

**WHAT ARE THE AIMS OF THIS LEAFLET?**

This leaflet has been written to help you understand more about topical/ immersion PUVA (psoralen + UVA) phototherapy for your skin condition. This leaflet explains this treatment in detail, including its risks, benefits and alternatives. If you have any questions or concerns, please speak to your healthcare professional.

**WHAT IS PHOTOTHERAPY?**

Natural sunlight has been known to be beneficial in certain skin disorders for thousands of years. Phototherapy is a specialised treatment, delivered by the Phototherapy Unit at your hospital. It is carefully regulated to ensure patient safety and has proven to be a very effective treatment for many different skin diseases.

The ultraviolet part of the radiation produced by the sun (UVR) is used in phototherapy. Although it cannot be seen, UV radiation is an important part of sunlight and is divided into ultraviolet A (UVA) and ultraviolet B (UVB) wavelengths. UVA rays go deeper into the skin than other types of UVR and can cause the skin to tan. UVB rays do not penetrate as deeply but can cause the skin to burn. In phototherapy, we use carefully calculated doses of UV light to minimise this risk.

**WHAT IS TOPICAL PUVA?**

Topical PUVA is a treatment in which a medication called psoralen (P) is applied to the skin before exposure of the skin to ultraviolet A (UVA) wavelengths of light. The psoralen can be applied in different ways:

- Bathing the whole body in psoralen solution

- Soaking of parts of the body (for example, hands and feet), in a basin of psoralen solution
- Applying the psoralen preparation in gel form directly on the affected areas.

Your healthcare professional will discuss with you the most suitable method of treatment for you. The psoralen reacts in the skin with the UVA to help improve or clear a variety of skin conditions.

**ARE THERE ANY OTHER TYPES OF PHOTOTHERAPY?**

Other phototherapy treatments include:

- **Narrowband UVB (NB-UVB):** Uses a small part of the UVB light spectrum to treat skin conditions.
- **Oral PUVA:** where UVA radiation is combined with a chemical called psoralen that increases the effect of UVA on the skin.
- **UVA1:** This type of UVA penetrates into the deepest layers of the skin.

The choice of phototherapy depends upon your skin condition, and on discussions that you have with your doctor about the treatment that would work best for you and be most suitable for you.

**WHAT SKIN CONDITIONS ARE TREATED WITH TOPICAL PUVA AND WHY AM I HAVING THIS TREATMENT?**

You and your healthcare professional will have talked about treatment options for your skin condition and decided that this treatment is the most suitable.

This treatment is usually recommended if ointments and creams have not helped sufficiently, but usually before trying tablet

medication. Topical PUVA therapy has been found to be a particularly useful treatment for many skin conditions including [psoriasis](#), [mycosis fungoides](#) and other conditions. It is often used if UVB treatment has failed as PUVA is a more potent form of treatment than UVB.

## THE TREATMENT PROCESS

### *What can I expect on my first treatment?*

On your first visit to the phototherapy unit, you will have a pre-treatment nursing assessment. Before starting the course of light treatment, you will usually need to undergo a test called MPD (minimal phototoxic dose) testing. MPD testing involves shining a few small doses of UVA light on your back/ arm. If you are only having your hands or feet treated this test is not usually necessary.

For whole-body treatment, you will soak your skin with psoralen solution for 15 minutes before the UVA testing. The entire process takes around 20 minutes, and the result will be checked 3-4 days later to determine your starting dose for the UVA machine.

Your first treatment in the UVA machine will happen only after your MPD test is completed.

### *What happens during treatment?*

At the beginning of each treatment, you may have to have a gel applied to your skin or soak your skin in a bath (for whole body treatment) or basins (for hand/ foot treatment) for **15 minutes**. Treatment that focuses specifically on the hands and/or the feet needs **at least an additional 30 minutes** following this. This is because the skin on the palms and soles is thicker than on other parts of the body and so needs to be soaked for a longer period. This will ensure that the psoralen has fully penetrated the skin, making the treatment more effective.

You will then have UVA treatment. Whole body treatment is given in a UVA cabinet, while hand/ foot treatment involves sitting and resting your hands/feet on a special light unit (you will be required to wear a face visor for the latter).

Before each session, the nurse will examine your skin and ask you some questions. You will be given protective goggles to wear during soaking and treatment. You must wear the goggles at all times during treatment. Men must also wear genital protection, such as a dark sock for full body exposure.

You will be guided on how to stand in the machine or how to position your hands and feet in the basins, to ensure your skin is exposed evenly each time.

UVA sessions last from 1 to 20 minutes. The amount of UVA you receive will be closely monitored, and the dose will be increased with each treatment if you have tolerated the previous treatment. The light in the machine is quite bright and you may feel warm if you need to stay in the booth for a long time. Please let the nursing staff know if you feel uncomfortable or unwell.

### *How long do treatments last?*

This depends on your skin condition and varies from person to person. Treatments are generally given twice a week (with a minimum of 72 hours between treatments) for 12 weeks. Individual UVA treatments initially last up to a few minutes with an increased duration with each subsequent visit if tolerated. The total visit takes approximately 45 minutes for whole body or an hour for hand and foot treatment. The total number of treatments will depend on your response to treatment and your specific skin condition.

### *Important points to remember before and during your treatment*

- You should avoid alcohol before your treatment.
- You need to commit to attending the phototherapy department twice per week. Attending regularly helps to achieve better results from your treatment.
- Psoralen makes you more sensitive to sunlight so you should minimise sun exposure to treated areas to reduce the risk of sunburn:



- On treatment days wear long sleeved clothes and a hat when outdoors, even on cloudy days.
- After treatment, use SPF 50 sunscreen with a UVA 5-star rating and re-apply it regularly (*do not apply before treatment as this may stop the PUVA from working*).
- Please do not sunbathe or use a sunbed during the whole course of your treatment.
- Newly exposed areas of skin during your treatment can burn. Let your phototherapy team know if you get a haircut or if any new areas of skin become exposed.
- Be consistent with the way you wear clothing or jewellery during treatment. This is because the dose of UV light increases with each session, and it may be too strong for skin that has not been gradually introduced to the therapy.
- Inform staff of any medication changes, including over-the-counter drugs or creams, as some can affect UVA sensitivity, including supplements.
- Men must wear protective genital coverings during treatment.

#### *On the day of your treatment*

- Do not wear perfumes, deodorants, aftershave lotions or other cosmetic products before your treatment. Some of these contain substances which make your skin more sensitive to light. This can cause patchy discolouration of the skin that can take some months to fade. You can use them after each treatment.
- On treatment days, please do not apply any creams or ointments to your skin before you go in the machine apart from an appropriate moisturiser. You may wish to moisturise with a non-SPF containing water-based moisturiser beforehand as this helps your skin to absorb the ultraviolet light, especially if your skin is dry and flaky. Please ask your nursing team for more information on this.

- Do not use oily creams as these could cause burning or prevent the UVA from being absorbed.

#### *Special requirements for bath/ immersion PUVA treatments*

Psoralen can make the skin sensitive to light for about a week depending on the type of topical PUVA you are having, and the extent of your skin condition. Please wash your skin as soon as possible after PUVA treatment to remove any residual psoralen on your skin. If the psoralen gets in your eyes at any time, please inform the nurse immediately.

Male genital protection must be worn for whole body bath PUVA treatments. Please seek advice from phototherapy nursing staff about this.

#### **WHAT ARE THE RISKS WITH TOPICAL PUVA PHOTOTHERAPY?**

Psoralen **will** make you more sensitive to UVA in sunlight (the rays that get through cloud and window glass) during the treatment. It is important to avoid sunlight or protect your skin anytime you are outside or near a sunny window after having been exposed to psoralen at least until end of daylight on that day, although some patients can be sensitive throughout the course and for up to a week following completion of treatment.

Your doctor or nurse will discuss the possible complications of this treatment with you in more detail, but you need to be aware of the following:

#### *Side effects that could happen during your course of treatment:*

- **Mild sunburn:** It is likely that you will get a mild sunburn reaction at least once during your course, and this can take 2-3 days to appear and could last for more than a week. If you get a severe sunburn-like reaction, contact your phototherapy unit, or contacts provided for advice. If there is any delay in getting further advice, you can apply a steroid ointment if you have one at home, along with moisturisers. More information on dealing with sunburn can be found on



the NHS website here:

[www.nhs.uk/conditions/sunburn/](http://www.nhs.uk/conditions/sunburn/)

- **Spotty itchy rash:** We know that about 1 out of 10 people develop spotty itchy rash during their course of treatment. This is called [polymorphic light eruption](#) or prickly heat. If you already know that sunlight causes this reaction on your skin, please tell the nurse or doctor *before* you start treatment. If this happens during your course of treatment, please tell the nurse as soon as possible.
- **Tanning:** Depending on your natural skin colour, if you skin goes brown easily in sunlight, you may develop a dark tan.
- **Dry itchy skin:** Your skin may become dry and itchy.
- **Cold sores:** This may affect one in thirty people who have PUVA to the facial area. Tell your nurse if you notice early signs of tingling or a painful bump developing on your lip. If you have a history of cold sores they will apply sunblock to your lips prior to each treatment.
- **Worsening of the condition being treated:** This may occur instead of improvement and your doctor will advise you of the risk of this happening.

If you develop any of these side effects or any other event you think may be PUVA related, please talk to the nursing staff. Always inform a member of staff if you are unwell.

## WHAT ARE THE RISKS ASSOCIATED WITH MULTIPLE COURSES OF PUVA?

- **Skin cancer:** People with a lot of sunlight exposure are at increased risk of skin cancer. In the UK, about one in every 4-5 people will develop skin cancer. This risk is higher with PUVA than with natural sunlight and depends on how many whole-body PUVA treatments you have had. If you have received more than 150-200 PUVA treatments, you may be asked to attend your local clinic for regular skin cancer screenings. It is

unlikely that you would be advised to continue PUVA treatments beyond 150-200 treatments and in this case other treatment options will probably be discussed.

- **Skin-aging:** If you undergo many treatments, you may develop skin changes similar to aging or those caused by smoking, such as wrinkling and skin discolouration. Increased freckling can also occur.

## WHERE CAN I GET MORE INFORMATION ABOUT PHOTOTHERAPY?

The process of phototherapy can generate lots of questions, and sometimes also thoughts and feelings about your skin condition. The list below contains information about some of the Patient Support groups that provide support during, and information about, the process of phototherapy.

*Patient support groups providing information:*

*Psoriasis Association:*

[www.psoriasis-association.org.uk](http://www.psoriasis-association.org.uk)

*Psoriasis and Psoriatic Arthritis Alliance (PAPAA)*

[www.papaa.org](http://www.papaa.org)

*National Eczema Society:*

[www.eczema.org](http://www.eczema.org)

*Vitiligo Support Group:*

[www.vitiligosupport.uk/](http://www.vitiligosupport.uk/)

*Vitiligo Society*

[www.vitigosociety.org.uk](http://www.vitigosociety.org.uk)

*Cutaneous Lymphoma Foundation:*

[www.clfoundation.org](http://www.clfoundation.org)

*Lymphoma Action*

[www.lymphoma-action.org.uk/types-lymphoma-skin-lymphoma/skin-cutaneous-t-cell-lymphoma](http://www.lymphoma-action.org.uk/types-lymphoma-skin-lymphoma/skin-cutaneous-t-cell-lymphoma)



Other relevant resources:

Skin cancer symptoms and treatments:

[www.skinhealthinfo.org.uk/symptoms-treatments/skin-cancer/](http://www.skinhealthinfo.org.uk/symptoms-treatments/skin-cancer/)

Jargon Buster:

[www.skinhealthinfo.org.uk/support-resources/jargon-buster/](http://www.skinhealthinfo.org.uk/support-resources/jargon-buster/)

In addition, the nursing staff of your Phototherapy unit are more than happy to answer questions about your course of treatment or anything that arises from the treatment.

*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 and the British Photodermatology Group: individual patient circumstances may differ, which might alter both the advice and course of therapy given to you by your doctor.

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*This leaflet has been assessed for readability by the British Association of Dermatologists' Patient Information Lay Review Panel*

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