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# light therapy

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## introduction to psoriasis

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### what is psoriasis?

Psoriasis is a noncontagious, genetic disease of the immune system, which affects the skin and/or joints. According to the National Institutes of Health, **as many as 7.5 million Americans have psoriasis.** The most common form, plaque psoriasis, results in raised, red lesions covered by silvery white scales. Psoriasis can be limited to a few lesions or can involve moderate to large areas of skin.

*Having 3 to 10 percent of the body affected by psoriasis is generally considered to be a moderate case. More than 10 percent is considered severe. For most individuals, the palm of the hand is about the same as 1 percent of the skin surface. However, the severity of psoriasis can also be measured by how psoriasis affects a person's quality of life. Psoriasis can have a serious impact even if it involves a small area, such as the palms of the hands or soles of the feet.*



**From 10 to 30 percent of individuals with psoriasis also develop psoriatic arthritis,** which causes pain, stiffness and swelling in and around the joints.

To learn more about the types of psoriasis or psoriatic arthritis, visit the National Psoriasis Foundation Web site at [www.psoriasis.org](http://www.psoriasis.org).

**LIGHT THERAPY** involves exposing the skin to wavelengths of ultraviolet light under medical supervision. Treatments usually take place in a doctor's office or psoriasis clinic. However, it is possible to follow a treatment regimen at home with sunlight or a phototherapy unit prescribed by your doctor. The key to success with light therapy is consistency.

## UVB phototherapy

### What is UVB and how does it work?

UVB and UVA are types of ultraviolet radiation. Because doctors in the United States use UVB more than UVA, this booklet discusses it more extensively.

Present in natural sunlight, ultraviolet light B (UVB) is an effective treatment for psoriasis. UVB penetrates the skin and slows the rapid growth of skin cells associated with psoriasis. Treatment involves exposing the skin to an artificial UVB light source for a set length of time on a regular schedule. This treatment can be taken in a medical setting or at home using a unit purchased with a doctor's prescription. See page 8 to learn more about home phototherapy.

There are two types of UVB treatment, broad band and narrow band. The major difference between them is that narrow-band UVB light bulbs release a smaller range of ultraviolet light.

**N**arrow-band UVB is similar to broad-band UVB in many ways and is becoming more widely used. Several studies indicate that narrow-band UVB clears psoriasis faster and produces longer remissions than broad-band UVB. It also may be effective with fewer treatments per week than broad-band UVB. Narrow-band UVB is emerging as an alternative to PUVA therapy, which uses the light-sensitizing medication psoralen plus exposure to UVA light. (See page 11 to learn more about PUVA.) Although not as effective as PUVA, narrow-band UVB is easier for people to undergo and may be safer over the long term.

### **Who is a candidate for UVB?**

Both adults and children can benefit from UVB treatment. It is effective in treating psoriasis for at least two-thirds of patients who meet these conditions:

- **Thin plaques (minimal scale buildup)**
- **Moderate to severe disease (involving more than 3 percent of the skin)**
- **Responsive to natural sunlight (most people are)**

A treatment program may include medicines applied to the skin or taken by mouth, as well as UVB. Topical medicines, such as anthralin, coal tar, calcipotriene (brand name Dovonex) and tazarotene (brand name Tazorac) are effective along with UVB in some people. Using systemic drugs such as methotrexate, biologics and acitretin (brand name Soriatane) with UVB may also improve the effectiveness of the treatment.

## How is UVB administered?

Usually, the patient undresses to expose all affected areas to the ultraviolet light. He or she then stands in a treatment booth lined with UVB lamps. Some doctors also have small units for treating areas such as the palms and soles.

A person will generally receive treatments three times per week. It takes an average of 30 treatments to reach maximum improvement of psoriasis lesions. The first exposure to the light is usually quite short, lasting as little as a few seconds. Exposure time depends on the person's skin type (see Table 1 on page 5) and the intensity of the light emitted from the bulbs.

Since people with lighter skin absorb more light (and sunburn more easily), they start with shorter exposure times than people with darker skin. If there is no itching and/or tenderness from the previous session, the next treatment will be longer. Administering UVB light is not an exact science. Each person's reaction to the light is not completely predictable.

UVB requires a significant time commitment. Individuals get the best results when they receive the regular follow-up treatments and strictly adhere to the action plan they make with their doctor.

A doctor may require a person to do one or more of the following before UVB treatments begin:

- Inform medical staff of medications used, topically or internally;
- Soak in warm water for 30 minutes to remove psoriasis scales;
- Protect certain areas of skin (for example, neck, lips, nipples and dark, pigmented areas of the breasts) with sunscreen;
- Cover uninvolved areas of the body (such as the face) with cloth, to shield from unwanted light exposure;
- Apply coal tar medicine to the lesions at night and wash it off in the morning before a UVB treatment.

Some studies suggest that mineral oil and petroleum jelly are as effective as coal tar or anthralin when used in conjunction with UVB. Applied in a thin layer before treatment, mineral oil or petroleum jelly can improve the ability of light to penetrate the skin. Talk to your doctor before trying this method.

Any other topical application left on the skin may block some or all of the UVB light and reduce the effectiveness of the treatment. This is especially true of coal tar, salicylic acid and thick, white moisturizers. To receive the maximum benefit from light therapy, it is important to talk to your doctor about all moisturizers and topical medications you are using.

Table 1.

Skin type	Sun history	Example
I	Always burns easily, never tans, extremely sensitive skin	Red-haired, freckled, Celtic, Irish-Scots
II	Always burns easily, tans minimally, very sensitive skin	Fair-skinned, lighter-haired, blue-eyed Caucasians
III	Sometimes burns, tans gradually to light brown, sun-sensitive skin	Average-skinned Caucasians, light-skinned Asians
IV	Burns minimally, always tans to moderate brown, minimally sun-sensitive	Caucasians of Mediterranean descent
V	Rarely burns, tans well, sun-insensitive skin	Middle Easterners, some Hispanics, some African-Americans
VI	Never burns, deeply pigmented, sun-insensitive skin	African-Americans

### What happens once the skin clears?

Once the skin clears, phototherapy may be stopped. Individuals may resume phototherapy to maintain skin clarity as the lesions begin to reappear.

However, studies show that continued UVB treatments after the skin clears can increase remission time. Most people need about eight maintenance treatments per month to prolong periods of skin clarity. However, it is different for every person.

If psoriasis lesions return, an individual may return to three treatments per week. Sometimes rotating different psoriasis treatments can give the skin a break from UVB. This minimizes long-term exposure and possible side effects.

### The Goeckerman regimen

Some people with severe psoriasis receive a doctor's referral to a day treatment center for three to four weeks of treatment with UVB and prescription coal tar. This is the Goeckerman [GEK-er-man] regimen. Once or twice a day, coal tar is applied and removed before the patient is exposed to UVB light. This is followed by a cleansing bath or shower to remove the tar and scales.

The regimen can be supplemented with steroid medications and keratolytics (scale removers), particularly in the early stages of treatment. In a modification of the Goeckerman regimen, called the Ingram regimen, anthralin is used instead of coal tar.

To be admitted to a day treatment center for Goeckerman treatment, a person must:

- Be able to walk without help
- Be free of health problems that could complicate treatment
- Be able to commute to the center daily for three to five weeks
- Go home or to other lodgings for evenings and weekends

Interested people should talk to their doctors to pursue this option.

**I**ntensive Goeckerman treatment in the hospital may be necessary for certain people. Sometimes a person's emotional as well as physical condition requires medical supervision. Bed rest and removal from the stresses of daily life are important elements of hospital Goeckerman therapy.

Goeckerman regimen patients have reported average remission times of six to 12 months.

### **What are the side effects of UVB therapy?**

#### **Irritation**

Skin pores can become blocked and inflamed by coal tar applications. Avoid inflammation by applying the coal tar on the skin in the same direction the hair grows. This type of irritation is not permanent. Occasionally, some individuals need to stop using coal tar preparations.

#### **Sunburn**

Certain medications, herbal supplements and topical ingredients can increase sensitivity to light. It is important for individuals to tell their doctors about all medications, treatments and dietary supplements (including vitamins and herbal medicines) they are taking. Avoid exposure to natural sunlight on UVB treatment days. The combination of the treatment light and natural UVB light can result in overexposure.

#### **Skin cancer**

UVB is an established carcinogen (cancer-causing substance or agent) in humans. It is important to have skin examined by a doctor periodically. If detected early, skin cancer can usually be stopped. Sunscreen should be used on uninvolved skin to minimize exposure to UVB.

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## home phototherapy

Treating psoriasis with a UVB light unit at home can be an economical and convenient choice. Like phototherapy in a clinic, it requires a very consistent treatment schedule. Individuals are treated initially at a medical facility. Later, they begin using a light booth at home. However, all phototherapy requires a prescription.

A dermatologist experienced in home phototherapy provides instructions on the schedule a person should follow. The length of exposure to ultraviolet light depends on skin type (see Table 1 on page 5), the type of UVB device and the intensity of light emitted from the home UVB lamps.

Just as with office-based phototherapy, people should take care to protect their eyes and other sensitive areas. Protective eyewear must be worn to protect the eyes from permanent damage. Men should also shield their genitals with clothing or sunscreen (see page 21 for more details). A doctor can provide guidance in this situation.

The most important rule in using home phototherapy is to follow a doctor's instructions. Even though the treatment is at home, continue with regular check-ups. Home phototherapy is a medical treatment that requires monitoring by a medical professional.

### Choosing a unit

Detailed information about the types of home phototherapy units available can be obtained from manufacturers of home phototherapy equipment. A list is available at the end of this

booklet. A dermatologist will also have more information about units.

Here are a few important tips to keep in mind when choosing a unit:

- Look for safety features in home UVB equipment, such as key switches or disabling keys that render the unit inoperative when the owner is not around.
- Check for safety guards or grids over the lamps.
- Evaluate the durability and stability of the equipment.
- Ask whether the price includes shipping and/or assembly charges.
- Find out if the company sells replacement lamps, and the cost.

Some insurance companies will pay a percentage of the cost of home UVB equipment. A call to the health insurance company prior to purchase is worthwhile.

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## lasers

### Targeted UVB treatment

The excimer laser, approved by the FDA for psoriasis treatment, emits a high-intensity beam of ultraviolet light very similar to the light delivered by narrow-band UVB units. The two brands currently on the market are the Xtrac and the Xtrac Velocity.

The excimer laser's beam is less than 1 inch across. It can target selected areas of the skin affected by psoriasis. This laser is used mostly to treat people with mild to moderate plaque psoriasis.

**I**ndividual response to the treatment varies. It can take an average of four to 10 sessions to see results, depending on the particular case of psoriasis. It is recommended that patients receive two treatments per week, with a minimum of 48 hours between treatments.

There is not yet enough long-term data to indicate how long the improvement will last following a course of laser therapy. The National Psoriasis Foundation has heard anecdotal reports from doctors that some people will remain clear for eight months or more, but results will vary.

### **Pulsed dye lasers**

Like the excimer laser, pulsed dye lasers are approved for treating chronic, localized plaque lesions. Using a different form of light than UVB units or the excimer laser, pulsed dye lasers destroy the tiny blood vessels that contribute to the formation of psoriasis lesions.

**T**reatment consists of 15- to 30-minute sessions every three weeks. For people who respond, it normally takes about four to six sessions to clear the target lesion.

Individuals who have received pulsed dye laser treatments report that it feels like being snapped with a rubber band. There is a small risk of scarring. The most common side effect is bruising after treatment, for up to 10 days.

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## PUVA

### What is PUVA and how does it work?

Like UVB, ultraviolet light A (UVA) is present in sunlight. Unlike UVB, UVA is relatively ineffective unless used with a light-sensitizing medication such as psoralen. This process, called PUVA, slows down the excessive cell growth of psoriasis and can clear symptoms for varying periods of time.

Studies show that PUVA clears psoriasis for more than 85 percent of patients. Even without maintenance treatment, it induces long remission times that can last from a few months to more than a year.

**P**UVA is recommended for adults who have moderate to severe cases of psoriasis. Stable plaque psoriasis, guttate psoriasis, and psoriasis of the palms and soles are most responsive to PUVA treatment.

PUVA is not normally given to children or teenagers. However, it can be used by young people to avoid unwanted side effects of other treatments or if other treatments have not been successful.

### How is it used?

PUVA treatments take place in a doctor's office. First, psoralen is taken orally or applied to the skin. After a specified amount of time, the patient exposes areas affected by psoriasis in a light booth lined with ultraviolet lamps. Most UVA units are vertical, and patients stand during treatment. Other special UVA units are used for exposing only specific parts of the body, such as the hands and feet.

Timing is critical to the success of the treatment. For the UVA light exposure to work best, it must be administered at a time when the psoralen is at a high level in the skin. Doctors and phototherapy staff know exactly how much time should elapse between the patient taking psoralen and exposing the skin to UVA.

**O**ral PUVA—the most common form—requires the patient to take psoralen pills 75 to 120 minutes before entering the UVA light booth.

Topical forms of PUVA are referred to as “paint,” “soak” and “bath.” In paint PUVA, a psoralen preparation in ointment or liquid form is painted directly on lesions. This is especially useful for those on the palms, soles and nails. In soak PUVA, affected areas are immersed in a basin of water that contains psoralen. Bath PUVA involves immersing the entire body in a tub of water that contains psoralen. The UVA should be administered within 15 minutes after the psoralen is applied to the skin. Light sensitivity drops dramatically after one hour.

Topical PUVA avoids some of the unpleasant short-term side effects associated with oral PUVA (see page 14). However, topical PUVA poses a higher risk of the skin burning from the light treatment, and is more labor intensive.

**T**opical PUVA can be useful for people with stubborn patches of psoriasis because it provides a higher local concentration of psoralen. Consequently, it lowers the amount of UVA needed for an effective response. In addition, people who are resistant to oral PUVA may respond to topical PUVA.

Initial exposure to UVA may be very short (30 seconds to several minutes), depending on the

skin type and the kind of UVA unit. Exposure time is gradually increased to 20 minutes or longer, depending on the strength of the UVA light. On average, 25 treatments are required for the skin to clear. More may be needed for very severe psoriasis.

Individuals may or may not continue PUVA treatments to maintain skin clarity. Only one or two PUVA treatments per month may maintain clearance, although the exact regimen will vary for each person.

### Who should not take PUVA?

Some people are not good candidates for PUVA due to their medical histories. The following are possible reasons to avoid PUVA:

- A family history of allergy to sunlight
- Pregnancy or nursing
- A history of arsenic intake (e.g., Fowler's solution)
- Previous ionizing radiation therapy (Grenz ray or X-ray)
- Medical conditions such as lupus erythematosus, porphyria, or skin cancers that require one to avoid the sun
- Heart or blood pressure problems so severe that one cannot endure heat or prolonged standing
- A history of skin cancer
- Liver disease (it may increase levels of medicine in the blood, although people with liver disease may use bath PUVA)

## What are the side effects of PUVA?

The most common short-term side effects of oral PUVA are nausea, itching and redness of the skin. Drinking milk or ginger ale, taking ginger supplements or eating while taking oral psoralen may prevent nausea for some people. Antihistamines, baths with colloidal oatmeal products or application of topical products with capsaicin (an extract of hot peppers) may help relieve itching caused by PUVA. Swelling of the legs from standing during PUVA treatment can sometimes be relieved by wearing support hose.

Rotating treatments—using another psoriasis treatment for a while—may reduce PUVA side effects. This can prevent individuals from becoming resistant to certain treatments, and can minimize long-term side effects. Work with a doctor to determine if rotating treatments is an appropriate option.

### **Skin cancers**

The primary long-term risk of PUVA treatment is a higher risk of skin cancer, particularly non-aggressive forms like squamous cell carcinoma (SCC) and basal cell carcinoma (BCC). Studies show the more PUVA treatments, the higher the risk for developing skin cancers.

Long-term PUVA treatment requires careful monitoring for skin cancer, even after treatments are finished. People who have had more than 150 PUVA treatments should have a dermatologist examine their skin once a year. Skin cancers generally can be removed easily if detected early.

**E**arly signs of non-melanoma skin cancer are keratoses, or raised, scaly wart-like bumps, that can range from a tenth- to a half-inch in diameter at the base. PUVA-induced keratoses

(as opposed to sun-induced keratoses) tend to appear on skin that does not receive regular sun exposure (e.g., the trunk and thighs). Keratoses and early skin cancer lesions generally can be removed.

There is also some evidence that people who receive high levels of PUVA treatments may be at increased risk of developing melanoma, a more aggressive and potentially deadly form of skin cancer. This is not universally accepted by researchers and doctors.

### **Cataracts**

PUVA could induce cataracts if the eyes are not protected for 12 to 24 hours after a treatment. Psoralen remains in the eye lens for a period following ingestion of the drug. To date, no increase in cataracts has been noted in patients using proper eye protection.

**S**pecial UVA-blocking glasses are prescribed for use following treatment. For at least 12 hours following ingestion of psoralen, they must be worn anywhere the sun shines—even indoors. Unlike UVB, UVA can go through window glass. Sunglasses must filter out 100 percent of the ultraviolet light, so use of commercial sunglasses should be discussed with a doctor.

### **Freckling and skin aging**

PUVA patients who have received more than 150 treatments within five years are at a higher risk for premature aging of the skin. The aging usually takes the form of wrinkling and dryness, or tight, shiny skin. Discolored spots that look like dark freckles may develop.

### **Can it be used with other treatments?**

PUVA may be used alone or in combination with topical treatments or oral medications.

Sometimes doctors prescribe steroid medications or anthralin to help clear a few stubborn lesions rather than prolong UVA exposure. Calcipotriene is also combined with PUVA in some cases, but this medication should always be applied after a treatment. UVA exposure can inactivate calcipotriene.

If the lesions are extensive, some doctors will combine UVB, biologics or methotrexate with PUVA to speed up the clearing and reduce the cumulative exposure to PUVA.

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## sunlight

### How is it used?

Although both UVB and UVA are found in sunlight, UVB is the light that works best for psoriasis. UVB from the sun works the same way as UVB in a doctor's office.

Short, multiple exposures to sunlight are recommended. Start with five to 10 minutes of noontime sun daily. Gradually increase exposure time by 30 seconds if the skin tolerates it. To get the most from the sun, all affected areas should receive equal and adequate exposure.

Avoid overexposure and sunburn. It can take several weeks or longer to see improvement. A dermatologist should check regularly for sun damage.

### Who should not use it?

Some topical medications can increase the risk of sunburn. These include tazarotene, coal tar, pimecrolimus (brand name Elidel) and tacrolimus (brand name Protopic). Individuals using these products should talk with a doctor before going in the sun.

People who are using PUVA or other forms of light therapy should limit or avoid exposure to natural sunlight unless directed by a doctor.

**S**ome foods, drugs and dietary supplements can increase the skin's sensitivity to light. Examples include celery and fennel, some high blood pressure medications and antibiotics, and the herbs St. John's wort and masterwort. Individuals should talk to a doctor about any factors that may increase the risk of sunburn.

### What are the side effects?

#### **Sunburn**

Just as some people experience a flare of their psoriasis when they injure their skin—called the Koebner phenomenon—sunburn may cause a flare. Sunburn can also increase the risk of skin cancer and premature aging.

Sunburn can be treated with cool oatmeal baths, fragrance-free moisturizers or over-the-counter hydrocortisone creams. Taking aspirin can also help with the pain associated with sunburn. Seek medical attention for severe sunburn accompanied by a headache, chills or fever.

#### **Skin cancer**

Exposure to sunlight increases the risk of skin cancers such as basal cell carcinoma, squamous cell carcinoma and actinic kurtosis. These non-melanoma cancers often appear as a change in the skin. Using sunscreen can reduce the risk.

#### **Premature aging**

According to the American Academy of Dermatology (AAD), just a few minutes of sunlight exposure each day over the years can cause aging of the skin. This includes freckles, age spots, spider veins on the face, rough and leathery skin, fine wrinkles that disappear when

stretched, loose skin and a blotchy complexion. Sunscreen can reduce the risk of premature aging.

## Tips for using sunlight therapy

### Sunscreen

It is very important to use sunscreen on areas of the body without psoriasis to prevent skin damage and cancer. Recommendations by the AAD for using sunscreen on skin unaffected by psoriasis include:

- Wear a broad-spectrum ultraviolet light A (UVA) and ultraviolet light B (UVB) sunscreen with a sun protection factor (SPF) of at least 15
- Use sunscreen every day if sun exposure lasts for more than 20 minutes
- Apply sunscreen to dry skin 15 to 30 minutes before going outdoors
- When applying sunscreen, pay particular attention to the face, ears, hands and arms, and generously coat the skin
- Reapply sunscreen every two hours and immediately after swimming or strenuous activity

Sensitivity to sun varies from person to person (see Table 1 on page 5). People with skin types I-IV, who are most likely to sunburn, benefit from high protection sunscreens.

### **Wear protective glasses**

Sunbathers should use sunglasses that filter UVA and UVB rays. Long-term exposure to ultraviolet light can produce cataracts.

It is wise to invest in high-quality sunglasses from an optical shop if sunbathing is a regular activity. Sunglasses sold in retail stores probably do not provide necessary protection unless they are marked “100 percent UVA and UVB protection.” An ophthalmologist or optometrist can recommend a brand of glasses.

### **Know the signs of skin cancer**

The following are noticeable changes in the skin that may be signs of skin cancer:

- A sore that does not heal
- Areas of the skin that are:
  - ◇ Small, raised, smooth, shiny and waxy
  - ◇ Small, raised and red or reddish-brown
  - ◇ Flat, rough, red or brown and scaly
  - ◇ Scaly, bleeding, or crusty
  - ◇ Similar to a scar and firm

Anyone who notices any of these symptoms should see a doctor immediately.

Further information about skin cancer is available from the American Academy of Dermatology, 847.330.0230, [www.aad.org](http://www.aad.org), or from the Skin Cancer Foundation, 800.SKIN.490 (800.754.6490), [www.skincancer.org](http://www.skincancer.org).

### **Tanning beds**

Some people visit tanning salons as an alternative to natural sunlight. Tanning beds in commercial tanning salons emit mostly UVA

light, not UVB. Both UVB and UVA are found in natural sunlight, but the beneficial effect for psoriasis is attributed primarily to UVB.

The American Academy of Dermatology, the U.S. Food and Drug Administration and the Centers for Disease Control and Prevention all discourage the use of tanning beds and sun lamps. The ultraviolet radiation from these devices can damage the skin, cause premature aging and increase the risk of skin cancer.

**M**ost practicing dermatologists steer psoriasis patients away from tanning beds, as well. However, some dermatologists view tanning beds as a last resort that might help if patients do not have access to light therapy.

Consult with a dermatologist before going to a tanning bed and keep these guidelines and precautions in mind:

- Psoralen drugs or other photosensitizing drugs should not be used in combination with tanning.
- People with psoriasis should talk to a doctor about any factors that may increase risk of burning.
- Individuals should gradually build exposure times, starting at a time recommended by a doctor.
- Risks of premature aging and skin cancer will increase with tanning bed use.

Tanning facilities may not measure or track the UV output of their bulbs on a regular basis.



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## home UVB equipment manufacturers

### Daavlin

Full-body and hand/foot/scalp narrow-band and broad-band units

800.322.8546

*www.daavlin.com*

### National Biological Corp.

Full-body and hand/foot/scalp narrow-band and broad-band units

800.338.5045

*www.natbiocorp.com*

### UVBioTek

Full-body and hand/foot narrow-band and broad-band units

800.882.4683

*www.uvbiotek.com*

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## Take charge of your health— join today!

Whether you're newly diagnosed or have been coping with psoriasis/psoriatic arthritis for years, National Psoriasis Foundation offers something for everyone. Your donation of \$35 or more brings you these membership benefits:

- **Psoriasis Advance:** Keep up to date with the latest psoriasis news in our award-winning magazine.
- **Psoriasis skINSIGHTS:** This twice-yearly newsletter brings you the latest Foundation news about our programs, events, volunteers and other indispensable information.
- **Money-saving coupons and discounts:** Receive exclusive coupons for skin care and other health products.
- **Treatment tips:** Full access to *It Works for Me*, our online database of tips from people with psoriasis and psoriatic arthritis.
- **Toll-free information line:** Call between 8 a.m. and 5 p.m. Pacific Time and talk to our health educator.
- **Opportunities to connect:** Share information and support with others who have the disease through our online message board and affiliated support groups.
- **Help in finding a doctor, special invitations to educational events and more!**

To join the National Psoriasis Foundation call 800.723.9166 or go to [www.psoriasis.org](http://www.psoriasis.org).

### Additional resources

The National Psoriasis Foundation maintains an extensive library of information on psoriasis and related topics. To learn more, visit our Web site at [www.psoriasis.org](http://www.psoriasis.org) or e-mail [education@psoriasis.org](mailto:education@psoriasis.org).

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# light therapy

## mission statement

Our mission is to improve the quality of life of people who have psoriasis and psoriatic arthritis. Through education and advocacy, we promote awareness and understanding, ensure access to treatment, and support research that will lead to effective management and, ultimately, a cure.

The National Psoriasis Foundation, a charitable 501(c)(3) organization, depends on your tax-deductible donations to support the millions of people diagnosed with psoriasis and/or psoriatic arthritis. The Psoriasis Foundation is governed by a volunteer Board of Trustees and is advised on medical issues by a volunteer Medical Board. For more information, or to obtain a copy of the Foundation's Annual Report, call 800.723.9166.

National Psoriasis Foundation educational materials are reviewed by members of our Medical Board and are not intended to replace the counsel of a physician. The Psoriasis Foundation does not endorse any medications, products or treatments for psoriasis or psoriatic arthritis and advises you to consult a physician before initiating any treatment.

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