Psoriasis and Phototherapy: What Are the Benefits and Risks?

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Phototherapy for Psoriasis Treatment

You've undoubtedly heard the adage that "the sun is nature's medicine," right? Well, if you have psoriasis, it turns out that the sun has been used as medicine to treat psoriasis for as long as psoriasis has been documented! It's known as phototherapy for psoriasis.

Psoriasis is an autoimmune skin condition in which skin cells proliferate rapidly, causing a buildup on the surface of the skin. This causes the scaly, red plaques that we all recognize and that characterize psoriasis.

There are a variety of topical, oral and injectable (biologic) medications for the treatment of psoriasis. Often the treatments are used in combinations — an oral medication and a biologic medication, for example. However, phototherapy for psoriasis treatment is a great alternative.

How Does Phototherapy Work?

Phototherapy for psoriasis involves the use of light. According to Steven Feldman, MD, PhD, a professor of dermatology at Wake Forest University School of Medicine in Winston-Salem, NC, "Ultraviolet light kills the immune cells in the skin that contribute to psoriasis, and research suggests that UV light may also disrupt the faulty signals between immune cells and skin cells that lead to psoriasis lesions."

The exact mechanism is not completely understood. There are two different types of UV rays: ultraviolet A (UVA) and ultraviolet B (UVB). Each type of ray may affect the skin a bit differently. The Psoriasis and Psoriatic Arthritis Alliance notes that, "phototherapy stops the overproduction of skin cells by either damaging their DNA (UVB phototherapy) or by preventing the cells from dividing by 'locking' the DNA (PUVA phototherapy)."

UVA and UVB Rays

Both UVA an UVB rays are present in natural sunlight. However, UVB rays may be helpful in treating psoriasis on its own, whereas UVA rays may need a "helper" for it to be effective in the treatment of psoriasis.

UVB rays are able to penetrate the skin slowly, which allows the skin cells to proliferate slowly. This type of ray can be further differentiated into two different types of rays:

- **Narrow band**: releases UVB in a smaller range of light.
- **Broad band**: releases UVB in a broader range of light.

Both types are similar but using narrow band for the treatment of psoriasis may achieve remission faster and may require fewer treatments per week.

UVA rays are also present in direct sunlight, but require the use of psoralen, a light-sensitizing medication, to

work effectively. Psoralen is a topical or oral medication.

When UVA is used in conjunction with psoralen, it is abbreviated as PUVA. It is most effective for stable, but severe, psoriasis. It also has more side effects than UVB treatments.

Phototherapy Treatments

There are a variety of types of phototherapy for psoriasis, utilizing both types of PUVA and UVB. While both types are effective, each type is effective for different types of psoriasis. They do, however, have similarities:

- In general, phototherapy requires about 20 sessions before *any* improvement is noted in the skin, which can be discouraging.
- Success rates are high — 65% for UVB treatments, 75% for narrow-band UVB treatments and even higher for PUVA treatments.

Side Effects of Treatment

PUVA is reserved for stubborn psoriasis cases because it has some irritating, and at times dangerous, side effects. It is estimated that one-third of patients have nausea after their treatments. In addition, the use of psoralen increases the risk of skin cancer. The risk is even greater in patients with fair skin.

Psoralen is thought to increase the risk of skin cancer, as opposed to the light itself. According to Health, “Psoralen, which is ingested orally or applied topically, enters the body’s cells and, when activated by UV light, changes their DNA. This process kills off immune cells close to the skin and helps control psoriasis, but it also leads to collateral damage that can cause skin cancer in the long run.”

UVB is not without side effects, although the side effects are minimal comparatively. UVB phototherapy can cause photosensitivity, which can increase the risk of sunburns. It also increases the risk of skin cancer, but not like PUVA does.

This risk should be weighed heavily when deciding if these treatments should be used to treat psoriasis.

The Bottom Line…

If you are suffering from psoriasis and are looking for a minimally invasive treatment, phototherapy may be the right treatment for you. It may be able to be prescribed on its own or as an adjunct treatment, depending on the severity of your psoriasis.

Keep in mind that as with any other treatment, phototherapy has its own set of risks. Weigh the pros and cons of all treatments while discussing them with your physician.