

ACTINIC KERATOSES

(SOLAR KERATOSES)

What are the aims of this leaflet?

This leaflet has been written to help you understand more about actinic keratoses. It tells you what they are, what causes them, what can be done about them, and where you can find out more about them. Another name for 'actinic keratoses' is 'solar keratoses', but for convenience we shall use only the term 'actinic keratoses' in this leaflet.

What are actinic keratoses?

Actinic keratoses are areas of sun-damaged skin found predominantly on sun-exposed parts of the body, particularly the backs of the hands and forearms, the face and ears, the scalp in balding men and the lower legs in women. They may also occur on the lips. The terms *actinic* and *solar* are from Greek and Latin, respectively, for 'sunlight-induced', and the term *keratosis* refers to thickened skin. They are usually harmless but there is a very small risk of some actinic keratoses progressing to a form of skin cancer called squamous cell carcinoma (see Patient Information Leaflet on Squamous Cell Carcinoma). Actinic keratoses are not contagious.

What causes actinic keratoses?

They are caused by excessive sun exposure over many years (from sunbathing, sunbed use, and outdoor work or recreational activities) and are therefore more common in older people. Fair-skinned, blue-eyed, red- or blonde-haired individuals, who burn easily in the sun but tan poorly, are at particular risk.

Are actinic keratoses hereditary?

No, but some of the factors that increase the risk of getting actinic keratoses such as a tendency to burn rather than tan, and freckling, do run in families.

What are the symptoms of actinic keratoses?

They often cause little trouble. Many affected individuals are not aware of them at all. The affected skin feels rough and dry. However, if an actinic keratosis starts to grow into a lump, becomes itchy, tender or starts to bleed, medical advice should be sought as these changes could indicate the development of skin cancer (a squamous cell carcinoma).

What do actinic keratoses look like?

Actinic keratoses can be variable in appearance, even differing from one another within a single individual. At first they can be hard to see, and are more easily felt, being rough, like sandpaper. They may grow to a centimetre or two in diameter.

Some are skin coloured, others are pink, red or brown. They can become raised, hard and warty, and may even develop a small horny outgrowth. The surrounding skin often looks sun-damaged - blotchy, freckled and wrinkled.

How are actinic keratoses diagnosed?

Usually the appearance of an actinic keratosis is sufficient to enable the diagnosis to be made, but in cases of doubt, for example if an early skin cancer is suspected, a sample (biopsy) or the whole affected area may be removed surgically under local anaesthetic for microscopic examination in the laboratory.

Can actinic keratoses be cured?

Yes, but others may develop in the future from the surrounding sun-damaged skin.

How can actinic keratoses be treated?

It is advisable to protect the skin from further sun damage (for example, by wearing a hat, long sleeves and a sunscreen with a high sun protection factor). (See Leaflet on Sunscreens)

Occasionally, small actinic keratoses may go away spontaneously, but generally they are treated as there is a small risk that some might transform into a skin cancer.

Treatments used for actinic keratoses include the following:

- *Freezing with liquid nitrogen (Cryotherapy)*. This is an effective treatment which does not normally leave a scar, but it can be painful. (See Patient Information Leaflet on [Cryotherapy](#))
- *Surgical removal*. This requires local injection into the affected skin with anaesthetic, after which the actinic keratosis can be scraped off with a sharp spoon-like instrument (a curette), or it can be cut out and the wound closed with stitches. Surgical removal leaves a scar but provides a specimen that can be analysed in the laboratory to confirm the diagnosis.
- *Creams*. Courses of creams containing drugs which may include 5-fluorouracil, imiquimod or Ingenol mebutate gel are useful treatments for actinic keratoses, especially if there are many of them. These preparations appear to selectively destroy the abnormal cells in sun-damaged skin. However, they often cause a lot of temporary inflammation of the treated areas. Diclofenac and retinoic acid are other drugs in cream or ointment form that are helpful when applied to milder actinic keratoses.
- *Photodynamic therapy*. A special light activates a cream which has been applied to the affected area of skin. This treatment is only available in certain hospitals (see Patient Information Leaflet on [Photodynamic Therapy](#)).
- *Laser treatment* may be useful particularly for actinic keratosis on the lips.

What can I do?

Protecting your skin from the sun will reduce the number of new actinic keratoses you get, and also reduce the risk of getting a sun-induced skin cancer. You should be extra cautious in the sun by following these recommendations:

- Protect yourself from the sun, from 11am to 3pm, especially in sunny weather.
- Wear protective clothing - hats, long sleeves, long skirts or trousers.
- Apply a sunscreen regularly, of sun protection factor 30 or above (and able to block both UVA and UVB light), to exposed skin before going into the sun, and re-apply according to the manufacturer's recommendations, especially if sweating or after swimming, when you are out in the sun.
- Protecting your children from the sun in the same way may reduce their risk of developing actinic keratoses.
- Avoid artificial sunlamps, including sunbeds and UV tanning cabinets.
- Examine your own skin every few months and see your doctor if an actinic keratosis starts to itch, bleed, or thicken, in case it has changed into a skin cancer (a squamous cell carcinoma).

Vitamin D advice

The evidence relating to the health effects of serum Vitamin D levels, sunlight exposure and Vitamin D intake remains inconclusive. Avoiding all sunlight exposure if you suffer from light sensitivity, or to reduce the risk of melanoma and other skin cancers, may be associated with Vitamin D deficiency.

Individuals avoiding all sun exposure should consider having their serum Vitamin D measured. If levels are reduced or deficient they may wish to consider taking supplementary vitamin D3, 10-25 micrograms per day, and increasing their intake of foods high in Vitamin D such as oily fish, eggs, meat, fortified margarines and cereals. Vitamin D3 supplements are widely available from health food shops.

Where can I find out more about actinic keratoses?

Web links to detailed leaflets:

www.skincarephysicians.com/actinickeratosesnet
[BAD Sunscreen fact sheet](#)