



SQUAMOUS CELL CARCINOMA of the skin

What are the aims of this leaflet?

This leaflet has been written to help you understand more about squamous cell carcinomas of the skin. It tells you what they are, what causes them, what can be done about them, and where you can find out more about them.

What is a squamous cell carcinoma?

A squamous cell carcinoma is a type of cancer that can occur in a number of parts of the body, but this leaflet refers only to squamous cell carcinoma originating from the skin.

There are two main types of skin cancer: melanoma and non-melanoma skin cancer. Squamous cell carcinoma (SCC) is a non-melanoma skin cancer (NMSC), and the second most common type of skin cancer in the UK. NMSC accounts for 20% of all cancers and 90% of all skin cancers. SCC accounts for 23% of all NMSC.

What causes a squamous cell carcinoma?

The most important cause is too much exposure to ultraviolet light from the sun or other sources. This can cause the DNA of skin cells (keratinocytes) in the outer layer of the skin (the epidermis) to change. Sometimes this alteration in DNA allows the skin cells to grow out of control and develop into an SCC. Ultraviolet light damage can cause SCC directly, or sometimes it can induce a scaly area called an actinic keratosis or Bowen disease. These can change into SCC if they are not treated.

Squamous cell carcinomas can also develop in skin damaged by other forms of radiation, in burns, persistent chronic ulcers and wounds, and in old scars. Certain human viral wart viruses can also contribute to its development. However, SCC itself is not contagious.

Who is most likely to have a squamous cell carcinoma?

The following groups of people are at greater risk of developing SCC:

- Immunosuppressed individuals (people with reduced immune systems) either due to medical treatment, such as methotrexate, ciclosporin and azathioprine, or due to diseases which affect immune function, including inherited diseases of the immune system or acquired conditions such as leukaemia or HIV;
- Patients who have had an organ transplant because of the treatment required to suppress their immune systems to prevent organ rejection
- People who are more susceptible to sunburn;
- People who have had significant cumulative ultraviolet light exposure, for example:
 - people who have lived in countries near to the equator, or who have been posted to work in these countries, e.g. military personnel, construction workers;
 - outdoor workers, such as builders, farmers;
 - people of advanced years, who have had a lifetime of frequent sun exposure.
- People with skin conditions such as albinism and xeroderma pigmentosum that make them more susceptible to SCC.

Are squamous cell carcinomas hereditary?

SCC is not an inherited cancer but some of the risk factors, such as fair skin and tendency to burn in the sun, are inherited.

What does a squamous cell carcinoma look like?

SCCs can vary in their appearance. Most SCCs usually look scaly or crusty, raised and rough as they originate from the outer layer of the skin. Underneath the scale, there may be an ulcer that bleeds easily. Where there has been a chronic skin ulcer from other causes, it may cause the ulcer not to heal. SCCs can be sore or tender and they can bleed but this is not always the case.

SCC can occur on any part of the skin, but they are more common on sun exposed sites such as the head, ears, lip, neck and back of the hands.

How will my squamous cell carcinoma be diagnosed?

If your doctor thinks that the area on your skin needs further investigation, you will be referred to a specialist such as a dermatologist. The NHS aims for you to receive an appointment with the specialist within 2 weeks of referral; this may be in person or via clinical photographs being examined. SCC does not have many distinguishing features when looked at with a dermatoscope (magnified light). To confirm the diagnosis, a small piece of the abnormal skin (a biopsy), or the whole area (an excision biopsy), will be removed using a local anaesthetic and sent to a pathologist to be examined under the microscope. The results will usually be available within a week to ten days.

Can a squamous cell carcinoma be cured?

Most SCCs are low risk skin cancers and can be cured. A small number can recur locally and/or spread (metastasise) to the lymph nodes or to other parts of the body.

How can a squamous cell carcinoma be treated?

Surgery is usually the recommended treatment. This involves removing the SCC with a margin of normal skin around it, using local anaesthetic. The skin is then closed with stitches or sometimes a skin graft is needed. Sometimes other surgical methods are used such as curettage and cautery which involves scraping the SCC away using local anaesthetic. In some circumstances, a specialised form of surgery called Mohs micrographic surgery may be recommended to treat your SCC.

Radiotherapy can also be used to treat SCC. This involves shining a beam of X-rays onto the skin. Several sessions are usually required.

For advanced SCC, a combination of treatments may be used. For SCC that has spread to other parts of the body a combination of surgery, radiotherapy and/or chemotherapy may be used.

Self-care (What can I do?)

Examining your skin from time to time is strongly advised. If you have any concerns, you should see your general practitioner or dermatologist. In particular, look out for scaly, red and raised areas that are new, increasing in size, changing in appearance, do not heal as expected and/or form a recurrent scab.

Follow-up after SCC treatment

Your medical team may wish to follow you closely after certain SCC treatments to ensure the treatment is successful and to detect complications, if any, sooner. Current guidelines state that patients with SCC who are at low risk of getting a second one do not need a specialist following them up. Higher risk SCCs should be followed up regularly for 1-2 years by the specialist or their team.

Within the five years after treatment for low-risk SCC there is about a 40% chance of another one developing and within five years of a higher risk SCC the risk may be as high as 80%.

How can I prevent SCC?

Reducing ultraviolet exposure will reduce the risk of getting an SCC.

Top sun safety tips

- Protect your skin with clothing, and don't forget to wear a hat that protects your face, neck and ears, and a pair of UV protective sunglasses.
- Spend time in the shade between 11am and 3pm when it's sunny. Step out of the sun before your skin has a chance to redden or burn. Keep babies and young children out of direct sunlight.
- When choosing a sunscreen look for a high protection SPF (SPF 30 or more) to protect against UVB, and the UVA circle logo and/or 4 or 5 UVA stars to protect against UVA. Apply plenty of sunscreen 15 to 30 minutes before going out in the sun and reapply every two hours and straight after swimming and towel-drying.
- Sunscreens should not be used as an alternative to clothing and shade, rather they offer additional protection. No sunscreen will provide 100% protection.

Treatment of areas of scaly sun damage (actinic keratosis and Bowen disease) may reduce your risk of an SCC. There is some evidence to show that nicotinamide taken by mouth may reduce the formation of actinic keratoses. Your specialist will have more information about this.

If you have had an SCC there are measures that you take to reduce your risk of a further skin cancer (see the related PIL [Skin cancer: How to reduce the risk of getting a second one](#)).

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 get more information?

References:

British Association of Dermatologists guidelines for the management of people with cutaneous squamous cell carcinoma 2020

<https://onlinelibrary.wiley.com/doi/10.1111/bjd.19621>

Web links to detailed leaflets:

<http://www.skincancer.org/squamous-cell-carcinoma.html>

<https://www.intelihealth.com/article/squamous-cell-carcinoma-of-the-skin>

<http://www.dermnetnz.org/lesions/squamous-cell-carcinoma.html>

Please note: The BAD provides links to help people access a range of information about their skin disease. The views expressed in these links may not be those of the BAD or its members.

For details of source materials used please contact the Clinical Standards Unit (clinicalstandards@bad.org.uk).

This leaflet aims to provide accurate information about the subject and is a consensus of the views held by representatives of the British Association of Dermatologists: individual patient circumstances may differ, which might alter both the advice and course of therapy given to you by your doctor.

This leaflet has been assessed for readability by the British Association of Dermatologists' Patient Information Lay Review Panel

**BRITISH ASSOCIATION OF DERMATOLOGISTS
PATIENT INFORMATION LEAFLET
PRODUCED OCTOBER 2004
UPDATED JANUARY 2012, APRIL 2015, APRIL 2022
REVIEW DATE APRIL 2025**