



POLYMORPHIC LIGHT ERUPTION

What are the aims of this leaflet?

This leaflet has been written to help you understand more about polymorphic light eruption (PLE). It briefly explains what it is, what causes it, what can be done about it, and where more information can be found about it.

What is PLE?

The term 'light eruption' means a rash that comes up after exposure to light. 'Polymorphic' is two words; 'poly' means 'many', and 'morphic' means 'forms'. In other words, the rash of PLE can take on many different forms, including small red bumps, larger red areas, and blisters. In PLE, a rash with one or more of these components comes up a day or two after exposure to the sun. PLE is the most common rash caused by UV light, perhaps affecting up to 10%-20% of the population in western countries. It tends to be more common in the spring or early summer.

What causes PLE?

PLE is a response to sunlight and as little as 20 minutes of sun can trigger the problem. PLE can come up even when the light has passed through window glass and sometimes even after exposure to fluorescent lighting. Both long (UVA) and short (UVB) wavelengths of ultraviolet light can cause PLE, but it is still not clear how they trigger the rash. It might be a reaction related to your immune system or an allergy.

Most people with PLE get a rash in the spring after they become exposed to strong sunlight for the first time of the year or when visiting countries with a sunny climate, and sometimes it clears up before they return home. The rash tends to affect areas that have been covered by clothing during the winter and goes away without treatment in about a week if there is no further sun exposure. If the affected area is exposed to more sun the rash will get worse

and spread; but as the summer continues, the skin becomes resistant to sunlight and many people can stay longer in the sun

Other points about PLE:

- Women get PLE more often than men. The symptoms of PLE seem to be less severe in post-menopausal women.
- PLE can occur at any age but usually starts before the age of 30 and tends to get worse with time. The symptoms can be less severe when there is repeated sunlight exposure or the skin becomes used to the light exposure, called hardening.
- PLE affects people of all skin types, but is most common in those who have fair skin. PLE is more common in countries that are not very sunny or countries with milder sun exposure such as northern countries.
- PLE is not infectious and has no connection with skin cancer.
- People that suffer from severe PLE can have significant psychological symptoms which can lead to anxiety and depression.

Is PLE hereditary?

No, but because it is a relatively common condition about 15% of those who have PLE know of other family members who have it too. Twins have a higher possibility of developing PLE, up to 18%-21% if their sibling experiences symptoms.

What are the symptoms of PLE?

- The rash (pink or red spots) of PLE can itch or have a burning sensation.
- PLE can be embarrassing as it comes up on exposed areas of skin.
- PLE restricts outdoor activities and holidays in the sun.

What does PLE look like?

- PLE ranges from a mild rash that lasts for only a short time to a severe and extensive eruption affecting the quality of life.
- The rash comes up equally on both sides of the body, affecting mainly those parts of the skin that are kept covered in the winter, such as the arms, the upper thighs and the upper trunk. For this reason the face, neck and backs of the hands are sometimes, but not always, affected.

- The appearance of the rash varies from person to person. The most common type has large numbers of small red bumps. In other people the rash is made up of larger red areas and small blisters. The rash of each affected person usually looks the same each time it comes back to that particular person. The rash usually disappears by itself within 7-10 days, if there is no further exposure. It heals without scarring.

How will PLE be diagnosed?

A doctor may make a referral to a dermatologist who will base the diagnosis of PLE on the appearance of the rash and the history that the rash has been provoked by sunlight. If there is any doubt, tests can be done to rule out other conditions that may cause sun sensitivity. Phototesting (trying to reproduce the rash by testing the skin with different amounts and wavelengths of ultraviolet and visible light) is sometimes needed to exclude other rare types of sun sensitivity.

Can PLE be cured?

No, treatment will not be able to get rid of PLE; however, many people do not have a recurrence if they avoid exposure to the sun and use an effective sunscreen. The tendency to get PLE may go away by itself after a few years as the skin becomes more adapted to sunlight. The aim of the treatment is both to minimize the severity of the symptoms and prevent the disease from occurring.

How can PLE be treated?

When the rash comes up, topical or oral corticosteroids, as well as oral antihistamine may help to reduce itching.

Mild PLE may be controlled by following the 'top sun safety tips' listed below in the 'Self care (What can I do?)' section below.

If very troublesome, desensitisation treatment may be considered. Desensitisation is a way of raising the skin's resistance by treating it with increasing doses of ultraviolet light in a special [phototherapy](#) cubicle. The treatment is given in the early spring so that the skin is ready to cope with the summer sun. The effect of desensitisation treatment wears off in the winter, so it should be repeated every spring.

Gradual exposure to sunlight in the springtime may help to reduce the severity of the rash when the summer comes in individuals who have a mild PLE.

A few people with extensive PLE may still have problems despite the measures listed above. Some tablets (such as [hydroxychloroquine](#)), which are usually prescribed for malaria, may be helpful in some cases. A short course of oral steroids can be considered at times, e.g. to cover a summer holiday. If very resistant to the treatments mentioned above, other oral non-steroidal agents like [azathioprine](#) can also be used. Using oral or topical antioxidants as well as oral nicotinamide prior or after the first sun exposure has shown to prevent PLE. Topical antioxidants (such as Vitamin E, as a combination with UVA sunscreen) and topical corticosteroid also help decrease itch.

Self care (What can I do?)

- Strictly follow the 'top sun safety tips' as well as the vitamin D advice mentioned below.
- Ask the doctor for a referral to a dermatologist to consider phototherapy desensitisation therapy.

Top sun safety tips:

- Spend time in the shade between 11am and 3pm when it's sunny. Seek shade from the sun before the skin has a chance to redden or burn.
- When choosing a sunscreen look for a high protection SPF (SPF 50 or above) 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, 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.
- The British Association of Dermatologists recommends that the doctor is informed about any changes to a mole or patch of skin. If the GP is concerned about the skin, make sure a referral to a Consultant Dermatologist is made.
- Taking Vitamin D supplement tablets (available from health food shops) may be helpful as strictly avoiding sunlight can reduce Vitamin D levels.

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 PLE?

Web links to detailed leaflets:

<https://www.nhs.uk/conditions/polymorphic-light-eruption/>

<https://knowyourskin.britishskinfoundation.org.uk/condition/polymorphic-light-eruption/>

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

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