SOLAR URTICARIA

What are the aims of this leaflet?

This leaflet has been written to help you understand more about solar urticaria. It tells you what it is, what causes it, what you can do about it, and where you can find out more about it.

What is solar urticaria?

The term ‘solar urticaria’ describes a relatively rare type of urticaria which is induced by exposing your skin to sunlight. It is a useful term as it reminds us of the main features of the condition; ‘solar’ describing that it is caused by light from the sun and ‘urticaria’ describing that the rash produced on the skin. Urticaria is also known as hives, weals and nettle rash.

Solar urticaria is found worldwide, and whilst it can start at any age it appears to be those aged between 20 and 40 who are most affected.

What causes solar urticaria?

Solar urticaria is caused by the release of histamine from cells in the skin called mast cells. Exactly how and why certain types of sunlight cause this is currently uncertain.

The appearance of solar urticaria can be quite dramatic as it usually develops within just a few minutes after exposure to the causative light. The ‘types’ of light responsible for solar urticaria are long wavelength ultraviolet (UVA) and/or short wavelength ultraviolet (UVB), along with visible light (e.g. sunlight not containing ultraviolet).

What are the symptoms of solar urticaria?

The main symptoms of solar urticaria are itching, stinging and burning. Rarely the rash is accompanied by symptoms such as headache, nausea, vomiting,
breathing difficulties and low blood pressure; however, in such cases it is advisable to seek emergency treatment.

Although urticaria in general can be distressing, because of the itching and its appearance, it has no direct effect on general health.

**What does solar urticaria look like?**

Solar urticaria looks like other forms of urticaria. The weals of urticaria are slightly raised up from the skin and may be flesh-coloured, pink or red, with the surrounding or central areas appearing paler.

Individual lesions usually disappear within a day, lasting for just a few minutes, or hours, and rarely last for longer than 24 hours even if further exposure to the causative light is avoided. No scarring is left behind.

Solar urticaria may develop on skin apparently covered by clothing especially if the clothing is thin.

**How is solar urticaria diagnosed?**

The diagnosis is usually based on its appearance and/or a description of it (e.g. the story that you relate of a rash appearing minutes after sunlight exposure which then settles down within a few hours). It may also help if you can bring along photographs you may have of the rash.

Phototesting (trying to reproduce the rash by testing the skin with different wavelengths of ultraviolet and visible light also known as monochromator light testing) may also be helpful. Phototesting requires referral to a specialised centre. Other tests such as blood tests and a skin biopsy may be needed in some cases.

**Can solar urticaria be cured?**

Some cases of solar urticaria do spontaneously go away, however for the majority of cases most can persist. If it does persist then the treatments described below may provide control by reducing the appearance and symptoms of the solar urticaria.

**How can solar urticaria be treated?**

Treating solar urticaria can be difficult, especially if it is visible light causing the problem. Taking measures to avoid to sunlight exposure is important to
prevent its occurrence and may require major adjustments to a person’s lifestyle. Such steps to help prevent eruptions include the following:

- **Behavioural modifications.** Spend time in the shade between 10am and 3pm when it’s sunny.

- **Clothing.** Simple measures include the wearing of clothes made from tightly woven cloth, long sleeves, a hat (ideally brimmed or Foreign Legion-style); shoes rather than sandals, and gloves, particularly for driving.

- **Sunscreens.** As solar urticaria is characterised by sensitivity mainly to visible light, conventional sunscreens that are formulated to protect against ultraviolet (particularly UVB) are usually not effective. Reflectant sunscreens that are based on titanium dioxide or zinc oxide will be more effective as they cover UVA, UVB, and visible light to a degree. In the UK, the SPF (sun protection factor) number tells you how effective the sunscreen is for UVB, and the star rating (usually found on the back of the bottle, with a maximum 4 stars) gives a measure of the UVA protection. Examples of reflectant sunscreen products available on prescription and from chemists include:

  Ambre Solaire® lotion SPF 60
  Delph® lotion SPF25
  Delph® lotion SPF 30
  E45 Sun® lotion SPF25
  E45 Sun® lotion SPF50
  Sunsense® Ultra SPF 60
  Ultrablock® cream SPF30
  Vichy factor 60A

  A tinted reflectant sunscreen, which is available in 3 colours, is available on prescription from Tayside Pharmaceuticals (see below for details). These can be mixed to obtain a good colour match with your skin.

- **Using photoprotective window films.** Some people may need to apply special photoprotective window films to the windows of their car and home in order to block out UVA and UVB light. These protective films may stop working and need replacing after about five years. Some car manufacturers offer UV protective glass as standard or as an optional extra, however most car windows do not block UV light. Your dermatologist or a patient support group may be able to advise you about suppliers of UV protective film.

- **Antihistamines.** Once solar urticaria develops it can be treated with antihistamine tablets which block the effects of histamine release.
Antihistamines can reduce the symptoms and even appearance of the weals of urticaria and can be an extremely effective treatment for some patients. Antihistamines may need to be taken regularly, in combination and at larger doses than normal, in order to control the urticaria. Oral steroids may occasionally be used to relieve severe flares.

- **Phototherapy.** If you are still having problems, despite regular antihistamine therapy, then phototherapy (where carefully measured artificial doses of UVA/UVB are delivered to your skin in a special cabin by specially trained nurses) may be an additional treatment option.

- **Other treatments.** These are tried if other treatments do not work and include ciclosporin, plasma exchange, photophoresis and intra-venous immunoglobulin.

### 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 deficient (less than 50 nmol/L) or reduced (52.5-72.5 nmol/L) 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 solar urticaria?**

**Web links to other detailed information:**

- [http://www.bad.org.uk/site/740/default.aspx](http://www.bad.org.uk/site/740/default.aspx)

**Other useful information:**

**Tayside Pharmaceuticals**
Ninewells Hospital
Dundee, DD1 9SY
Tel: 01382 632264
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: its contents, however, may occasionally differ from the advice 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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