark eye circles.

For years, her eczema went untreated because she did not want to use steroids. Eventually, she developed brown and grey patches on both her upper and lower eyelids, especially in the skin creases.

Mrs P had post-inflammatory hyperpigmentation in the area around her eyes caused by her skin condition.

This kind of hyperpigmentation can also be caused by contact dermatitis, which is a skin

irritation induced by external factors such as the application of serums and creams.

In these cases, the dark eye circles can be lightened by treating the underlying condition, for instance, by avoiding triggering factors as well as the regular use of topical agents such as moisturisers, topical steroids and lightening creams.

Mrs P's dark eye circles improved dramatically once she complied with the eczema treatment.

A third patient, Miss S, was in her late 40s, and suffered from poor self-esteem because of the dark shadows under her eyes.

She had tried everything from concealers to topical lightening creams.

Her dark circles were a shadow effect caused by the bone structure of the eye socket, the musculature and eye bags. She has deep-set eyes and a deep tear trough, an exaggerated under-eye hollowness in the area between the rim of the orbital bone and the side of the nose.

In addition, ageing caused loss of volume in the under-eye area.

Miss S responded well to facial fillers containing hyaluronic acid, which restored volume to her tear trough and reduced the shadow effect.

She is planning to undergo a blepharoplasty, a surgical modification of the eyelid.

Yet another patient, Miss V, consulted me about the bluish-red discoloration in her lower eyelids that led some unthinking friends to remark she had "raccoon eyes".

With her very fair complexion and translucent skin, Miss V suffered from the most common form

of dark eye circles seen in fair-skinned Asians.

Vascular hyperpigmentation around the eye presents with a bluish-red discoloration caused by veins and capillaries that become more prominent when the skin is stretched.

I conducted an epidemiologic study at the National Skin Centre, Singapore, last year, to assess the prevalence of dark eye circles here and found that the vascular form was predominant, especially in Chinese as they tend to have fairer complexion.

It appears to be the result of transparency of the skin combined with dense blood supply to the skin.

Miss V also worked long hours as an executive, and sleep deprivation made the dark eye circles more pronounced.

She received monthly treatments with a vascular pulsed dye laser to minimise the appearance of the under-eye vasculature and responded well.

As the causes of dark eye circles are diverse, treatment should be tailored to the underlying cause to achieve optimal results.

Although they will not completely disappear, their appearance, on the whole, can be improved with various creams and laser treatments.

So don't lose sleep over your dark eye circles. There may be something you can do for them, aside from beauty products that promise much but do little.

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