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1. **Introduction**

Your doctor has referred you to the Phototherapy Unit at UCLH for a course of narrow band ultraviolet treatment for your skin condition. Narrowband UVB is also known as TL01. This leaflet explains this treatment in detail, including its risks, benefits and alternatives. If you have any questions or concerns, please speak to a doctor or nurse caring for you.

2. **What is ultraviolet B radiation (UVB) phototherapy?**

Ultraviolet (UV) rays are produced by the sun. They cannot be seen but are an important part of sunlight and are grouped into different wavelengths: UVA, UVB and UVC. UVA rays penetrate skin and cause it to darken or tan. UVB rays are mostly absorbed by the epidermis, which is the top layer of our skin, and are responsible for sunburn. UVC rays are absorbed by the earth’s ozone layer, so they do not reach us. Broadband UVB radiation has been found to treat skin conditions that are caused by overactive immune cells in the skin, as it reduces their activity. A specific wavelength of UVB (311 to 312 nanometres) is thought to be the most effective range for treating skin conditions. This is referred to as narrowband UVB or TL01. Treatment with UV is often referred to as phototherapy.

3. **What can narrowband phototherapy treat?**

It is mainly used to treat psoriasis, but it can also be used for other skin conditions such as acne, eczema, vitiligo, mycosis fungoides, and polymorphic light eruption (PLE).
4. What does the treatment involve?
The treatment is given in the Phototherapy room in the Dermatology Department by specially trained nurses. You will need to undress and stand in a phototherapy unit, which is a cabinet containing fluorescent tubes that produce UVB rays. Each machine is screened off to make sure your treatment is given in private. The machine will be turned on and you will be given a calculated dose of narrowband UVB. This is then repeated 2 or 3 times per week over several months. You may feel a warm sensation during treatment, but it will not hurt.

5 Why should I have narrowband UVB?
This treatment should help to improve your skin condition. It is often recommended if you have tried ointments and creams without success. However, it is sometimes used in combination with other treatments. Most patients with psoriasis find their skin has improved after about 30 treatments and remains clear for three to four months or sometimes longer. Compared to other forms of phototherapy, narrow band UVB has the following benefits:
- For many conditions, you are more likely to have longer periods where your skin condition disappears or improves with narrowband UVB than with broadband UVB.
- For many (though not all) conditions, narrowband UVB is as effective as PUVA but with fewer side effects.

6 Are there any alternatives?
Your doctor recommended this treatment for you. However, there may be other treatments available, such as broad band UVB and PUVA. PUVA involves making your skin sensitive to light by taking tablets and then exposing it to UVA radiation.

However, these treatments are not currently available at UCLH.
As well as these treatments, there is a wide variety of creams and ointments that can be used alone or at the same time as your UVB. Oral medications or injections may also be options to consider. Your doctor will explain all the alternatives available to you in more detail. Please make sure you ask questions if you are uncertain.

7 Asking for your consent
If you decide to go ahead with this treatment, you will be asked to sign a consent form, which confirms that you agree to have the treatment and understand what it involves. If you do not, please ask for more information.

8 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 and take some months to fade. You can use these after each treatment. For the same reason, please let us know if you have started any new medications or creams, while 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 should use a water-based moisturiser such as Dermol 500, Doublebase or Aveeno. Do not use oily creams, as these could cause burning and prevent the UVB from being absorbed. We suggest that you moisturise beforehand, as this helps your skin to absorb the ultraviolet light. If you are not sure which creams you can use, please ask a member of the staff.

Reduce your exposure to the sun’s rays, to minimise the risk of sunburn. Cover up with long sleeved clothes, particularly on sunny days; you may also want to wear a hat. Use a sunscreen with a factor of at least 30 that protects
against UVA and UVB rays. Re-apply it regularly. Please do not sunbathe or use a sunbed during the whole course of your treatment. Let us know if you have a haircut or, for any other reason, any areas of skin become newly exposed during the course of treatment.

9 Arriving for your treatment
Let the nursing staff know you have arrived. At your first visit you will need to have a light test, which allows us to see your skin’s tolerance to UVB. We need this to calculate your safe starting dose. You will need to come back 24 hours later so we can examine the site where you had the light test. We will then be able to start your treatment. We usually ask that you remove all your clothing, however men must either wear dark underwear or cover their genitalia with a thick dark sock. If an area of skin that has previously been covered is exposed to the UVB treatment, it may burn. Please remove any jewellery you are wearing.

10 What happens during treatment?
The nurse will call you from the waiting room when a machine is available for your treatment. He/she will examine your skin on each visit and ask you some questions before you enter the machine. We will give you goggles to protect your eyes and tell you how to stand in the machine, to make sure all your affected skin receives the UVB rays. We will give you specific instructions on how to stand in the machine to ensure that all of your skin is exposed evenly each time. After we have calculated the correct dose for you, we will turn the machine on. The time that you are in the booth will depend on many factors such as your skin type (fair or dark) and skin condition. Your starting dose of UVB may only be a few seconds and then be gradually built up. Please allow 15-20 minutes for your
treatment, to allow time for changing. We will explain this to you in more detail before your treatment and will closely monitor the amount of UVB you receive. We will increase the dose of UVB slightly 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. Let us know if you find it uncomfortable or have a fear of enclosed spaces.

11 How often will I need to have this treatment?
This depends on your skin condition but this treatment is usually quite intensive. We generally give treatments two to three times a week for about 10-15 weeks.

Therefore, you must make sure you can commit this amount of time before you start the course of treatment.

We do our best to keep to your appointment time, but occasionally there may be a short queue. Please ask one of the nurses if you are concerned about your waiting time.

12 What are the risks?
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:

- Your skin can occasionally become itchy and dry.
- Your skin condition could temporarily worsen.
- Your skin may burn, as with any form of sunlight. We will try to avoid this, but some tanning and redness of your skin is likely. Please let us know if your skin does become sunburnt. This usually develops 8-14 hours after your treatment and usually settles within 24 hours.
- Very occasionally, patients develop polymorphic light eruption, which is an itchy rash due to sunlight.
- As with too much sun exposure, long-term use of UVB (many months to years) may age your skin and increase your risk of developing skin cancer. This increased risk is
very slight at first, but increases after about 200-300 treatments. For this reason, we do not give UVB therapy between courses.

- If you do not wear the protective goggles in the unit, you risk developing sunburn like reaction to your eyes within a few hours of exposure. It may also increase your risk of developing eye cataracts in the future. You may open your eyes during treatments only when you are wearing the protective goggles provided.

- If you have rosacea or a history of cold sores which can be aggravated by the sun, we may shield your face during treatment.

UVB is most suitable for people with extensive skin problems, but may not be appropriate for you if it has not been successful in the past, or if your condition becomes worse in sunlight. It is also important to note that your skin condition may flare up again. If it does, you will need further treatments of UVB or other another type of treatment in the future to manage it.

13 What do I need to do after my treatment?
You may want to apply your moisturiser or other creams and ointments after your treatment. The nurses will be able to help you if needed. You can then get dressed, book your next appointment and go home.
UVB tends to cause dryness to the skin so you may find it more comfortable to use your moisturiser regularly, usually twice a day.
If you develop sunburn, please treat your skin as you usually would after sunburn. If it is severe, please phone the department for advice. However, this is very rare. Please remember to inform the nurses of any reactions you have from your treatments so that your treatment dose can be altered accordingly.
14 Are there any follow-up appointments?
You will be able to book your UVB appointments in advance if you wish. Please remember to keep all your appointments and let us know if you cannot attend for any reason. You will usually have a follow-up appointment six to eight weeks after your treatment, or sooner if you are having problems.

15 What does the MED tester look like?

![Fig.1– Hybec Minimal Erythema Dose Tester](image)
16 What will the test look like?

Fig. 1 - MED test result example

17 What does the cabin look like?

Fig. 3. – TL01 UVB phototherapy cabin
18 Where can I get more information?
www.bad.org.uk
www.bcds.org.uk

UCLH cannot accept responsibility for information provided by external organisations.

19 Contact details
Dermatology/Phototherapy Nurses:
Sister Marian Calnan
Staff Nurse Giorgia Serra
Staff Nurse Oana-Alexandra Olarasu

UCLH Dermatology Department
Mortimer Market Centre
Tottenham Court Road-off Capper Street
London WC1E 6JB
Tel: 0203 447 9148
Mobile: 075 0779 0466
20 How to find us
We are located on the 2nd floor of the Mortimer Market Centre, just off Capper Street.
21 References
Space for notes and questions