

Lentigo

What is a lentigo?

Lentigines (plural of lentigo) are flat brown lesions which do not darken following sun exposure (thus differentiating them from ephelides, or true freckles).

Appearance^[1]

One study of Caucasian women found that lentigines were signs of photo-damage whereas there was a genetic component in true freckles.^[2] They may be any size from 5-20 mm and may be irregular in shape. They occur over the shoulders in young people, especially those who have had a lot of sun exposure and in the elderly on the sun-exposed sites such as the dorsum of the hands and forearms, the face and the neck.

The histopathology may include hyperplasia of the epidermis and pigmentation of the basal layer. A number of different types are found:

- **Lentigo simplex** - the most common type, mainly seen in children and not associated with sun exposure. The spots are 5-15 mm in diameter.

- **Solar lentigo** – related to sun exposure. Seen on skin normally exposed to sunlight (eg, face, hands), they are benign lesions, <5 mm in diameter but may merge to form larger spots. Former peak age of 30–50 is becoming younger with increasing sun exposure. The colour may vary from yellow–brown to black.



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- **Ink spot lentigo** – this lesion, so called because it resembles a spot of ink, is a benign lesion limited to sun-exposed areas. They are usually solitary lesions and may be mistaken for melanomas.
- **PUVA lentigo** – these brown macules can appear six months or more after the start of psoralen combined with ultraviolet A (PUVA) treatment for psoriasis in areas exposed to treatment. The macules are usually 3–8 mm in diameter and persist for 3–6 months after treatment has finished. There is also a larger stellate form (which can be up to 3 cm in diameter) which may persist for two years or more.
- **Radiation lentigo** – this appears after a single large exposure to radiation (of Chernobyl proportions rather than post-radiotherapy). There may be other histological signs of radiation damage, such as epidermal atrophy and subcutaneous fibrosis. The malignant potential for such lesions is not known.

- **Sunbed lentigo** - lentigines can appear rapidly after intense exposure, or they may appear after long-term use. They are 2-5 mm in diameter and are most common on the anterior aspects of the arms and legs.
- **Labial and oral melanotic macules** - labial macules usually appear as single lesions on the vermillion of the lower lip. Oral lesions occur on the gingival and buccal mucosa, palate and tongue.
- **Genital lentigo** - in men, this can present as a tan to dark-brown macule anywhere on the glans, shaft or corona. They can achieve a size of 15 mm. In women, lentigines can occur anywhere on the genital mucosa and are usually between 5-15 mm in size.
- **Lentigines profusa** - in this condition, there are widespread lentigines over the arms, legs and genitalia. There are no trigger factors or associated abnormalities (thus differentiating them from a number of lentigo-associated syndromes - see below). The lesions can be 5 mm-2 cm in diameter. The appearance is of dark brown or black freckles but with a more generalised distribution.
- **Agminated lentiginosis** - in this condition, which can be associated with a number of childhood diseases, lentigines appear in a sharply demarcated distribution which often follows the outline of dermatomes. They are tan or dark brown in colour and may be present at birth or develop in early childhood.

A number of lentigo-associated conditions can occur:

- **LEOPARD** - lentigines, electrocardiographic conduction defects, ocular hypertelorism, pulmonary stenosis, abnormal genitalia, restriction of growth, deafness.
- **Peutz-Jeghers syndrome** - gastrointestinal polyps and pigmented macules.
- **Laugier-Hunziker syndrome** - a variable number of pigmented macules appearing commonly around the oral mucosa or lower lip and in other areas.

- **Myxoma syndromes** – a group of disorders including:
 - **LAMB** – lentigines, atrial myxomas, mucocutaneous myxomas and blue naevi.
 - **NAME** – naevi, atrial myxoma, myxoid neurofibroma and ephelides.
 - **Carney's syndrome** – cardiac, cutaneous and mammary myxomatous masses; lentigines; blue naevi; endocrine disorders; testicular tumours.

Differential diagnosis^[3]

- [Actinic keratosis](#).
- Ephelides (freckles) – become darker after sun exposure.
- [Seborrhoeic wart](#).
- [Xeroderma pigmentosum](#).
- [Melanoma of the skin](#).

- Lentigo maligna - seen mainly on the sun-exposed areas of the face and neck in the elderly; it is slow-growing and sometimes grows to a size of several centimetres. Their size and site differentiates them from lentiginos. Lentigo maligna is a pre-cancerous condition. Conversion to a lentigo maligna melanoma can take from a few months to up to 15 years. Transformation to malignancy is lower than in other forms of melanoma, occurring in approximately 5% of patients. However, the risk is higher in larger lesions with a risk of 50% in lesions larger than 4 cm. Identifying lesions that require referral is not easy but worrying signs include changes in size or colour, itching, burning, bleeding, or pain.^[4] The ABCDE rule of melanoma may be helpful:
 - **A**symmetry.
 - **B**order irregularity.
 - **C**olour variegation.
 - **D**iameter greater than 6 mm (the end of a pencil head), although melanoma can occur in lesions less than 6 mm.
 - **E**nlargement.



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See the separate [Malignant Melanoma of Skin](#) article.

Investigations^[5]

- Biopsy and histology may be used to differentiate the various types of lentigines.
- A dermatoscope is occasionally used in the diagnosis of solar lentigo.
- The diagnosis of lentigo maligna has been improved by the use of reflectance confocal microscopy (a non-invasive imaging technique that enables in vivo visualisation of the epidermis down to the papillary dermis) and immunohistochemical stains.

Primary care management of lentigo

- Unsightly lesions of the face can be lightly frozen, which often improves the cosmetic result.

- Tretinoin is occasionally employed to lighten lesions (unlicensed use).^[6]
- Any treatment which has a purely cosmetic aim may not be available on the NHS.

Secondary care management of lentigo

- Cryotherapy can be used for isolated lentigines. One study found it was more effective than 40% trichloroacetic acid for the treatment of solar lentigines although the difference was not significant.
- Lasers are useful for a variety of lentigines. Aggressive therapy for using quality-switched lasers is effective in the treatment of solar lentigines but carries the risk of post-inflammatory hyperpigmentation (PIH). For darker skin types, less intensive irradiation reduces this risk, with no reduction in efficacy.^[7]
- Intense pulsed light (IPL) is another option.

When to refer

- For doubt over diagnosis and for diagnostic biopsy.
 - When treatment is required but cannot be provided within primary care - eg, treatment with lasers (Q-switched Nd:YAG or ruby) are effective when available.^[8]
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Prognosis

Lentigines tend to worsen over time but do not become malignant.

Lentigo prevention^[1]

- New lesions can be prevented to some extent by sun avoidance. Clothing is more effective than sunscreens.
- Avoiding the excessive use of sunbeds helps to prevent tanning-bed lentigines.
- Avoidance of a large single dose of ionising radiation helps to prevent radiation lentigines.

Further reading

- [Goncharova Y, Attia EA, Souid K, et al](#); Dermoscopic features of facial pigmented skin lesions. ISRN Dermatol. 2013;2013:546813. doi: 10.1155/2013/546813. Epub 2013 Feb 3.

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