



What is phototherapy?

Phototherapy is the treatment of certain skin diseases through light exposure. Several skin diseases, including psoriasis, get better in the summer or following exposure to sunlight. Phototherapy aims to reproduce this phenomenon in your doctor's office.

While phototherapy may at first appear similar to going to a tanning salon, it is in fact very different. Unlike tanning booths, which emit the full spectrum of the sun's rays, including hazardous rays known to cause skin cancers, phototherapy machines only emit ultraviolet (UV) rays of a very specific spectrum (311 nm) known for its anti-inflammatory properties on the skin. Such exposure to light is done only for a short amount of time, under the supervision of a health professional, in a controlled environment.

What skin diseases respond to phototherapy?

Several skin diseases can be treated using phototherapy. Here are a few examples: psoriasis vulgaris, eczema, lichen planus, vitiligo, folliculitis, pityriasis rosea, pityriasis lichenoides chronica, parapsoriasis, mycosis fungoides, chronic pruritus, uremic pruritus, etc.

How do phototherapy treatments work?

Treatments are given in your dermatologist's clinic, at the rate of two to three times a week. A 24 hour interval between treatments is necessary to avoid potential sunburns. For most patients, a Monday-Wednesday-Friday treatment schedule is therefore optimal. The starting dosage will be determined as a function of your skin type (phototype).

SKIN PHOTOTYPES

- Type 1: Always burns and never pigments
- Type 2: Always burns and sometimes pigments
- Type 3: Sometimes burns and always pigments
- Type 4: Rarely burns and always pigments
- Type 5: Brown skin (Asian, Middle Eastern, South American origins, etc.)
- Type 6: Black skin

Initial treatments often last less than a minute, with UVA exposure times being progressively increased to a few minutes.

The extent of the skin area to be exposed inside the phototherapy machine is a factor of the extent of your ailment. Most patients will expose all of their skin area in the machine, except for eyes (which must always be protected by goggles) and male genitalia (which must at all times be covered by an athletic cup or "jockstrap").

Assiduous treatment typically leads to better results. In contrast, lack of assiduity slows treatment response and can ultimately lead to failure.



What do I need to avoid when undergoing phototherapy treatments?

- Avoid wearing perfume or aftershave before phototherapy sessions because these products can make skin more sensitive to UV rays and provoke “sunburn”.
- Avoid applying vitamin D creams (Dovobet®, Dovonex®, Silkis®) before phototherapy sessions, as phototherapy deactivates their main active ingredient and renders them ineffective. Such creams can however be applied after sessions or at night.
- Avoid suddenly uncovering a skin area that was shielded from UV rays in previous sessions. The previously covered skin area was not able to develop a tolerance to the progressively stronger rays and is thus at high risk of burning when exposed. This can for example happen when someone with long hair gets a haircut or ties their hair in a way that exposes previously unexposed skin areas. If your dermatologist suggests covering a certain skin area with a piece of clothing, it's important to use the same piece of clothing in every subsequent session. If you wish to expose a new area to phototherapy, please notify the phototherapy technician who will adjust the dosage of the rays accordingly.
- Avoid photosensitizing drugs (drugs that make your skin more sensitive to light). Please notify the technician if you are taking any new medication or natural product.

What to do before a phototherapy session

- Always hydrate your skin using a hydrating cream. Dead skin cells (akin to white dandruff flakes) tend to block UV penetration and thus reduce the effectiveness of phototherapy. Using a hydrating cream favours better UV ray penetration.
- Always protect eyes with proper goggles.
- Always protect male genitalia with an athletic cup (or “jockstrap”) as this area is more susceptible to develop skin cancer if exposed to UV rays.
- Notify the technician of any redness/discomfort stemming from the previous treatment so the dosage can be appropriately adjusted.
- Notify the technician if you missed a session. Ray dosage will have to be adjusted if you have not received treatment for more than a week.

Are there any contraindications to phototherapy?

Phototherapy is contraindicated for people suffering from diseases that can be exacerbated by the sun, such as lupus or dermatomyositis, as well as for certain rare illnesses such as pemphigoid, pemphigus, Gorlin syndrome or xeroderma pigmentosum. Patients having suffered from melanoma or having undergone radiotherapy are also typically excluded.



What are the possible side-effects of phototherapy?

Short term

- Redness and “sunburn”: It is normal for redness to appear when dosage of the rays is progressively increased. This is a normal consequence of phototherapy treatments, which entail finding the proper light intensity to ensure maximum treatment efficacy. It is therefore important to notify the technician of any redness so that he/she can adjust the intensity and prevent further such undesirable “sunburns”.
- Dryness and itchiness: Phototherapy tends to dry the skin but this undesirable side-effect can be easily prevented by using a daily moisturizing cream.
- Eye damage: Any potential eye damage resulting from phototherapy can be avoided by wearing goggles during treatment.
- Phototherapy can reactivate cold sores. To prevent such a reoccurrence, we recommend applying sunscreen to the previously affected area before treatment (for example, by using SPF 60 lip balm). If this proves ineffective, notify your dermatologist who can prescribe oral medication to prevent such herpes onsets.
- Exposure to UV rays can bring out freckles on people with fairer skin. Those should disappear when treatment stops, but could reappear following future prolonged exposure to the sun.

Long term

Therapeutic use of UVB rays under medical supervision has relatively few long term risks. These risks do, however, increase in proportion with the dosage of UVs received.

- Photoaging, skin cancer and cataracts: These long term side effects, while rare, chiefly occur among patients with skin phototypes 1 and 2 (fairer skin). For this reason, if your face does not require treatment, it is recommended that you cover it while you are in the phototherapy machine.

Phototherapy or a trip to the Dead Sea?

As early as 300 B.C., the Dead Sea (in what is today Israel) has been known for being beneficial to skin. These ancient benefits are now understood by scientists. Because of its unique geographical location, 400 meters below sea level, the Dead Sea has an additional atmospheric layer which, combined with the natural evaporation of surface water, can naturally and very precisely filter UVB rays of a specific spectrum (311 nm). It so happens that these rays are endowed with high anti-inflammatories properties for the skin and can therefore be used to treat several skin diseases. It is following this discovery that scientists created cabins capable of emitting these same 311 nm UVB rays, thereby mimicking the type of light exposure received at the Dead Sea. Your phototherapy treatments are therefore as beneficial to your skin as teleporting to the Dead Sea three times a week would be.