



NATIONAL  
PSORIASIS  
FOUNDATION®

# topical treatments

for psoriasis, including steroids

- > Anthralin
- > Calcipotriene
- > Calcipotriene +  
betamethasone  
dipropionate
- > Calcitriol
- > Tazarotene
- > Topical Steroids
- > OTC Topicals
- > + More



## introduction to psoriasis

### 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.*



**Up 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).

**TOPICAL TREATMENTS—** medications applied to the skin—are usually the first line of defense in treating psoriasis. Researchers believe psoriasis occurs when faulty signals in the immune system cause skin cells to grow too rapidly and build up on the skin. Topicals slow down or normalize that excessive cell reproduction and reduce inflammation associated with psoriasis.

There are many effective topical treatments for psoriasis. While many can be purchased over the counter (OTC), others are available by prescription only.

Corticosteroids, or just “steroids,” are the most frequently used treatment for psoriasis. They are referred to as anti-inflammatory agents, because they reduce the swelling and redness of lesions. See page 7 for more information about steroids.

### prescription topicals

#### Tips for all topical medications

- Always follow your doctor's directions for application and consult your doctor if you experience any unusual discomfort.
- Apply topical treatments only to psoriasis lesions if possible to avoid irritating unaffected skin. A thin layer is generally sufficient. Wash your hands thoroughly

after applying, unless your hands are being treated.

- Do not apply topical treatments around the eyes, genitals, or other sensitive areas unless directed by your doctor.
- When prescribed multiple topicals, apply the topicals at different times of the day or ask your doctor in which order to apply them.
- Do not overuse topical medications, as they can be absorbed into the body.
- Pregnant or breastfeeding women should discuss the use of topical medications with their doctor. Generally, they are not recommended unless the benefits outweigh the risks.
- Do not occlude—or cover up—an application of a topical medication without talking to your doctor first.
- Keep in mind that the amount of time a medication takes to work varies among individuals. Consistent use is important for achieving treatment success.

## Anthralin

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

Anthralin is used to treat plaque psoriasis. It works by reducing the rapid growth of skin cells associated with plaque psoriasis.

### How is anthralin used?

Anthralin comes in a cream and a scalp formulation that can be applied directly to the skin and scalp.

Anthralin can be messy to use. It will cause brown stains if it comes into contact with unaffected skin. A stain in the center of a plaque may indicate that the psoriasis is clearing. Several weeks of use may be required to see results.

Zithranol-RR is a brand that was designed to reduce the risk of staining and irritation. It is a 1.2% anthralin cream in which the active ingredient is surrounded by a protective layer of lipids (fatty substances). These lipids melt at body temperature, releasing the anthralin only on the skin where it is applied and not on clothing, bedding or furniture.

### What are the side effects?

There are no known long-term side effects to using anthralin. It may cause skin irritation and can stain light-colored hair as well as unaffected skin, clothing and bedding. Stains on skin and hair will eventually fade and disappear.

### Can it be used with other treatments?

Anthralin may be combined with ultraviolet light B (UVB), PUVA (the light-sensitizing drug psoralen plus ultraviolet light A), tazarotene or topical steroids to improve the response. Ask your doctor before initiating any such regimen.

## Calcipotriene

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

Calcipotriene (brand name Dovonex) is a form of synthetic Vitamin D<sub>3</sub>. It is not the same as the Vitamin D found in dietary supplements taken by mouth, which should not be used to treat psoriasis. Calcipotriene is formulated to slow skin cell growth, flatten lesions and remove scale. It can also be used to treat psoriasis of the scalp and nails.

### **How is it used?**

Calcipotriene comes in a 0.005% cream or scalp solution. Doctors usually recommend applying it twice per day. Calcipotriene is typically prescribed for an initial treatment period of six to eight weeks. It is approved by the U.S. Food and Drug Administration (FDA) for long-term use.

### **What are the side effects?**

Calcipotriene has no known serious side effects when used according to guidelines.

The most common minor side effect is skin irritation, such as stinging or burning. Less common side effects include dry skin, peeling, rash, dermatitis, and worsening of psoriasis.

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

Calcipotriene can be used with many other treatments. Combining it with topical steroids can be more effective and less irritating than calcipotriene alone; however, the specifics of the combination matter since some steroids, for example, may cause faster breakdown of calcipotriene. If calcipotriene is prescribed with other topicals, apply the medications at different times of day and never mix them unless they are known to be compatible.

A topical combining calcipotriene and the steroid betamethasone dipropionate, which avoids this problem, is available (see page 5).

Calcipotriene increases the effectiveness of both UVB and PUVA treatments. However, apply calcipotriene after UV treatments, because UV rays can inactivate the medication.

In cases of moderate to severe psoriasis, calcipotriene may be combined with systemic

treatments, such as cyclosporine or acitretin. There are no known problems using calcipotriene with methotrexate or biologics, but studies are limited.

## **Calcipotriene and betamethasone dipropionate**

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

Calcipotriene is a form of synthetic Vitamin D<sub>3</sub> and betamethasone dipropionate is a steroid. Taclonex is the brand name for this formulation. It slows skin cell growth, flattens lesions, removes scale and reduces itch and inflammation.

### **How is it used?**

It comes in an ointment and is applied once a day for no more than four weeks. Thereafter, follow your physician's directions. Calcipotriene and betamethasone dipropionate should be used on no more than 30 percent of the body's surface at any time.

### **What are the side effects?**

The most common side effects are itching, rash, skin thinning and skin burning. Less common side effects include redness of the skin, folliculitis, skin irritation, worsening of psoriasis, change of skin color and swollen fine blood vessels at the application site.

## **Calcitriol**

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

Calcitriol (brand name Vectical Ointment) is a naturally occurring active form of Vitamin D<sub>3</sub>. In studies, it has been shown to help control excessive skin cell production.

### **How is it used?**

Calcitriol comes in an ointment that is applied twice daily to affected skin, morning and evening. The maximum weekly dose should not

exceed 200mg. Calcitriol can be applied to most places on the body except for face, lips and eyes.

### **What are the side effects?**

Changes in calcium metabolism may occur. However, this side effect is extremely uncommon. Treatment should be stopped until the levels of calcium return to normal. There is an increased chance of skin tumors due to sensitivity to light. It is not recommended for use during pregnancy, or while breast-feeding.

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

Studies have shown that using a sequential schedule of clobetasol propionate (brand name Clobex) spray followed by calcitriol to be effective in managing plaque psoriasis. Calcitriol has also been clinically assessed and shown to be effective with phototherapy treatments and betamethasone.

## **Tazarotene**

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

Tazarotene (brand name Tazorac) is a Vitamin A derivative and is also known as a topical retinoid. It is thought to slow skin cell growth.

### **How is it used?**

Tazarotene comes in a gel and a cream that are available in either 0.05% or 0.1% strength. The gel is odorless and non-staining. The cream contains a moisturizer which may make it more tolerable for people with sensitive or drier skin or for people who live in harsher climates. Tazarotene can be applied to most parts of the body, including the face, hairline, scalp and nails.

### **What are the side effects?**

The most common side effects are skin irritation and dry skin. Tazarotene may make your skin more susceptible to sunburn. Use a sunscreen

and wear protective clothing if skin treated with tazarotene will be exposed to the sun.

It is normal for psoriasis plaques to become very red before clearing when using tazarotene. The redness is often intense in color, but it is generally not painful. If you experience discomfort, burning, itching or stinging, check with your doctor.

Tazarotene is not recommended for use by pregnant women, women who may become pregnant or women who are breastfeeding. Women in their childbearing years should use reliable birth control during treatment. Tazarotene has no effect on sperm, so it is safe for a woman to become pregnant while her partner is using the medication.

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

Tazarotene may be combined with a mid- to high-potency topical steroid to more quickly clear plaques as well as reduce irritation, redness and itching. Combining tazarotene with phototherapy treatment has proven more effective for clearing psoriasis than either treatment alone.

## **..... topical steroids**

### **What are they and how do they work?**

Corticosteroids used on the skin are the most frequently used treatment for psoriasis. These topical steroids are derivatives of the natural corticosteroid hormones that are produced by the adrenal glands. These have many important functions in the body, including control of inflammatory responses. The way that steroids work is not completely understood; however,

they are referred to as anti-inflammatory agents because they reduce the swelling and redness of lesions.

### **How are they used?**

Steroids come in various strengths, ranging from very strong or superpotent (Class 1) to very weak or least potent (Class 7). The chart on page 11 provides the potencies of a variety of steroid medications. Generally, the stronger the steroid, the more effective it is in clearing psoriasis, but the risk of side effects is also greater.

Topical steroids are not considered adequate when used as the only treatment for moderate to severe psoriasis, and are usually combined with other treatments. Steroids come in a variety of bases, such as creams, shampoos, ointments, gels, sprays, solutions, lotions, foam and tape. The base can influence how much medication is absorbed into the skin. Steroids are generally applied once or twice a day. Always use steroids exactly as your doctor prescribes them.

Low-strength steroids are ordinarily used to treat thin, sensitive skin, such as the face, groin and breasts. These areas are more prone to side effects, so apply with caution. This kind of application should only be carried out under the direction of a doctor. Steroids should not be used on the face or other steroid-sensitive sites for long periods of time. Stronger steroids are suitable for thicker skin, such as the knees and elbows. Use superpotent steroids with caution.

**A**lways check with your doctor before occluding (covering up) a steroid medication, as many steroids are too strong to cover. Occlusion can increase the effectiveness of a steroid medication, but it can also intensify

the side effects, such as skin atrophy (thinning of the skin), skin sensitivity and systemic absorption (see “side effects”). Your doctor can decide if occlusion is appropriate for you.

Topical steroids can stop working over time, and abruptly discontinuing the use of a steroid can cause psoriasis to flare. Do not make any changes to your steroid regimen without consulting your doctor.

### **What are the side effects?**

Potential side effects of higher-strength steroids or steroids used in the wrong areas include skin damage, such as skin thinning, changes in pigmentation, easy bruising, stretch marks, redness and dilated surface blood vessels. Using steroids on the face can cause redness, acne, or visible blood vessels that appear swollen.

Some of the side effects of steroids may go away after the medication is stopped; in other cases, the damage is permanent. Have your doctor check your skin for steroid damage periodically (at least two to three times per year), as it can be difficult to recognize the subtle changes that mark steroid damage.

Pulse-dosing is an application schedule that can minimize the risk of steroid side effects. In a typical schedule, a person might clear lesions with daily applications of a potent steroid. Once the lesions clear, the steroid application is reduced to two days a week.

Potent steroids should not be used on or around the eyelids. Cataracts and glaucoma can result when stronger steroids come in contact with the skin around the eyes. Steroids should not be applied to uninvolved skin.

Steroids can be absorbed through the skin and affect internal organs. This occurs when a steroid is excessively misused, i.e., applied to widespread areas of skin, used over long periods of time or used with excessive occlusion.

**W**omen who are pregnant or nursing should discuss the use of steroids with their doctor. Topical steroids can be absorbed through the skin and get into breast milk.

In most cases, experts feel that mild- to mid-strength steroids are safe for children if used on small areas of the body. Potent steroids can be used sparingly with careful monitoring, usually for very brief periods of time.

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

Steroids can be used with other topical treatments such as anthralin, coal tar, calcipotriene, tazarotene and salicylic acid. Steroids work particularly well with tazarotene and salicylic acid, because they help calm the irritations these medications can cause.

Steroids can be used with UVB treatments to help clear stubborn areas of psoriasis. There may be a slight advantage to using steroids in combination with PUVA.

Steroids may also be prescribed in combination with systemic medications including methotrexate, cyclosporine, acitretin and biologics.

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**potency chart**

The following potency chart categorizes brand-name topical steroid medications along with the name of the corresponding generic drug. The medications are listed in order of their potency. Please note that the percentage of ingredient in the medication does not necessarily correlate with the strength of the steroid. The list may not be comprehensive.

BRAND NAME	GENERIC NAME
<b>CLASS 1 - Superpotent</b>	
Clobex Lotion/Spray/ Shampoo, 0.05%	Clobetasol propionate
Cormax Cream/ Solution, 0.05%	Clobetasol propionate
Diprolene Ointment, 0.05%	Betamethasone dipropionate
Olux E Foam, 0.05%	Clobetasol propionate
Olux Foam, 0.05%	Clobetasol propionate
Temovate Cream/Ointment/ Solution, 0.05%	Clobetasol propionate
Ultravate Cream/ Ointment, 0.05%	Halobetasol propionate
Vanos Cream, 0.1%	Fluocinonide
<b>CLASS 2 - Potent</b>	
Diprolene Cream AF, 0.05%	Betamethasone dipropionate
Elocon Ointment, 0.1%	Mometasone furoate
Florone Ointment, 0.05%	Diflorasone diacetate

BRAND NAME	GENERIC NAME
<b>CLASS 2 - Potent (cont.)</b>	
Halog Ointment/Cream, 0.1%	Halcinonide
Lidex Cream/Gel/Ointment, 0.05%	Fluocinonide
Psorcon Cream, 0.05%	Diflorasone diacetate
Topicort Cream/Ointment, 0.25%	Desoximetasone
Topicort Gel, 0.05%	Desoximetasone
<b>CLASS 3 - Upper Mid-Strength</b>	
Cutivate Ointment, 0.005%	Fluticasone propionate
Lidex-E Cream, 0.05%	Fluocinonide
Luxiq Foam, 0.12%	Betamethasone valerate
Topicort LP Cream, 0.05%	Desoximetasone
<b>CLASS 4 - Mid-Strength</b>	
Cordran Ointment, 0.05%	Flurandrenolide
Elocon Cream/Lotion, 0.1%	Mometasone furoate
Kenalog Cream/Spray, 0.1%	Triamcinolone acetonide
Synalar Ointment, 0.03%	Fluocinolone acetonide
Westcort Ointment, 0.2%	Hydrocortisone valerate
<b>CLASS 5 - Lower Mid-Strength</b>	
Capex Shampoo, 0.01%	Fluocinolone acetonide
Cordran Cream/Lotion/Tape, 0.05%	Flurandrenolide
Cutivate Cream/Lotion, 0.05%	Fluticasone propionate
DermAtop Cream, 0.1%	Prednicarbate

BRAND NAME	GENERIC NAME
<b>CLASS 5 - Lower Mid-Strength (cont.)</b>	
DesOwen Lotion, 0.05%	Desonide
Locoid Cream/Lotion/Ointment/Solution, 0.1%	Hydrocortisone
Pandel Cream, 0.1%	Hydrocortisone
Synalar Cream, 0.03/0.01%	Fluocinolone acetonide
Westcort Cream, 0.2%	Hydrocortisone valerate
<b>CLASS 6 - Mild</b>	
Aclovate Cream/Ointment, 0.05%	Alclometasone dipropionate
Derma-Smoothe/FS Oil, 0.01%	Fluocinolone acetonide
Desonate Gel, 0.05%	Desonide
Synalar Cream/Solution, 0.01%	Fluocinolone acetonide
Verdeso Foam, 0.05%	Desonide
<b>CLASS 7 - Least Potent</b>	
Cetacort Lotion, 0.5%/1%	Hydrocortisone
Cortaid Cream/Spray/Ointment, 1%	Hydrocortisone
Hytone Cream/Lotion, 1%/2.5%	Hydrocortisone
Micort-HC Cream, 2%/2.5%	Hydrocortisone
Nutracort Lotion, 1%/2.5%	Hydrocortisone
Synacort Cream, 1%/2.5%	Hydrocortisone

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## over-the-counter topicals

OTC topicals are available in pharmacies, drugstores, supermarkets or directly from the manufacturer without a doctor's prescription. They come in many different forms. Two active ingredients, salicylic acid and tar, are approved by the FDA as treatments for psoriasis.

### Salicylic acid

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

Salicylic acid is classified as a keratolytic, or peeling agent, and works by causing the outer layer of skin to shed. It is a common and effective treatment for a wide variety of skin problems. As a psoriasis treatment, it acts as a scale lifter, helping to soften and remove psoriasis scales.

#### How is it used?

It comes in many OTC forms, including creams, gels, lotions, ointments, shampoos and soap. Salicylic acid is available over the counter in concentrations up to 3%; concentrations more than 3% are only available with a doctor's prescription.

#### What are the side effects?

Strong salicylic acid preparations can cause irritation if left in contact with the skin too long. The body may absorb salicylic acid if used over large areas of the skin.

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

Salicylic acid removes scales from plaques, allowing other topical medication to better penetrate the affected skin. It is often combined with topical steroids, anthralin or tar to enhance effectiveness.

## Tar

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

Tar derived from both coal and wood (e.g., juniper, pine) is used for medicinal purposes. However, coal tar is the type used most commonly to treat psoriasis. Tar can help slow the rapid growth of skin cells and restore the skin's appearance. In addition, it can help reduce the inflammation, itching and scaling of psoriasis.

Tar products vary dramatically from brand to brand. When reading labels on tar products, keep in mind that, generally, the higher the concentration of tar, the more potent the product. Tar has a strong odor and can be messy. Higher concentrations can also mean greater odor and mess.

#### How is it used?

Tar preparations can be applied directly to psoriasis plaques, added to bath water or applied to the scalp. Follow the directions on the label or instructions from your doctor. Tar medications are generally left on for at least two hours, except for tar shampoos, which are left on five to 10 minutes.

Tar is sometimes occluded, both to increase effectiveness and to help prevent staining.

#### What are the side effects?

Tar can irritate, redden and dry the skin. Test a tar product on a small area of the skin first. If reddening occurs, try applying the tar on top of a moisturizer.

Tar can stain bleached, light blond and gray hair. Tar gels usually cause less staining and may be

a good alternative for people with light-colored hair. Tar can also stain clothing and bed linen.

To reduce staining, allow the medication to air dry before covering with clothing. For heavy applications, covering the area with pajamas or a warm-up suit may help hold the medication in place and prevent staining of bedding and furniture. Cotton socks can be helpful in covering arm or leg lesions. Use a breathable fabric such as cotton to decrease the risk of infection.

Tar makes skin more sensitive to natural sunlight. Be sure to use sunscreen and monitor your sun exposure to avoid sunburn. Wash tar off thoroughly if your skin is going to be exposed to the sun. Be aware that tar remains active on the skin for at least 24 hours, and you are at increased risk of burning during this period.

Studies show some of the chemicals in coal tar may cause cancer, but only in very high concentrations, such as in coal tar used in industrial paving. Anyone using tar regularly should have a dermatologist recommend a skin cancer checkup schedule. The FDA maintains that OTC products with coal tar concentrations between 0.5% and 5% are safe and effective for psoriasis and that no scientific evidence suggests that the coal tar in OTC products is carcinogenic.

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

Tar can be combined with UVB to treat severe psoriasis. This is known as the Goeckerman regimen. It is used in a hospital or day treatment program and requires three or four weeks of treatment. A limited number of clinics offer this treatment.

Tar can be combined with home phototherapy. However, given the possible risk of severe burning, a doctor must be consulted in devising a home-care regimen of tar and UVB.

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### **other otc topicals**

There are other products that don't contain salicylic acid or coal tar, but may be beneficial for treating psoriasis. Substances such as aloe vera, jojoba, zinc pyrithione, capsaicin and many more are frequently used to moisturize, soothe, remove scale or relieve itching.

The effectiveness of some of these products is not known. Be aware that "natural" agents can also cause side effects or allergic reactions. If irritation occurs, discontinue use.

### **Moisturizers**

Keeping the skin lubricated is an important part of psoriasis care because it helps reduce redness and itching and helps the skin heal. Apply moisturizers on a daily basis to keep the skin lubricated. Skin experts say the greasiest products (creams and ointments) work best for locking water into the skin. Cooking oils and even shortening can be effective and economical substitutes for commercial moisturizers.

### **Bath solutions**

Bath solutions can be beneficial in treating psoriasis. Adding oil, oilated oatmeal, Epsom salts or Dead Sea salts in a bath can help remove psoriasis scale and soothe itching. It is common to soak for 15 minutes and apply a moisturizer or oil to the skin immediately after getting out of the bath to lock in moisture.

## Scale lifters

“Scale lifters” (keratolytics) help loosen and remove scale. This enables other medications to reach the psoriasis lesions. Some scale-lifting products are for the scalp and some are designed for use on the body. Some products can be used for both purposes, but the scalp products are usually stronger and may be too harsh for regular skin. OTC products that contain an active ingredient of salicylic acid, lactic acid, urea or phenol can be used as scale lifters.

## Occlusion

Some topical medications or moisturizers can be occluded (or covered) to increase their effectiveness and the amount absorbed into the skin. With occlusion, the topical is applied to psoriasis lesions and the area is covered with plastic wrap, cellophane, waterproof dressing, cotton socks or a nylon suit. Always check with your doctor before occluding a steroid or other prescription medication.



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## the national psoriasis foundation

**Mission: To find a cure for psoriasis and psoriatic arthritis and to eliminate their devastating effects through research, advocacy and education.**

**The National Psoriasis Foundation is working for you every day.**

We educate members, health professionals and others about psoriasis and psoriatic arthritis, connect you to people and resources, speak out for your needs, and constantly advance the search for a cure.

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## learn

Through the Foundation’s Web site, publications and events, you will:

- Learn about treatments and new scientific advances
- Get advice from others about how to live with psoriasis
- Talk to health educators about your questions and concerns





NATIONAL PSORIASIS FOUNDATION®

act

It's time for psoriasis and psoriatic arthritis to be recognized as serious, life-changing conditions that affect millions of Americans. Join us as we:

- Raise awareness
- Seek funding for new research
- Advocate for a cure
- Improve access to health care
- Fight discrimination

connect

Sharing successes and challenges with others makes it easier to live with your disease.

Get support, information and encouragement through:

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- Events and conferences

cure

Finding a cure is our top priority. We are your voice in:

- Building a BioBank of genetic information about psoriasis
- Funding cutting-edge research initiatives
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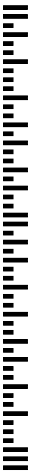


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