



## PHOTOTHERAPY

### What are the aims of this leaflet?

This leaflet has been written to help you understand more about phototherapy. It tells you what it is, what is involved, what the potential side effects are, and where to find out more about it.

### What is phototherapy?

The term *phototherapy* literally means the use of light to treat medical conditions. Natural sunlight has been known to be beneficial in certain skin disorders for thousands of years, and it is the ultraviolet part of the radiation produced by the sun that is used in phototherapy, in particular the ultraviolet A (UVA) and ultraviolet B (UVB) wavelengths.

### Types of phototherapy

There are 3 main types of phototherapy:

1. **Broadband UVB** in which the skin condition is treated with the full UVB spectrum.
2. **Narrowband UVB** in which just a small part of the UVB spectrum is used to treat the skin condition.
3. **PUVA (Psoralen + UVA)**, also sometimes called photochemotherapy, in which UVA radiation is combined with a sensitiser (a chemical that increases the effect of UVA on the skin) called a psoralen.

The choice of the type of phototherapy to use is dependent on the type of skin condition, previous responses to treatment among other factors.

### How does phototherapy work?

Ultraviolet light reduces inflammation of the skin and can help in various inflammatory skin disorders. However, although it can cause skin conditions to clear, this is usually temporary and not a cure. PUVA is a more potent form of treatment, so is usually reserved for people who do not respond to UVB.

## **What conditions can be treated with phototherapy?**

UVB is used to treat common skin conditions such as psoriasis, atopic eczema, other forms of dermatitis, polymorphic light eruption, generalised itching, pityriasis lichenoides, cutaneous T cell lymphoma, lichen planus, vitiligo and other less common conditions. PUVA is generally indicated for chronic plaque psoriasis and atopic eczema if UVB has not been effective. Failure to respond adequately to UVB does not predict failure of response to PUVA. PUVA is favoured over UVB for some indications, such as mycosis fungoides beyond patch stage, adult pityriasis rubra pilaris, pustular psoriasis, hand and foot eczema.

## **What does phototherapy involve?**

Ultraviolet treatments are usually given in a hospital outpatient department in a walk-in cabinet containing fluorescent light bulbs. The treatment schedule varies from two to five times a week and an average course lasts between 15 and 30 treatments. The starting dose is worked out either by asking how well you tan in sunlight or by performing a test dose of ultraviolet light on an area of your skin. The first few treatments will often last less than one minute, and the duration of exposure to ultraviolet light will gradually increase, up to a number of minutes.

The amount of skin exposed to the ultraviolet light will depend primarily on the extent of your condition; for most patients all of the skin is exposed to ultraviolet light, except the eyes (which will be protected by goggles) and male genitalia (which should be covered). A visor or face shield may be worn if your face is not affected by your skin condition. It is recommended not to give more than 150 to 200 PUVA light treatments in a lifetime to reduce the risk of developing skin cancer.

In some parts of Scotland there is a home UVB phototherapy service which involves the use of portable whole body phototherapy units to treat selected and well-trained patients at home; monitoring of progress is provided remotely by trained phototherapy nurses.

PUVA treatment involves making your skin extra sensitive to UVA by means of a psoralen, which is either taken orally as tablets, 2 hours prior to each treatment session, or by the application of a solution, lotion or gel directly onto your skin (sometimes in a bath – *bath PUVA*). You will be required to wear sunglasses that will prevent the exposure of your eyes to natural ultraviolet light for 24 hours from the time of psoralen tablets being taken. Some patients requiring treatment to small areas only may be treated using a smaller hand and foot unit. In this case the hands and/or feet are soaked in water containing psoralen, then immediately exposed to UVA. Pregnancy should be avoided during PUVA treatment.

### **What reasons might prevent you having phototherapy?**

- If you are unable to attend regularly for treatment.
- If you are unable to stand unaided for up to ten minutes.
- If your skin condition is made worse by natural sunlight.
- If you have xeroderma pigmentosum or lupus erythematosus.
- If you have had skin cancer.
- If you are taking a medicine which suppresses your immune system, such as ciclosporin or methotrexate.
- PUVA treatment may not be used if you have severe liver or kidney disease.
- If you are taking medicines that make you more sensitive to sunlight.
- If you have reached the maximum number of light treatments in a lifetime.
- If you are pregnant (only for PUVA).

### **Do I need to avoid anything whilst having phototherapy?**

- Medicines that make you more sensitive to ultraviolet light. You should inform the phototherapy staff of any new medicines prescribed or purchased, including herbal preparations.
- Additional sun exposure or the use of sunbeds.
- Excessive quantities of foods such as celery, carrots, figs, citrus fruits, parsnips and parsley; these can make you more sensitive to ultraviolet light.
- Perfumed products.
- Creams, ointments and lotions other than moisturisers, unless directed by the phototherapy staff.
- Short haircuts, as they may result in burning of previously covered skin.

### **What are the potential side effects of phototherapy?**

The short-term side effects of phototherapy include:

- Redness and discomfort (sunburn).
- Dry and itchy skin.
- Folliculitis – inflammation of the hair roots may occur. This does not cause discomfort and usually require no treatment or interruption of the UV therapy.
- A sunlight-induced rash called polymorphic light eruption may develop whilst receiving ultraviolet light.
- Cold sores – if you are prone to these it is advisable to cover the area usually affected with sun block when having ultraviolet treatment.
- Blisters in areas of psoriasis.
- Worsening of skin disease.

Potential long-term side effects of phototherapy include:

- Premature skin ageing.
- Skin cancer (the risk of skin cancer is related to your total lifetime exposure to ultraviolet light, and other factors such as how easily you burn in the sun; the risk is higher with repeated courses of UVB and PUVA).

Other side effects: using PUVA treatment with psoralen tablets may cause nausea.

### **Where can I get more information about phototherapy?**

You can find more information about phototherapy on the following websites:

<http://www.dermnetnz.org/procedures/narrowband-uvb.html>

<http://www.dermnetnz.org/procedures/puva.html>

<http://www.psoriasis.org/phototherapy>

The British Photodermatology Group has released a consensus statement on [UV protective films](#).

For details of source materials used please contact the Clinical Standards Unit ([clinicalstandards@bad.org.uk](mailto: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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