



DISSEMINATED SUPERFICIAL ACTINIC POROKERATOSIS (DSAP)

What are the aims of this leaflet?

This leaflet has been written to help you understand more about disseminated superficial actinic porokeratosis or DSAP. It tells you what it is, what causes it, what can be done about it, and where you can find out more about it.

What is disseminated superficial actinic porokeratosis?

DSAP is a skin condition with multiple, dry, scaly rings, each measuring up to 1 cm (1/2 inch) across. They are found mainly on the forearms and legs, in sun-exposed sites. It is sometimes confused with actinic keratosis which is also caused by sun exposure (See Patient Information Leaflet on [Actinic Keratoses](#)); however, actinic keratosis is more likely to arise on the face and hands.

DSAP is twice as likely to develop in women compared with men and is more common in lighter skin type. It normally develops between 30-50 years of age. It is not contagious.

There are multiple other types of porokeratosis, which affect different age groups or present in slightly different ways.

What causes disseminated superficial actinic porokeratosis?

DSAP is thought to be caused by a variety of factors. There is a genetic predisposition, but ultraviolet light exposure is thought to be the main cause. This condition tends to affect sun-exposed areas on people with fair skin who burn easily and tan poorly in the sun. It may appear more obvious in summer and less obvious in winter. Lastly, individuals taking medications or with

illnesses that weaken the body's immune system are also more likely to develop this skin condition.

Is disseminated superficial actinic porokeratosis hereditary?

It may be in some individuals. There are multiple genes on different chromosomes which have been associated with DSAP. This can occur in families in an autosomal dominant pattern, this means on average about half of the children of an affected parent could develop DSAP, although a certain amount of accumulated sun exposure is required for it to appear. The genetic mutation may also arise newly without any family history (sporadic).

What are the symptoms of disseminated superficial actinic porokeratosis?

DSAP is usually without symptoms. The affected areas often feel dry and rough. However, exposure to sun can cause them to itch or sting and grow in size (still remaining small) and number.

What does disseminated superficial actinic porokeratosis look like?

DSAP normally starts as a brownish red or brown spot and can grow from 2 mm up to 1 cm (1/2 inch) in diameter. The affected area normally has a thinned centre surrounded by a ridge-like border.

Is disseminated superficial actinic porokeratosis cancerous?

DSAP is generally harmless but in very rare cases individuals may be at risk of developing squamous cell carcinomas (SCCs) at the affected site, see Patient Information Leaflet on [SCC](#). This tends to present as an enlarging raised lump within the original DSAP, which may be painful. Therefore it is important to monitor the area and let your dermatologist know if there is any change. The risk is higher for rarer subtypes like linear porokeratosis or giant porokeratosis.

Many people with DSAP have also had significant exposure to the sun and so may also have other skin lesions caused by sun damage including skin cancer..

How is disseminated superficial actinic porokeratosis diagnosed?

Sometimes a sample of the affected area may be removed under local anaesthetic by a dermatologist for microscopic examination in the laboratory (known as a skin biopsy). However, the appearance of the affected area, along with the history, may be sufficient to enable a doctor to make the diagnosis.

Can disseminated superficial actinic porokeratosis be cured?

Unfortunately, there is no cure for DSAP. The best way to avoid worsening of this skin condition is to avoid exposure to the sun and regular use of sunblock.

How can disseminated superficial actinic porokeratosis be treated?

There is no effective treatment for DSAP and some of the treatments that are offered may have significant side effects or may not be available on the NHS. Many do not make a difference to the long term outcome of the disease. For the majority of individuals, no treatment is required apart from sun avoidance and monitoring of lesions in case they become cancerous.

However if the rash is itchy or if the appearance is troublesome, methods which have been tried in the past include the following:

Emollients. Regular use of emollients is important because while this will not cure the lesions of DSAP it but may soften the appearance and feel of them.

CAUTION: This leaflet mentions 'emollients' (moisturisers). Emollients, creams, lotions and ointments contain oils which can catch fire. When emollient products get in contact with dressings, clothing, bed linen or hair, there is a danger that a naked flame or cigarette smoking could cause these to catch fire. To reduce the fire risk, individuals using skincare or haircare products are advised to be very careful near naked flames to reduce the risk of clothing, hair or bedding catching fire. In particular smoking cigarettes should be avoided and being near people who are smoking or using naked flames, especially in bed. Candles may also risk fire. It is advisable to wash clothing daily which is in contact with emollients and bed linen regularly.

Cryotherapy. Liquid nitrogen is sprayed onto the lesions, destroying the abnormal cells. This procedure is performed by a trained practitioner. It can be very uncomfortable and may result in scarring, which can be more noticeable than the original lesion (See Patient Information Leaflet on [Cryotherapy](#)).

Creams - 5-fluorouracil, or imiquimod. These creams destroy the abnormal skin cells in sun-damaged areas of DSAP. A vigorous skin reaction consisting of [redness](#) and soreness may occur which is a sign that the condition is more likely to respond. The reaction settles on completion of a course of treatment. (See Patient Information Leaflets on [5-Fluorouracil](#) and [Imiquimod Cream](#)).

Topical retinoids. Tretinoin cream and adapalene gel have been effective for some individuals with DSAP, and do not cause as much inflammation but take much longer to work.

Surgical methods. This is done under local anaesthetic by scraping the lesions off with a sharp spoon-like instrument (curette). This is likely to leave a scar.

Photodynamic therapy. This involves a special light which activates a cream, which was applied to the affected area of skin. This treatment kills the abnormal cells in the skin, and can be painful during the process. (See Patient Information Leaflet on [Photodynamic Therapy](#))

Laser treatment. Several different types of laser have been used to treat DSAP, but this treatment is often not available in the NHS. Several sessions several weeks apart may be required, under specialist guidance. This may result in scarring.

Oral retinoids. In very severe cases, acitretin and isotretinoin tablets have been used. The DSAP also frequently reoccurs on stopping the medication.

Self care (What can I do?)

The most important precaution to take is to protect your skin from sun damage:

Top sun safety tips

- Protect your skin with adequate clothing, wear a hat that protects your face, neck and ears, and a pair of UV protective sunglasses. Choose sun protective clothing (with permanently sun-protective fabric, widely available for adults and children) if you have fair skin or many moles.
- 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.

- When choosing a sunscreen look for a high protection SPF (current recommendations are SPF 30 or 50+) 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.
- Keep babies and young children out of direct sunlight.
- UVA can penetrate through glass and be present on cloudy days, therefore it is important to wear sunscreen in these circumstances too.
- The British Association of Dermatologists recommends that you tell your doctor about any changes to a mole or patch of skin. If your GP is concerned about your skin you are advised to see a Consultant Dermatologist – an expert in diagnosing skin cancer. Your doctor can refer you for free through the NHS.
- Sunscreens are not an alternative to clothing and shade, rather they offer additional protection. No sunscreen will provide 100% protection.

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 about disseminated superficial actinic porokeratosis?

Web links to detailed leaflets:

www.dermnetnz.org/scaly/dsap.html

Links to patient support groups:

<https://www.britishskinfoundation.org.uk/disseminated-superficial-actinic-porokeratosis>

For details of source materials use 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 FEBRUARY 2013
UPDATED JULY 2016, JULY 2020
REVIEW DATE JULY 2023**