



## **NB-UVB PHOTOTHERAPY**

### **What are the aims of this leaflet?**

This leaflet has been written to help you understand more about Narrowband UVB (NB-UVB) 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 the doctor or nurse caring for you.

### **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 can't 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 UVB?**

Narrowband UVB (NB-UVB) is a particular treatment where a small part of the UVB light spectrum is used to treat the skin condition. Treatment lamps produce these special rays, which has anti-inflammatory effects on the skin. Although these rays are also present in natural sunlight, UVB treatment is usually more effective than sunlight because harmful and ineffective sunlight rays are filtered out. In this way we also seek to minimise the risk of burning episodes.

### **Are there any other types of phototherapy?**

The other phototherapy treatments are PUVA (psoralen + UVA, where UVA radiation is combined with a chemical called psoralen that increases the effect of UVA on the skin) and UVA1. The choice of phototherapy treatment depends upon your skin condition, and on discussions that you have with your doctor about the treatment that would work best for you.

### **What skin conditions are treated with NB-UVB and why am I having this treatment?**

You and your doctor will have talked about treatment options for your skin condition, and decided that this treatment is the most suitable treatment for your skin condition. It is often recommended after you have tried ointments and creams without success but before trying tablet medication. NB-UVB has been found to be particularly useful for many different skin conditions, including psoriasis, eczema and vitiligo, and also to build up tolerance to natural ultraviolet light for people with light sensitive skin conditions. Most patients find their skin has improved after about 30 treatments and remains clear for three to four months or sometimes longer, though the number of treatment and successfulness of the treatment varies from one patient to another and from one skin disease to another.

### **The Treatment Process: What can I expect on my first treatment?**

On your first visit you will have a pre-treatment nursing assessment.

Before you begin light treatment you will usually receive a series of small test doses, called an MED (Minimal Erythema Dose). A number of doses of ultraviolet light B will be shone on small circles on your back or arm, this takes about 25 minutes and the result will be read the next day (24 hours later). This result will help decide what individual dose your light treatment should be started at. This may also be important if you suspect you are unusually sensitive to sunlight or if you are taking medications that may make you extra sensitive. Otherwise, staff may simply ask you about your history with sun exposure, for example whether you tan or burn and use this 'skin type' to determine your starting dose. Even if you have had UVB treatment in the past an MED will normally be required because your skin sensitivity to UVB can change. The MED not only makes sure that you are treated at a safe UVB dose, but also makes sure you are started at a high enough dose for you. If an MED cannot be done, treatment has to be started at a low dose, and often the first treatment will be to a small test area such as the forearm.

Your first treatment in the phototherapy machine will only happen after the MED test has been read.

## **What happens during treatment?**

The nurse will call you from the waiting room when a machine is available for your treatment.

They will examine your skin on each visit and ask you some questions before you enter the machine. You will be given goggles to protect your eyes, which you must wear at all times during your treatment. Men will also need to wear genital protection whilst receiving treatment. You will be shown how to stand in the machine in the correct position to make sure that all your skin is exposed evenly each time.

You will be in the UVB machine for up to 10 minutes. The phototherapy staff will closely monitor the amount of UVB you receive and will increase the dose with each treatment as long as you have tolerated the previous treatment. The machine is quite bright and you may feel warm if you need to stay in the booth for a long time. You can let the nursing staff know if it feels uncomfortable.

## **How long do treatments last?**

This depends on your skin condition and varies from person to person. Treatments are generally given 2-3 times a week for 12-16 weeks. Individual treatments last up to 10 minutes with the total visit taking up to half an hour. The total length of a treatment course will depend on your response and the specific skin condition being treated.

## **Practical advice for 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 and take some months to fade. You can use them after each treatment.
- For the same reason please let your phototherapy nurse know if you have started any new medications or creams whilst having treatment as some can make your skin more sensitive to light.
- 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 beforehand using a water-based moisturiser as this helps your skin to absorb the ultraviolet light. Please speak to your nursing team for more information on this.
- Do not use oily creams as these could cause burning or prevent the UVB from being absorbed.

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

- You need to commit to attending the phototherapy department 2-3 times per week. Attending regularly helps to achieve better results from your treatment.
- Reduce exposure to the sun's rays to minimise the risk of sunburn. Sun protection advice includes:
  - Cover up with long sleeved clothes particularly on sunny days;
  - Wear a hat when possible;
  - Apply sunscreen generously, at least twenty minutes before going outside
  - Choose a product with a sun protection factor (SPF) of at least 50 with a four or five star UVA rating as well, as this makes sure you're protected against both UVA and UVB rays. Reapply sunscreen regularly, particularly after swimming or if sweating heavily. Be particularly careful with your sun protection between the hours of eleven and three o'clock.
  - Please do not sunbathe or use a sunbed during the whole course of your treatment.
  - More information on sun protection can be found on the British Association of Dermatologists' Patient Website at <http://www.skinhealthinfo.org.uk/sun-awareness/>
- Let your phototherapy nurse know if you have a haircut or, for any other reason, any areas of skin become newly exposed during the course of treatment. If you wear clothing during treatment it is important that you wear the same clothing or the exact same style for every treatment of the course.
- Male patients must wear genital protection while in the machine.
- Before you start UVB treatment the doctor and nurses will check the medicines that you are taking. If any medications you are taking (including anything you are taking over-the-counter) are changed during UVB treatment, please let the nursing staff know before they start your next treatment. This is because some tablets can affect the way your skin reacts to UVB.
- If you are planning a pregnancy or think that there is a chance you could become pregnant during the treatment, we advise that you take the recommended pre-pregnancy folic acid supplements.

## **What are the risks with UVB phototherapy?**

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:

### **Effects that could happen during your course:**

- It is likely that you will get a mild sunburn reaction at least once during your course. If you get any severe sunburn-like reactions then you should contact the phototherapy unit and ask to speak to one of the photo nurses. If there is any delay in getting further advice you may use a steroid ointment if you have this at home, as well as moisturisers.
- More information on dealing with sunburn can be found on the NHS website here: <https://www.nhs.uk/conditions/sunburn/>
- You may get a spotty, itchy rash during your course (prickly heat): about one out of ten people do.
- Depending on your natural skin colour, if you skin goes brown easily in sunlight, you may develop a dark tan.
- Your skin may become dry and itchy. Regular use of moisturiser will help to minimise this.
- Cold sores. This may affect one in thirty people. Tell your nurse if you notice early signs of tingling or a painful bump developing on your lips. If you have a history of cold sores they will apply sunblock to lips before each treatment.
- Deterioration of the disease being treated. This may occur instead of improvement and your doctor will advise you of the risk of this happening.

### **What are the risks associated with multiple courses of phototherapy?**

- **Skin Cancer:**  
People who have a lot of sunlight exposure have an increased risk of cancer. In the UK approximately one out of ten of us will develop skin cancer. Although we do not know the full risk of this particular type of ultraviolet light (narrowband UVB), if we assume that the risk is the same as with sunlight, a course every year over the whole of a patient's life would in general double the risk of treatable skin cancer. Many factors affect this. If you are not having your face treated this risk will be reduced.  
It is usual practice to be asked to attend your local clinic for a specific skin cancer review once you have received more than 500 UVB treatments.
- **Photoaging:**  
It is also possible if you need many treatments that you may develop sunlight induced skin changes with wrinkling and skin discolouration, similar to that of the ageing process or produced by cigarette smoking.

### **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.

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

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

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

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

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

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

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.

**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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