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## Lichen sclerosis

Lichen sclerosis is chronic skin disorder that most often affects the genital and perianal areas. It usually persists for years, and can cause permanent scarring. There is no known cure, although most people are substantially improved and quite comfortable with treatment.

Lichen sclerosis (LS) is ten times more common in women than in men. It can start at any age, although it is most often seen in women over 50. Prepubertal girls can also be affected. It may cause no symptoms but it can be itchy, sometimes severely so. It can develop after an injury to the affected area. It may follow or co-exist with another skin condition such as [lichen simplex](#), [candidiasis](#) or [erosive lichen planus](#).

### What does it look like?

Lichen sclerosis presents as white crinkled or thickened patches.

#### **Vulval lichen sclerosis**

In women, lichen sclerosis results in a white thickening of the skin of the vulva. It can be localised to one small area or involving the perineum, labia majora, labia minora, fourchette and clitoris. Sometimes the clitoris disappears, the labia (lips) can shrink and the entrance to the vagina tightens. Lichen sclerosis never affects inside the vagina.

The affected skin can be unbearably itchy (the symptom known as [pruritus vulvae](#)) and/or sore ([vulvodynia](#)). Sometimes bruises, blood blisters and ulcers appear, after scratching, or on their own.

Sexual intercourse can be very uncomfortable and may result in splitting of the skin (fissuring). The skin around the anus may be involved, which may cause discomfort passing bowel motions, and aggravate any tendency to constipation.

Lichen sclerosis is associated with an increased risk of [vulvar cancer](#), which presents as a slowly-growing lump or a sore that doesn't heal. It may affect up to 5% of patients with vulvar lichen sclerosis. In some cases it is associated with [genital warts](#) (human papillomavirus) and [vulval intraepithelial neoplasia](#) (VIN).

[Images of vulval lichen sclerosis ...](#)

[Images of perianal lichen sclerosis ...](#)

#### **Penile lichen sclerosis**

In men, lichen sclerosis usually affects the tip of the penis, which becomes firm and white (also called balanitis xerotica perstans). The urethra may narrow such that it is difficult to pass urine, resulting in a thin stream. Sometimes the passage has to be widened with a special operation, called meatal dilation. The foreskin may be come difficult to retract (phimosis) and a circumcision may be needed.

Penile lichen sclerosis may rarely predispose to [penile cancer](#). Long term follow-up is therefore recommended.

[Images of penile lichen sclerosis ...](#)

#### **Other skin sites**

Lichen sclerosis may also affect non-genital areas in 10% of patients with vulval disease. Six percent of affected men and women have no genital involvement. One or more white patches may be found on the inner thigh, buttocks, under the breasts, neck, shoulders and armpits. They often look like cigarette paper, with a wrinkled surface and waxy thickened feel. Less often they are scaly, bruised-looking, blistered or ulcerated. In these sites, lichen sclerosis is generally not itchy and it does not appear to predispose to cancer.

## Non-genital lichen sclerosus



[More images of extragenital lichen sclerosus ...](#)

### What is the cause of lichen sclerosus?

The cause of lichen sclerosus is not fully understood and may include genetic, hormonal and infectious components. Lichen sclerosus is believed to relate to an autoimmune process, in which there are antibodies to a component of the skin. This is possibly extracellular matrix protein-1 (ECM-1) as antibodies to this protein have been detected in 75–80% of women with vulval lichen sclerosus.

Other autoimmune conditions such as thyroid disease (about 20% of patients), pernicious anaemia, [vitiligo](#), [alopecia areata](#) and [psoriasis](#) are reported to be more frequent than expected in patients who have lichen sclerosus and in their families.

### How is it diagnosed?

Often the diagnosis is made by a dermatologist or gynaecologist after a careful clinical examination. A [skin biopsy](#) is frequently recommended to confirm the diagnosis, as there are characteristic histopathological findings in lichen sclerosus. A biopsy also rules out other possible explanations for the skin condition such as [dermatitis](#), [lichen planus](#) and [vulval intraepithelial neoplasia](#). Sometimes these disorders may co-exist with lichen sclerosus.

During follow-up, your specialist may decide to perform another biopsy to evaluate areas of concern.

### Treatment

Strong [topical steroid](#) creams or ointments (especially clobetasol propionate) are very helpful for lichen sclerosus, especially when it affects genital areas. They should be applied very accurately to the affected areas for a few weeks or months. Over-use of steroid creams can result in skin thinning; it is most important to follow instructions carefully and to attend follow-up appointments regularly.

Most patients will be told to apply the steroid cream once a day initially. The doctor should reassess the treated area after a few weeks as the response to treatment is quite variable. The itch often settles within a few days but it takes weeks to months for the appearance to return to normal. Once the lichen sclerosus has resolved or skin

thinning due to the cream has arisen, the cream should be used less often. Generally it will need to be continued on a regular basis (perhaps once a week) to prevent the lichen sclerosus recurring. In general, after initial more generous treatment, one 30g tube is expected to last about 6 months.

Wash gently in a shower or bath with plain water alone or with a [non-soap cleanser](#). Try to avoid rubbing and scratching. Some patients find it helpful to apply an emollient cream or petrolatum several times a day to relieve dryness or itching.

If the first topical steroid is not well tolerated or ineffective, another one should be used. An ointment may be preferred to a cream (or vice versa).

There are a variety of other treatments occasionally prescribed as well or instead of steroid creams. These include [calcipotriol cream](#), [topical](#) and systemic retinoids ([acitretin](#)), and [systemic steroids](#). The new immune modulating creams [tacrolimus](#) and [pimecrolimus](#) look promising for treating lichen sclerosus, but may be difficult to use because they tend to cause burning. There is also concern that these medications may have the potential to accelerate skin cancer formation in the presence of oncogenic human papilloma virus ([genital warts](#)).

Topical oestrogen creams are not effective for lichen sclerosus but may be prescribed for postmenopausal atrophy (dry, thinned and sensitive vulval and vaginal tissues due to hormonal deficiency).

If the vaginal opening has narrowed, it may need gentle stretching using dilators. Rarely, surgery is necessary to allow sexual intercourse. Unfortunately, the lichen sclerosus sometimes closes up the vaginal opening again after surgery has initially appeared successful.

Surgery to remove the entire vulva (vulvectomy) is reserved for the most severe cases or if there is vulvar cancer or pre-cancer (vulvar intraepithelial neoplasia or VIN).

#### Related information

##### On DermNet NZ:

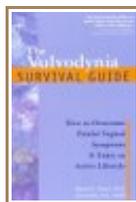
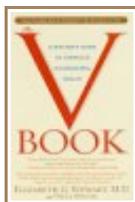
- [Genital skin conditions](#)
- [Pruritus vulvae](#)

##### Other websites:

- [Lichen sclerosus et atrophicus](#) - emedicine dermatology, the online textbook
- [UK National Lichen Sclerosus Support Group](#)
- [UK Vulval Pain Society](#)

##### Self-help books

- [The V Book: A Doctor's Guide to Complete Vulvovaginal Health](#)
- [The Vulvodinia Survival Guide: How to Overcome Painful Vaginal Symptoms & Enjoy an Active Lifestyle](#)



DermNet does not provide an on-line consultation service.

If you have any concerns with your skin or its treatment, see a [dermatologist](#) for advice.

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