PATIENT INFORMATION LEAFLET

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 POLYMORPHIC LIGHT ERUPTION?

The term 'light eruption' means a rash that comes up after exposure to sunlight. 'Polymorphic' is two words; 'poly' means 'many', and 'morphic' means 'shapes. 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 appears between a few hours to a few days after exposure to the sun. The rash can last for several days before subsiding.

PLE is the most common rash caused by ultraviolet (UV) light, estimated to affect up to 10%-20% of the population in western countries. It tends to be more common in the spring or early summer.

WHAT CAUSES POLYMORPHIC LIGHT ERUPTION?

PLE is a response to sunlight and as little as 20 minutes of sun can trigger the rash. PLE can appear even when the sunlight has passed through window glass and sometimes even after exposure to fluorescent lighting. It is predominantly caused by long sunrays (UVA), but it can also be caused by short sunrays (UVB) and visible light, but it is still not clear how they trigger the rash. It might be a reaction related to the immune system.

Most people with PLE develop 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; as the summer continues, the skin becomes used to sunlight (also known as hardening) and many people can stay longer in the sun.

Other aspects observed with 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.
- 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 have severe PLE can have significant psychological symptoms which can lead to anxiety and depression.

IS POLYMORPHIC LIGHT ERUPTION HEREDITARY?

PLE 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 developing PLE if their sibling experiences symptoms.

WHAT DOES POLYMORPHIC LIGHT ERUPTION FEEL AND LOOK LIKE?

The rash of PLE can be itchy or create a burning sensation. Because of this, it can make outdoor activities and holidays in the sun difficult.

The appearance of the rash varies from person to person. In white skin, the rash can appear as pink or red spots, and black or brown skin, a pinpoint rash is commonly seen.

PLE ranges from a mild rash that lasts for only a short time to a severe and extensive rash which may affect a person's quality of life. The rash can also form a few small spots to larger affected areas and blistering. The rash of each affected person will appear the same shapes and colour each time a flare up occurs.

The rash appears 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 rash usually disappears by itself within 7-10 days, if there is no further exposure to sunlight. It heals without scaring.

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 caused by sunlight. If there is any doubt, tests can be done to rule out other conditions that may cause sun sensitivity.

Photo-testing (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 POLYMORPHIC LIGHT ERUPTION BE CURED?

No medication can cure PLE; however, many people do not have a recurrence if they avoid exposure to the sun and use an effective broad-spectrum 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 minimise the severity of the symptoms and prevent the disease from occurring.

HOW CAN POLYMORPHIC LIGHT ERUPTION BE TREATED?

Most cases are mild and respond to prevention by avoiding intense sun exposure, wearing sun protective clothing and hats, and by wearing broad spectrum (protecting against both UVA and UVB) sunscreens. Please see the further resources section to learn more.

Mild rashes can be treated with topical or oral corticosteroids, as well as oral antihistamines which may help to reduce itching.

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 severe 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, alternatives to steroids such as 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 broad-spectrum sunscreen) and topical corticosteroids also help decrease itch.

SELF-CARE (WHAT CAN I DO?)

Top sun safety tips:

- Avoid the sun between 10am and 3pm
- Wear long-sleeved, loose-fitting clothing and hats when out in the sun
- Wear broad spectrum sunscreen that protects against UVA and UVB

- Take antihistamines, providing they do not interfere with other medication you are prescribed
- Take pain relief if needed
- Protect any rash from further sun exposure
- Ask the doctor for a referral to a dermatologist for further assessment and to consider phototherapy desensitisation therapy.

Vitamin D advice

People who avoid sun exposure may be at risk of low levels of vitamin D. They should think about checking their serum vitamin D levels. If the levels are low, they may consider:

- Taking vitamin D supplements of 10-25 micrograms per day. Your GP can advise on this.
- Consuming more foods rich in vitamin D. This includes oily fish, eggs, meat, butter, fortified margarine, cereals, and others.

WHERE CAN I GET MORE INFORMATION ABOUT POLYMORPHIC LIGHT ERUPTION?

Weblinks to other relevant sources

NHS: www.nhs.uk/conditions/polymorphic-light-eruption/

DermNetNZ: www.dermnetnz.org/topics/polymorphic-light-eruption

Sun awareness fact sheet: www.skinhealthinfo.org.uk/sun-awareness/the-sunscreen-fact-sheet/

Jargon Buster: www.skinhealthinfo.org.uk/support-resources/jargon-buster/

Please note that the British Association of Dermatologists (BAD) provides web links to additional resources to help people access a range of information about their treatment or skin condition. The views expressed in these external resources may not be shared by the BAD or its members. The BAD has no control of and does not endorse the content of external links.

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 | AUGUST 2004
UPDATED | APRIL 2010, MAY 2013, FEBRUARY 2017, MAY 2021, AUGUST 2025
NEXT REVIEW DATE | AUGUST 2028