Actinic Keratoses and Bowen’s disease

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What are Actinic Keratoses and Bowen’s disease?

Actinic keratoses (AKs) and Bowen’s disease are common forms of sun-damage where abnormal cells have developed in the top layer of the skin (the epidermis) from excessive sun exposure. They appear as scaly patches. These usually occur on areas of the body which catch the sun such as the face and ears, scalp in balding men, back of the hands, forearms, and lower legs in women.

Actinic keratoses are sometimes called ‘solar keratoses’. Bowen’s disease is sometimes called ‘squamous cell carcinoma in-situ’.

What causes actinic keratoses and Bowen’s disease?

They arise from repeated sun damage over many years including from sun-bathing and sun-beds as well as from working or playing outdoors. Even casual sun exposure from day-to-day activities is enough for some people to develop AKs and Bowen’s disease.

There is a delay period of several years (sometimes decades) between sun exposure and developing AKs or Bowen’s disease.

Fair-skinned people who burn easily in the sun but tan poorly are most at risk.

Are they serious?

Individual lesions are not usually serious and often do not cause much trouble. However as they may look unsightly, and can be itchy and sore, they are often treated.

There is a very small risk that AKs and Bowen’s disease may progress into a type of skin cancer called squamous cell carcinoma (SCC). It is estimated that 1 in every 1000 actinic keratosis will progress to a skin cancer each year.
What is the significance of actinic keratoses or Bowen’s disease?
They are a sign that the skin is reaching the limit of it’s tolerance to sunlight and a warning that you need to reduce sun exposure in future.
They also indicate that you are at an increased risk of skin cancer in the future and that you should check your skin regularly.

What do actinic keratoses and Bowen’s disease look like?
Actinic keratoses are usually small in size (0.5–2.0 cms) and look like patches of rough, scaly skin which vary in colour. They are usually pink but can be red, or tan, a combination of all of these, or the same colour as normal skin.
Bowen’s disease patches are usually 0.5–2.0 cms in size. They are usually more red and scaly than AKs, and can grow to a size of several centimetres.
Many individuals are not aware of them at all. At first they can be hard to see, and are more easily felt, being rough, like sandpaper.
In some instances, lesions can become raised, hard and warty, and may even develop a small horny outgrowth.
The surrounding skin may looks sun-damaged – blotchy, freckled and wrinkled.

How are actinic keratoses and Bowen’s disease diagnosed?
They can usually be diagnosed from their appearance by a trained professional.
A skin biopsy is sometimes required which involves a small sample of a lesion is removed for testing.
How can actinic keratoses and Bowen’s disease be treated?

The best treatment for you depends on your age, and health and the site, size and number of lesions you have. Your doctor will discuss the options with you. These include:

• Observation – not all lesions need to be treated and using a good moisturiser to keep the area soft, and keeping an eye on the area for any changes to suggest skin cancer (see below) can be enough

• Sun protection – sun creams can be effective for actinic keratoses on sun exposed areas such as the face and scalp. You would need to use SPF 30-50 sunscreen regularly for 1 year or longer

• Cryotherapy – the lesions are frozen by a doctor or nurse at the clinic. This treatment is very effective but may make the skin in the treated areas become paler and smoother

• Curettage and cautery – the lesions are scraped away under local anaesthetic, leaving a graze which heals over a few days

• Creams – several different drugs applied to the skin as creams may be used to treat AKs

What happens after treatment?

Follow-up appointments in the clinic will not be needed once treatment has been completed. It is possible that you will develop new AKs or Bowen’s disease in the future, and may need to be referred back for further treatment.

What should I look out for?

You should see your GP if any actinic keratosis or Bowen’s disease lesion becomes more ‘lumpy’ or painful, and is growing into a nodule or bleeding and scabbing since this could indicate the development of a skin cancer called a squamous cell carcinoma.
Squamous cell carcinomas (SCC)

- Grow quickly over months
- Start as pink lumps or flat, scabbing and oozing areas
- They may bleed and can be painful
- Often occur on the face, head, ears, neck, arms and legs
- Need urgent referral to hospital for diagnosis and treatment

How can I prevent further AKs and Bowen’s disease?

Even though your skin is already sun-damaged, protecting it from the sun from now will reduce the number of new actinic keratoses and Bowen’s disease lesions you develop in the future. It will also reduce the risk of developing a skin cancer.

Simple precautions you should take are:

- Do not allow yourself to sunburn
- Do not try to get a suntan – going out in the sun with the specific intention of going brown will increase your skin cancer risk
- Cover up on a bright day. Protect the skin with clothing, including a hat, T-shirt and UV protective sunglasses
- Avoid strong sunlight. Spend time in the shade when it’s sunny particularly between 11:00 and 15:00
- Use a ‘high protection’ sunscreen of at least SPF 30 which also has high UVA protection, and make sure you apply it generously and frequently when in the sun, preferably every 2–3 hours as this can not only clear existing actinic keratoses but also prevent them from developing in the future
- Sunscreens should not be used as an alternative to clothing or shade – rather they offer additional protection. No sunscreen will provide 100% protection
• Don’t use sun beds
• Check your skin for changes once a month. A friend or family member can help you with this particularly with checking your back. If there is a new or changing lump or skin lesion, if it has been present for more than six weeks, is getting bigger, scabs or bleeds go to your doctor and have it looked at

Where can I get further information?

Local resources at Queen Elizabeth Hospital Birmingham

Dermatology Outpatients 0121 371 5469
Dermatology Secretaries 0121 371 5121 / 5122 / 5123

National organisations

British Association of Dermatologists www.bad.org.uk
Patient UK www.patient.co.uk
Please use the space below to write down any questions you may have and bring this with you to your next appointment.
The Trust provides free monthly health talks on a variety of medical conditions and treatments. For more information visit www.uhb.nhs.uk/health-talks.htm or call 0121 371 4323.

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