

## **AGE SPOTS (Solar Lentigines)**

What are age spots?

Age spots (also called liver spots, lentigines, or solar lentigos) are collections of pigment caused by exposure to the sun. They are most common in people over age 50. The spots commonly appear on the hands but can occur almost anywhere, especially sun-exposed areas such as the face, forearms, and shoulders. Lentigines are superficial collections of skin pigment called melanin which have accumulated within the top layer of skin called the epidermis. Lentigines usually appear later in life and can occur in all skin types. Ephelides or freckles are common in lighter skin types and occur earlier in life.

Age spots or lentigines are caused by prolonged and repeated sun exposure (and not caused by the liver although they are sometimes called liver spots). Ephelides occur even in children after brief periods of sun exposure. Both types of pigmented spots only rarely occur in non sun exposed areas. Sun avoidance and the use of good sunscreen protection can help lessen the appearance of both lentigines and freckles.

Are age spots cancerous?

Age spots are not cancerous, and rarely do they lead to cancer. However, on skin exposed to the sun, they may be accompanied by precancerous scaly, red elevations of the skin called actinic keratoses. Dark spots, which might be cancerous, may also appear to be lentigines. Thus, all lesions should be evaluated.

Age spots removal and treatment

Age spots can be treated with freezing, acids, skin sanding, electric needle, laser, and any other methods which cause a superficial destruction of the skin. These methods frequently leave white spots and occasionally scars..

Topical bleaching products that contain hydroquinone can be useful. They work by decreasing melanocytes and melanosomes. Over time, this will lead to a fading of spots. If a hydroquinone formula is used, it is imperative that the treated area is completely protected from the sun. Exposure to sunlight will kill the hydroquinone and render it useless. Also, sunlight is, of course, what caused the lesions to begin with, and the lesions have a high rate of recurrence with the littlest bit of sunlight.

Hydroquinone can sometimes irritate and redden the skin. It is possible that the irritation associated with hydroquinone can over stimulate the higher concentration of melanocytes found in dark skin types and can ironically lead to hyperpigmentation (dark spotting). Another rare side effect of hydroquinone is exogenous ochronosis, which is an irreversible blue-black color to the skin. So if any worsening of color, one should stop hydroquinone and call for re-evaluation. Consider taking a few month break from hydroquinone every few months as there have been reports of this decreasing the incidence of side effects.

Other topical ingredients that can help fade age spots include kojic acid, vitamin C, alpha hydroxy acids, and topical retinoids including adapalene, tretinoin (most commonly known as Retin-A or Renova) and tazoratene. All these ingredients have risks of irritation, and increased sun sensitivity. Some of these ingredients may be teratogenic and should not be used during pregnancy.

In the morning, topical medication should be followed with a lotion with SPF 30 and words "broad spectrum" sun protection.

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