Lee Clinic Dermatology Information Leaflet

Actinic Keratoses

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. 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, 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 up 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 (or the whole lesion) may be removed under a 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).

Occasionally, small actinic keratoses may go away spontaneously, but generally it is advisable to treat them 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.
- Surgical removal. This requires local 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 called 5-fluorouracil, imiquimod and imgenol mebutate are useful treatments for actinic keratoses, especially if there are a lot of them. These preparations appear to selectively destroy the abnormal cells in sun-damaged skin. However, they often cause a good deal of temporary inflammation of the treated areas. Diclofenac and retinoic acid are other drugs in cream or ointment form that may be helpful when applied to actinic keratoses.
- Photodynamic therapy. A chemical is applied to the affected area, which is then treated with the correct wavelength of visible light. This treatment is only available in certain

Self care (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 10am 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 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 sunbeds. 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.

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