

Making Treatment Decisions

# SUN & WATER THERAPY



**NATIONAL  
PSORIASIS  
FOUNDATION®**

*Connect. Control. Cure.*

# SUN AND WATER THERAPY

## WHAT IS PSORIASIS?

Psoriasis is a noncontagious, lifelong skin disease that has been diagnosed in more than 4.5 million adults in the United States. The most common form, plaque [pronounced plak] psoriasis, appears as raised, red lesions covered with a silvery white buildup of dead skin cells, called scale.

About 10 percent to 30 percent of people with psoriasis also develop psoriatic [sore-ee-AA-tic] arthritis, which causes pain, stiffness and swelling in and around the joints. The hands, feet, wrists, ankles, knees and lower back are most often affected by this type of arthritis.



*Three percent to 10 percent of the body affected by psoriasis is considered to be a moderate case. More than 10 percent is considered severe. The palm of the hand equals 1 percent of the skin. However, the severity of psoriasis is also 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.*

To learn more about the types of psoriasis or psoriatic arthritis, contact the National Psoriasis Foundation and request the following booklets:

- *Psoriatic Arthritis*
- *Specific Forms of Psoriasis*

Sunlight and water are natural therapies that can help improve psoriasis and/or psoriatic arthritis for many people.

Climatotherapy is a term used to describe the combination of natural sunlight and water, such as the ocean or other bodies of water, to treat psoriasis. In particular, climatotherapy refers to certain locations around the world, like the Dead Sea in Israel, where the environment and natural elements are said to be especially therapeutic for psoriasis and/or psoriatic arthritis.

Balneotherapy is a general term used for water-based treatments involving natural thermal springs, hot springs, mineral water or seawater. This treatment is widely used throughout Europe and Asia, and spas that feature balneotherapy are being introduced in the United States.

No matter what it is called or where it takes place—in the backyard, at the beach or in the bathtub—sun and water may make a difference in how psoriasis and psoriatic arthritis look and feel.

## USING SUNLIGHT AS A PSORIASIS TREATMENT

As with all psoriasis remedies, consistency and persistence are keys to a successful outcome when using sunlight to treat psoriasis. Short, multiple exposures to sunlight are recommended. To get the most from the sun, give all affected areas equal and adequate exposure, but avoid overexposure and sunburn. Be aware that it can take several weeks or longer to see improvement. It is a good idea to see your dermatologist regularly to watch for sun damage.

### Avoiding sunburn

While sunlight is generally good for psoriasis, too

much can make your condition worse. A sunburn may cause psoriasis to flare. Some people experience a flare of their psoriasis when they injure their skin. This is called the Koebner [keb-ner] phenomenon. You are most likely to experience a Koebner response if your psoriasis is active or if you have a history of flares due to skin injuries. Sunburns can also increase your risk of skin cancer and premature aging.

If you get a sunburn, treat it with cool baths (with oatmeal), bland moisturizers or over-the-counter hydrocortisone creams. Taking aspirin can also help with the pain associated with a sunburn.

Seek medical attention if your sunburn is severe and accompanied by a headache, chills or fever.

### Using a sunscreen

Sunlight is a potent treatment that can both help and harm. It is very important to use a sunscreen to protect the unaffected areas of the body to prevent damaged skin and skin cancer. You can follow recommendations by the American Academy of Dermatology (AAD) for using a sunscreen on skin unaffected by psoriasis:

- 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 you are going to be in the sun 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 or immediately after swimming or strenuous activity.

Sensitivity to sun varies from person to person (see Table 1 on page 6). People with skin types I-IV, who are most likely to sunburn, benefit from high protection sunscreens.

### Protective glasses

Sunbathers should use sunglasses that filter UVA and UVB rays. Long-term exposure to ultraviolet light can produce cataracts. An ophthalmologist or optometrist can recommend a brand of glasses. Sunglasses sold in retail stores must be marked “100 percent UVA and UVB protection,” or they probably do not provide necessary protection. It is wise to invest in a high-quality pair of sunglasses from an optical shop if sunbathing is a regular activity.

### Sunlight and other psoriasis treatments

Some medications, treatments and supplements can make you more sensitive to light. Call your pharmacy if you are unsure about potential photosensitivity reactions with medications you are currently taking. Additionally, it is always important to tell your doctor what medications you are using and that you are using natural sunlight as a treatment for your psoriasis. He or she will be able to tell you if there is a possibility of a reaction or if you should reduce your time in the sun.

If you are being treated with the light sensitizing drug psoralen, plus UVA (PUVA) or UVB, make sure to discuss sunlight exposure with your phototherapy nurse or doctor. Some doctors may suggest not using natural sunlight during PUVA or UVB

**Table 1**

The U.S. Food and Drug Administration (FDA) and the AAD recognize six skin-type categories:

| Skin Types | Sun History   | Example   |
|------------|---|---|
| <b>I</b>   | Always burns easily, never tans, extremely sensitive skin               | Red-headed, freckles, Celtics, Irish-Scots                |
| <b>II</b>  | Always burns easily, tans minimally, very sensitive skin                | Fair-skinned, fair-haired, blue-eyed Caucasians           |
| <b>III</b> | Sometimes burns, tans gradually to light brown, sun-sensitive skin      | Average skin  |
| <b>IV</b>  | Burns minimally, always tans to moderate brown, minimally sun-sensitive | Mediterranean-type Caucasians                             |
| <b>V</b>   | Rarely burns, tans well, sun-insensitive skin                           | Middle Easterners, some Hispanics, some African-Americans |
| <b>VI</b>  | Never burns, deeply pigmented, sun-insensitive skin                     | African-Americans   |

treatment. They may alter your treatment schedule to accommodate your sunbathing, or you may be able to reduce your phototherapy treatments during sunny weather. If you are spending time at the pool and in the sun, do not use home UVB light treatments without first talking with your doctor.

If you use Dovonex (a vitamin D<sub>3</sub> derivative, also known by its generic name calcipotriene) you can continue using it while self-treating with sunlight. However, Dovonex should not be applied before sunbathing because it may partially block the

ultraviolet light, and UV rays can inactivate the medication.

Patients using Tazorac (a vitamin A derivative, also known by its generic name tazarotene) should avoid exposure to the sun unless told otherwise by a doctor. Tazorac can increase the skin's sensitivity to sunlight and cause burning.

If you are using tar products, be very cautious about sunbathing, even if you have washed the tar from the skin. Tar products make your skin extra sensitive to the sun's effects and more likely to sunburn.

Other topical products can also make your skin more sensitive when exposed to natural sunlight. For example, Elidel and Protopic, two topical products that are approved for treating eczema, can increase an individual's photosensitivity and their risk of skin cancer.

Photosensitivity can occur from many systemic (affecting entire body) medications. Some high blood pressure drugs, antibiotics and psoriasis medications can put you at high risk for a dangerous sunburn. Check all of your medications for possible photosensitivity reactions.

Also, some foods and dietary supplements, such as celery, St. John's wort and masterwort, can cause photosensitivity and should be used with caution when undergoing a regimen of sun therapy.

It may be beneficial to apply a thin layer of mineral oil to the psoriasis lesions before sunbathing. Avoid applying the mineral oil to uninvolved skin. This will increase the effect of the sunlight and help preserve the skin's moisture. However, it is important to note that using mineral oil can increase the likelihood of getting

a sunburn. Because of the increased effectiveness, you may want to decrease your sun exposure time. As noted earlier, a sunburn may cause psoriasis to flare.

### Sunlight and skin cancer

The damage caused by sunlight, including skin cancer and premature aging, is well documented. While sunlight may help control psoriasis, you must take precautions to minimize these potential risks. Sunscreens and clothing can decrease the amount of exposed skin by shielding uninvolved areas.

It is important to know the warning signs of skin cancer and get regular checkups from your dermatologist.

### Know the signs of skin cancer

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

- A skin growth that increases in size and appears pearly, translucent, tan, brown, black or multi-colored
- A mole, birthmark or beauty mark that changes color, increases in size or thickness, changes in texture or is irregular in outline
- A spot or growth that continues to itch, hurt, crust, scab, erode or bleed
- An open sore or wound on the skin that does not heal or persists for three or more weeks, or heals and then reopens

If you have any of these symptoms, see your doctor immediately.

Further information about skin cancer is available from the American Academy of Dermatology, P.O. Box 4014, Schaumburg, IL 60168-4014, 847.330.0230, [www.aad.org](http://www.aad.org), or from the Skin Cancer Foundation, P.O. Box 561, New York, N.Y. 10156, [www.skincancer.org](http://www.skincancer.org)

## CLIMATOTHERAPY SITES

Sites where climatotherapy is available exist around the world. The most well-established are described here. There are others, although limited information is available about them, including the Black Sea and the Copahue Thermal Basin in Argentina.

### The Dead Sea

One of the best known climatotherapy sites is the Dead Sea, which offers formalized treatment facilities for psoriasis. At 1,200 feet below sea level, the Dead Sea is the lowest point on the earth's surface. This creates a very unique climate that allows people to sunbathe for long periods of time without burning. The Dead Sea water is said to have a therapeutic effect on the skin due to its high salt and mineral content. It has an extraordinarily high salt content of 33 percent. In comparison, the Great Salt Lake in Utah has 22 percent, and the oceans have 3 percent.

The Dead Sea area is hot and sunny with more than 300 cloudless days a year and very low rainfall. The only time the Dead Sea treatment clinics are closed is in the month of January, which is usually cloudy. The average temperature at the Dead Sea is 90 degrees, and the average humidity is 35 percent. Because it is far below sea level, an atmospheric filter is created that eliminates many of the burning rays and much of the heat. In addition, high levels of bromine in the air seem to add to a patient's sense of well-being.

The main elements of Dead Sea climatotherapy are sun exposure and bathing in the sea waters. Psoriasis patients sunbathe in large enclosed solariums; there is a central public solarium and almost all of the hotels have private solariums for their guests. Sun exposure is gradually increased to a total of three to six hours per day, and bathing in the Dead Sea is limited to 30 minutes at a time, twice per day.

Moisturizers, keratolytics (agents that remove the scales) or other mild topical preparations may be recommended for some patients. In very resistant cases, more potent medications can be used at the beginning of treatment. Most patients are under the regular supervision of a dermatologist from one of the Dead Sea's medical clinics.

Patients are advised to stay at least four weeks to get the maximum benefit and maximum remission time. Some people experience a substantial improvement in two weeks, but most do not show significant improvement until at least the third week.

According to several published studies, about 80 percent to 90 percent of the people visiting the Dead Sea for psoriasis treatments can expect to clear or significantly improve. Less than 1 percent of people see no change or get worse.

Once the psoriasis is clear, the length of remission varies. A 1999 study published in the *International Journal of Dermatology* looked at 100 patients with psoriasis who traveled for treatment to the Dead Sea. Of the 75 individuals who achieved clearance after four weeks at the Dead Sea, 68 percent were still in remission after four months, 43 percent after six months and 10 percent after eight months. In a 2003 study published in the *Journal of the American Academy of Dermatology*, 27 patients with plaque psoriasis re-

ceived treatment at the Dead Sea with daily bathing in the water and sunlight exposure. Of those patients, 48 percent achieved complete remission and 41 percent showed a moderate to marked response. The average remission period for the individuals who achieved complete clearance was 3.3 months.

Psoriatic arthritis can be treated with applications of Dead Sea mud to affected joints and regular baths in sulfur pools, combined with sun exposure and bathing in the Dead Sea. Also, the high concentration of minerals in the Dead Sea produces a high water density that allows the human body to float almost effortlessly. Arthritis patients float in the Dead Sea to facilitate movement of swollen painful joints. Many treatment centers also provide physical therapy services.

Dead Sea salts, mud and other products containing the minerals of the Dead Sea are available over the counter through a variety of companies based in Israel and in the United States. These may be helpful for some, particularly in relieving itching and redness. However, studies have shown that the most effective part of the Dead Sea treatment regimen is the unique light exposure, and not the minerals in the Dead Sea water.

### **Hotels and treatment clinics at the Dead Sea**

In Israel, there are a variety of psoriasis treatment clinics and numerous hotels in an area called Ein Bokek on the Dead Sea's shores. Ein Bokek is where the vast majority of psoriasis treatment takes place at the Dead Sea. A small treatment center is also open at the north end of the Dead Sea. Accommodations are available at a nearby kibbutz (village).

### **Making travel arrangements**

You may wish to make travel arrangements through your own travel agent. However, there are several travel

companies that specialize in arranging therapeutic trips to the Dead Sea. Some are listed below. They may also provide organized group travel.

#### ***Bound to Travel***

625 S. Euclid Street  
Fullerton, CA 92832  
800.669.6970  
Fax: 714.879.7520  
[www.boundtotravel.com](http://www.boundtotravel.com)

#### ***Kings Bay Travel***

14411 South Dixie Highway, #217  
Miami, FL 33157  
305.233.3575  
Fax: 305.233.5521

#### ***Mirabel Dead Sea Travel***

18401 Collins Ave., #C2  
N. Miami Beach, FL 33160  
800.890.4590  
Fax: 305.937.0331

#### ***Sunworld Tours***

503A 17th Ave. SW  
Calgary, Alberta T2S OA9  
Canada  
800.461.6854  
Fax: 403.229.4455

Because of the geographic location of the Dead Sea, it is important to check travel advisories before booking a trip to the Middle East.

#### **For more information**

You can also visit the Dead Sea Guide Web site at [www.dead-sea.net](http://www.dead-sea.net) for comprehensive information on traveling to the Dead Sea.

#### **Blue Lagoon**

Another place to treat your skin using the natural elements of the environment is the Blue Lagoon in Iceland. The Blue Lagoon Outpatient Clinic, located in Grindavik, Iceland, 40 minutes from the capital city of Reykjavik, offers facilities to house and treat psoriasis patients. Treatment at the clinic consists of ultraviolet light treatments, usage of skin care products and bathing in seawater that is heated by a geothermal power plant. The water has a unique mineral content and contains salts, silica and blue green algae.

For more information about the Blue Lagoon, contact the Blue Lagoon Outpatient Clinic at P.O. Box 22, 240 Grindavik, Iceland, 354.420.8800, or visit [www.bluelagoon.com](http://www.bluelagoon.com)

#### **Canary Islands**

A psoriasis treatment center operates on the Canary Islands. However, it is not possible for Americans to participate in this particular program because it is funded by the Norwegian government. Americans can travel to the Canary Islands off the coast of Spain through private travel companies to take advantage of the sun and water.

The Norwegian Psoriasis Association, together with other Scandinavian associations, is working on plans for its own psoriasis treatment center on the Canary Islands. This center would be accessible to the international public.

#### **France**

The Avene Spa Center, located in the south of France, provides spa therapy with water from a thermal spring. Baths are the main feature of the treatment, but it also incorporates drinking the water, and environmental

(climate) and psychological factors. A course of therapy is usually three weeks. For more information about this location, contact a travel agent, or visit [www.avenehydrotherapycenter.com](http://www.avenehydrotherapycenter.com)

The La Roche Posay spa is located near Poitiers about 185 miles from Paris. The thermal spring water contains a unique combination of mineral salts. Treatment includes baths, showers, drinking the water, general detoxification and natural sunlight. Psychotherapeutic support is also provided. Nearly 10,000 people stay at this thermal spa each year. The spa also welcomes children. For more information about Centre Thermal Del La Roche Posay, contact a travel agent or visit [www.laroche-posay-shrp.com](http://www.laroche-posay-shrp.com)

### Manitou Beach

People looking to treat a myriad of diseases have used Manitou Beach, on Little Lake Manitou in Watrous, Saskatchewan, Canada, since the beginning of the 20th century. Little Lake Manitou is 14 miles long and approximately one mile wide. The shallow lake is fed by underground springs and contains higher than normal mineral concentrations. Little Lake Manitou has many of the same qualities as the Dead Sea.

Local small motels, hotels and inns offer accommodations. To learn more about Manitou Beach, visit [watrousmanitou.com](http://watrousmanitou.com) or call 866.756.6665.

### Mavena Derma Center

The Mavena Derma Center in Des Plaines, Ill., is the only medical clinic in the United States offering balneo-phototherapy, which combines a brine soak with UVB. Mavena's balneo-phototherapy combines a magnesium-rich Dead Sea salt whirlpool soak followed by narrow-band UVB phototherapy. Most patients require 15 to 25 treatments to achieve 80 percent to 87 percent clearance.

Mavena also offers a total body product line of Dead Sea salt moisturizing products. Mavena mines and imports its salt directly from the Dead Sea.

The Mavena Des Plaines Center is located approximately 18 miles northwest of downtown Chicago. Other Mavena centers exist in Switzerland and Germany. For more information, call the Mavena Derma Center at 866.4.MAVENA or visit [www.mavena.com](http://www.mavena.com)

### Red Sea

The Red Sea in Egypt is another geographical site where the water contains unique properties said to help certain diseases. The climate at the Red Sea is similar to that of the Dead Sea, with sunshine at least 350 days a year.

Sites that offer climatotherapy in Egypt include Helwan, Hurghada, the Fayoum Oases, Aswan, Sinai and Safaga.

A climatotherapy site located in Safaga is open to people who have psoriasis. At the National Research Center Clinic, psoriasis patients bathe in the highly salty waters of the area and expose themselves to sunlight twice a day.

Several travel agencies specialize in treatment packages to Safaga at the Red Sea. Visit [www.sporttouristik.de/medicustravell/english.htm](http://www.sporttouristik.de/medicustravell/english.htm) to learn more about the travel packages available or contact a travel agent for assistance.

### Soap Lake

Soap Lake is located in the high desert terrain of central Washington state. The treatment regimen consists of a do-it-yourself schedule of soaking in the lake



water (which includes a unique combination of 25 minerals), applying mudpacks and sunbathing in the area's dry, desert climate during June, July and August. No formal treatment facilities exist.

Small motels and hotels offer accommodations, and several of them pipe lake water into the rooms for therapeutic purposes. Most hotel staff and local residents are knowledgeable about the lake water and how to make use of it. For more information about Soap Lake accommodations or available activities, contact the Soap Lake Chamber of Commerce, P.O. Box 433, Soap Lake, WA 98851, call 509.246.1821, or visit [www.soaplakecoc.org](http://www.soaplakecoc.org)

### Warm Mineral Springs

The Warm Mineral Springs are located halfway between Sarasota and Ft. Myers on the West coast of Florida. The Springs is a water-filled, hourglass-shaped sinkhole that is about 80 yards in diameter and 230 feet deep. Some individuals with psoriasis and psoriatic arthritis have found that bathing in the Springs has helped improve their condition.

For more information, contact Warm Mineral Springs at 941.426.1692 or visit [www.warmmineralsprings.com](http://www.warmmineralsprings.com)

## OTHER OPTIONS

Many individuals take advantage of informal climatotherapy by going to U.S. beaches and other tropical sites for sunbathing and saltwater swimming. There are many natural and man-made spas or springs across the country. Some people with psoriasis and psoriatic arthritis find bathing in these water sources beneficial. For more information about water-based facilities in your area, contact your state's chamber of commerce or tourism office.

### 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. UVB is the type of light typically administered in phototherapy at a doctor's office. Both UVB and UVA are found in natural sunlight, but the beneficial effect for psoriasis is attributed primarily to UVB.

The AAD, the FDA and the federal Centers for Disease Control and Prevention have all discouraged the use of tanning beds and sun lamps, because the ultraviolet radiation from these devices can damage the skin, cause premature aging and increase the risk of skin cancer. Most practicing dermatologists steer psoriasis patients away from tanning beds, as well. A recent study in the *Journal of the National Cancer Institute* found that sunburns and tanning-lamp use during the adolescent and early adult years significantly increase an individual's susceptibility to skin cancer.

However, some dermatologists view tanning beds as a last resort that might help if patients do not have access to UVB and PUVA, and natural sunlight is also not an option. "Tanning beds are not a primary treatment, but they may be a good option for people who can't get access to UVB in a doctor's office," says Steve Feldman, M.D., Ph.D., professor of dermatology, pathology and public health services at Wake Forest University School of Medicine in Winston-Salem, N.C.

Consult with your dermatologist before using a tanning bed. If you already go to a tanning salon or feel you have no other option, keep these guidelines and precautions in mind:

- Do not take psoralens or other strong photosensitizing drugs in combination with tanning. Your doctor may be able to suggest certain topical products to complement tanning;
- Be aware that some drugs may increase your sensitivity to light and subsequently may cause you to burn;
- Tanning is not right for everybody; people who respond well to sun (type III skin or darker) would be more likely to benefit; light-skinned people might want to consider other treatment options;
- Be cautious of taking herbal medications or supplements, as some may also increase your sensitivity to light;
- Gradually build exposure times, starting with a time recommended by a doctor or the tanning bed operator;
- Risks of premature aging and skin cancer will increase with tanning bed use.

Be aware that tanning facilities may not measure or track the UV output of their bulbs on a regular basis—new bulbs can be inserted into the tanning bed without your knowledge, which can make the UV output more intense. These changes and lack of monitoring can cause a serious sunburn and subsequent flare of your disease.

## STAY INFORMED AND INVOLVED. TAKE ACTION.

The National Psoriasis Foundation is committed to improving the lives of people with psoriasis and psoriatic arthritis. Join the Psoriasis Foundation to make a difference in the lives of millions of people with these diseases. Donate today!

Call **800.723.9166**

Visit **[www.psoriasis.org](http://www.psoriasis.org)**

E-mail **[getinfo@psoriasis.org](mailto:getinfo@psoriasis.org)**

### **The following educational materials are available from the National Psoriasis Foundation:**

- Alternative Approaches
- Biologic Medications for Psoriasis & Psoriatic Arthritis
- Conception, Pregnancy & Psoriasis
- Genital Psoriasis
- Phototherapy: Light Treatment for Psoriasis
- Psoriasis: How It Makes You Feel
- Psoriasis Research: Progress & Promise
- Psoriasis on Specific Skin Sites
- Psoriatic Arthritis
- Scalp Psoriasis
- Specific Forms of Psoriasis
- Steroids
- Sun & Water Therapy
- Systemic Medications: Internal Drugs for Moderate to Severe Psoriasis
- Topical Treatments for Psoriasis
- You & Your Doctor: Things to Consider
- Your Diet & Psoriasis

*More updated information may be available at*  
**[www.psoriasis.org](http://www.psoriasis.org)**

# SUN & WATER 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 more than 5 million people affected by 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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**NATIONAL  
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