

How Is Coal Tar Used to Treat Psoriasis?

This topical treatment has been used for psoriasis for more than 100 years. Here's why it works—and how to try it.

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COAL TAR MIGHT sound like something that belongs on your driveway, which might very well be the case. But this same ingredient—at a different concentration, of course—is also potentially helpful for mild to moderate psoriasis when used in topical treatments. In fact, its use is even endorsed by official [psoriasis \(PsO\)](#) treatment guidelines from the [American Academy of Dermatology](#) (AAD). So how, exactly, does coal tar help your skin, and how do you use it? We tapped dermatologists to explain.

What Is Coal Tar?

Coal tar is a derivative of coal—yes, the same fossil fuel that can be burned for energy or used to seal a driveway—and it has been used to treat [psoriasis](#) for more than 100 years, says [Cindy Wassef, M.D.](#), an assistant professor at the Rutgers Center for Dermatology in New Brunswick, NJ. When it's used in skin products, coal tar extract is mixed with many other chemical compounds, so the precise makeup varies by brand, according to the AAD. At the levels used in skincare products, coal tar is a safe treatment option.

How Does Coal Tar Help Psoriasis?

While the exact mechanism is still not fully understood, coal tar is believed to treat psoriasis in a few different ways. It has some anti-inflammatory properties, and it targets some receptors that are involved in the body's dysfunctional immune response (the root cause of psoriasis), says [David Pearson, M.D.](#), an assistant professor at the University of Minnesota Medical School in Minneapolis and a dermatologist with M Health Fairview. But the main way it helps, he explains, is by slowing down the turnover of skin cells.

If you have plaque psoriasis, your skin cells grow much more quickly than they should, which causes them to pile up on top of one another and cause [plaques](#), says Dr. Wassef. Coal tar is believed to slow skin cell growth by suppressing DNA synthesis, she adds.

Several clinical trials have demonstrated that coal tar is an effective treatment for psoriasis, especially for mild to moderate psoriasis, according to the [AAD treatment guidelines](#). But how well it works varies by patient, says Dr. Wassef.

"It definitely works, and it has its place," says Dr. Wassef, who has patients use it for scalp psoriasis and sometimes for psoriasis on the [hands and feet](#). Coal tar has also been shown to be effective when combined with phototherapy, which entails exposure to a special light box, or even some exposure to natural sunlight, says Dr. Pearson. The combo of UV light and coal tar is part of what's known as [Goeckerman therapy](#), a [psoriasis treatment](#) approach created in the 1920s that has since been modified to be less intense, he says.

How to Use Coal Tar for Psoriasis

Given the abundance of other, more modern options, coal tar isn't usually a first-line treatment for psoriasis, says Dr. Wassef. But it's a good choice for people who can't use steroid creams. It's also often used [in combination with other psoriasis treatments](#), including steroids, phototherapy, oral drugs, or biologics, she says, noting that some people find it soothing.

Over-the-counter (OTC) products with coal tar contain up to 1% of coal tar, says Dr. Pearson. He adds that there are also prescription formulations that contain as much as 5% coal tar, but these aren't used very often because they increase the risk of irritation and don't necessarily work any better.

In fact, the AAD treatment guidelines cite a [randomized clinical trial on coal tar published in the Journal of Dermatological Treatment](#) which pitted 1% coal tar lotion against one that contained 5%. The patients who got the lower (1%) dose had the greater improvement in their psoriasis.

Choosing a Coal Tar Product

If you're considering introducing coal tar into your PsO management, most dermatologists recommend that patients start with a low-dose OTC product such as a [psoriasis shampoo](#), Dr. Pearson says. Per the [Mayo Clinic](#), other types of coal tar products include:

- Foams
- Gels
- Liquids
- Lotions
- Ointments

Some OTC products that contain coal tar include:

- Betatar Gel Shampoo
- Cutar Emulsion (for use as lotion or bath oil)
- Denorex Therapeutic Dandruff Shampoo + Conditioner
- Neutrogena T/Gel Therapeutic Shampoo

How to Apply Coal Tar

Each type of coal tar product will be applied differently, so it's best to follow the instructions on the label or to consult your dermatologist. In general, however, Dr. Pearson advises that people with mild scalp psoriasis who want to try a coal tar shampoo use it two to three times a week. Massage it into your scalp and leave it on for five to 10 minutes to make sure it penetrates before rinsing it off.

If you want to try coal tar to treat psoriasis on your hands or feet, Dr. Wassef recommends mixing some coal tar shampoo into a basin of water and soaking the affected extremity for five minutes a few times a week.

Consult your dermatologist before combining coal tar with UV light exposure. You might require a special phototherapy box, but even if you're opting for regular sun exposure, it's wise to get some personalized guidance about how to do it safely. While some UV exposure combats psoriasis, too much can instead trigger a flare, according to the [National Psoriasis Foundation](#).

Safety of Using Coal Tar for Psoriasis

Topical coal tar treatments, including shampoos, are generally believed to be safe, even when used for an extended period of time, according to the [AAD](#). While people who work with industrial coal tar, such as those involved with road paving, may have an elevated cancer risk and increased cancer risk has been shown in animal studies that used extremely large amounts of coal tar, the group says there is no good evidence that using coal tar in skin or hair products causes cancer in humans.

The AAD also says that women who are pregnant or [breastfeeding](#) might prefer to avoid coal tar simply because research in this area is limited.

Coal tar makes your skin more sensitive to UV light, which is why combining it with phototherapy or natural sun exposure may be effective, says Dr. Pearson. The catch is that this extra sensitivity can leave you more vulnerable to burns and increase your risk of [skin cancer](#). So, skip using coal tar if you're already sun sensitive (perhaps because of another medication you're taking).

If you're thinking of combining coal tar with UV exposure for therapeutic purposes, talk to your dermatologist. Keep in mind that everyday sun exposure can also add up: You may need to wear extra sunscreen to prevent burning, and your doctor may want you to get skin cancer screenings more regularly, according to the [National Psoriasis Foundation](#).

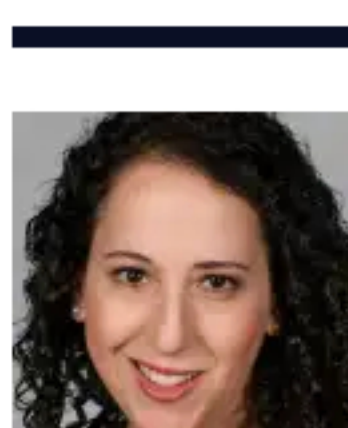
Side Effects of Coal Tar Products

Coal tar products are sometimes irritating or drying, says Dr. Wassef, but most people can tolerate the OTC formulas. The biggest downsides, she says, are the smell and the mess. Coal tar solutions often have a strong odor that many people dislike. Additionally, these products tend to stain, so some patients complain that their scalp, skin, or clothing gets discolored. Scalp discoloration may be especially noticeable if you're blonde.

Overall, coal tar is a treatment that helps many people with psoriasis, but you should keep in mind that it has some limitations. If your psoriasis is severe, it probably won't do enough on its own, and even for mild to moderate psoriasis you may need to use it in conjunction with other remedies. And if you have significant psoriasis-related inflammation elsewhere in your body (such as in your joints, if you have [psoriatic arthritis](#)), topical treatments such as coal tar won't necessarily be enough says Dr. Pearson.

The bottom line: Coal tar can be a useful part of your psoriasis treatment arsenal, particularly if you've got scalp psoriasis. Just don't expect it to completely clear up severe plaques—and prepare yourself for the smell and mess.

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