

**HANDLING  
THE HARD  
QUESTIONS:**

# **WHAT OUR PATIENTS ARE ASKING US ABOUT PUSTULAR PSORIASIS**





# THE PURPOSE OF THIS DOCUMENT

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Patients with pustular psoriasis often ask challenging questions about their disease and how to manage it effectively. To help with this, it is important that healthcare providers involved in the management of pustular psoriasis are able to properly and effectively communicate appropriate responses to

these questions. This pocket guide includes a brief summary of evidence-based answers to some of the most common—and challenging—questions healthcare providers are likely to face from their patients with pustular psoriasis. We hope you find this guide useful for your professional development.

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SECTION 1:

# GENERAL QUESTIONS





WHAT OUR PATIENTS  
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## WHAT IS PUSTULAR PSORIASIS?

When you hear the word “psoriasis,” you may think of people who have itchy, scaly patches of skin affecting specific areas of the body, such as the knees, elbows, or scalp. But pustular psoriasis is a much rarer and more unique form of the disease, accounting for only about 1% of all psoriasis cases we see.<sup>1</sup> In people with pustular psoriasis, the skin is red, tender to the touch, and covered with small, yellowish, pus-filled blisters called pustules that can appear on various parts of the body.

Within the pustular psoriasis family, there are several different subtypes that are classified based on the location and appearance of pustules.<sup>2,3</sup> When the pustules affect large areas of the arms, legs, or body, we call it generalized pustular psoriasis, or GPP. This is a particularly serious form of the disease. It can appear suddenly and cause potentially life-threatening complications that require emergency medical treatment.<sup>4,5</sup>

There are other types of pustular psoriasis that are more localized and confined to a

specific area of the body. If the pustules appear mainly on the palms of the hand or soles of the feet, we call this palmoplantar pustulosis, or PPP. Patients with PPP often have pustules at the base of the thumb or on the side of the heel.

While GPP and PPP are the most common forms of pustular psoriasis, there are rarer varieties as well. One of the more notable of these is acrodermatitis continua of Hallopeau, or ACH, a localized disease that mostly affects the fingers, toes, and nail beds. We sometimes see cases of ACH crop up after a skin injury or infection.<sup>4,5</sup>

Pustular psoriasis can affect children or adults of any age, although in practice, we usually see it either in infancy or among adults between the ages of 40-50 years. Statistics show that pustular psoriasis is more common in women than men; it is also seen more often in individuals of Asian descent compared to Caucasians.<sup>2,3</sup>



# WHAT IS PUSTULAR PSORIASIS?

Pustular Psoriasis Subtypes

| Subtype                              | Characteristics   |
|--------------------------------------|---|
| Generalized pustular psoriasis       | <ul style="list-style-type: none"><li>• Condition is widespread</li><li>• Pustules appear on large areas of the body, arms, and legs</li><li>• May be accompanied by fever, chills, and loss of appetite</li><li>• Potential life-threatening complications requiring emergency care, including heart failure, kidney failure, and severe infection</li></ul> |
| Palmoplantar Pustulosis              | <ul style="list-style-type: none"><li>• Condition affects specific areas of the body</li><li>• Pustules appear mainly on palms of the hands and soles of the feet</li><li>• Recurrent disease flares</li><li>• Often accompanied by severe pain and itching</li><li>• Can make completion of everyday activities difficult</li></ul>                          |
| Acrodermatitis continua of Hallopeau | <ul style="list-style-type: none"><li>• Condition affects specific areas of the body</li><li>• Pustules appear mainly on fingers, toes, and nail beds</li><li>• Progressive condition</li><li>• Often causes permanent nail damage</li><li>• Can make completion of everyday activities difficult</li></ul>   |

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# WHAT IS PUSTULAR PSORIASIS?

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## REFERENCES

---

1. Boehner A, Navarini AA, Eyerich K. Generalized pustular psoriasis - a model disease for specific targeted immunotherapy, systematic review. *Exp Dermatol*. 2018;27(10):1067-1077.
2. DermNet. Generalised pustular psoriasis. Available at [dermnetnz.org/topics/generalised-pustular-psoriasis](http://dermnetnz.org/topics/generalised-pustular-psoriasis). Accessed December 28, 2022.
3. Shah M, Al Aboud DM, Crane JS, et al. Pustular psoriasis. In: StatPearls. StatPearls Publishing; 2022. Available at [www.ncbi.nlm.nih.gov/books/NBK537002/](http://www.ncbi.nlm.nih.gov/books/NBK537002/). Accessed December 28, 2022.
4. National Psoriasis Foundation. Pustular Psoriasis. Available at [www.psoriasis.org/pustular/](http://www.psoriasis.org/pustular/). Accessed December 28, 2022.
5. Crowley JJ, Pariser DM, Yamauchi PS. A brief guide to pustular psoriasis for primary care providers. *Postgrad Med*. 2021;133(3):330-344.





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## DO I HAVE AN INFECTION? IS MY CONDITION CONTAGIOUS?

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No, pustular psoriasis is not an infection, and it's not contagious. Generalized pustular psoriasis is actually considered to be an autoimmune condition, which means that your body's immune system is attacking its own healthy skin tissue.<sup>1</sup> It is a common public misconception that the redness and raised, pus-filled bumps associated with pustular psoriasis must mean that the condition is infectious or contagious in nature, when in fact, pustular psoriasis cannot be transmitted to others. The pus inside the pustules is sterile, meaning that it is free from infection.<sup>2</sup>

Even some healthcare providers may be confused about the appearance of the bumps associated with pustular psoriasis since it is not often seen in clinical practice. In some instances, the condition may be initially mistaken for an infection or some kind of contagious skin condition.<sup>3</sup> That's why it's important that you are managed primarily within a dermatology practice—these specialists have the expertise to definitively diagnosis your condition, which is an important first step in determining an appropriate plan of medical care.

### REFERENCES

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1. Crowley JJ, Pariser DM, Yamauchi PS. A brief guide to pustular psoriasis for primary care providers. *Postgrad Med*. 2021;133(3):330-344.
2. Marrakchi S, Puig L. Pathophysiology of generalized pustular psoriasis. *Am J Clin Dermatol*. 2022;23(Suppl 1):13-19.
3. Shah M, Al Aboud DM, Crane JS, et al. Pustular psoriasis. In: StatPearls. StatPearls Publishing; 2022. Available at [www.ncbi.nlm.nih.gov/books/NBK537002/](http://www.ncbi.nlm.nih.gov/books/NBK537002/). Accessed December 28, 2022.





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## SHOULD I BE SEEING ANY OTHER SPECIALISTS TO MANAGE MY CONDITION?

Absolutely. It is very important to have a team of healthcare professionals working together to help manage your pustular psoriasis.<sup>1</sup> Primary care providers—the doctors and other healthcare professionals responsible for your general health—are important members at the foundation of this team. However, because your disease is rare, they are not likely to see many other patients with pustular psoriasis, and they may need help in assessing, diagnosing, and treating your condition.<sup>2</sup>

A number of specialists may be involved in your care. Dermatologists can be especially helpful in figuring out what is causing your condition and checking for any potential complications. If you experience any joint pain, muscle pain, or stiffness related to your condition, rheumatologists or other specialists may also play a role.<sup>3</sup> And even

though pustular psoriasis is not infectious, an infectious disease specialist may still be involved in your care—for example, in the assessment of underlying infections that could trigger a disease flare.<sup>1</sup>

Depending upon the specifics of your condition, your care team may even extend beyond these specialists. Some patients with pustular psoriasis, and particularly those with generalized pustular psoriasis (GPP), may require hospital stays during severe disease flares, which would put you under oversight from various hospital staff members.<sup>1</sup> Because of the importance of emotional health in managing your condition, it may also be helpful to follow-up with a mental health professional to address any psychological challenges you may be facing. Additionally, some patients concerned about the possibility of passing



# SHOULD I BE SEEING ANY OTHER SPECIALISTS TO MANAGE MY CONDITION?

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on GPP to their children may be interested in genetic counseling. If you are concerned about the financial burden of your disease, members of our healthcare team may be able to help you navigate insurance and assistance programs.<sup>4</sup>

By working together, your healthcare team can help manage your condition, minimize the number of future disease flares, and reduce the intensity of these flares when they do occur.

## REFERENCES

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1. Shah M, Al Aboud DM, Crane JS, et al. Pustular psoriasis. In: StatPearls. StatPearls Publishing; 2022. Available at [www.ncbi.nlm.nih.gov/books/NBK537002/](http://www.ncbi.nlm.nih.gov/books/NBK537002/). Accessed December 28, 2022.
2. Crowley JJ, Pariser DM, Yamauchi PS. A brief guide to pustular psoriasis for primary care providers. *Postgrad Med*. 2021;133(3):330-344.
3. Bachelez H. Pustular psoriasis: The dawn of a new era. *Acta Derm Venereol*. 2020;100(3):adv00034.
4. Strober B, Leman J, Mockenhaupt M, et al. Unmet educational needs and clinical practice gaps in the management of generalized pustular psoriasis: Global perspectives from the front line. *Dermatol Ther (Heidelb)*. 2022;12(2):381-393.



SECTION 2:

# **GENERALIZED PUSTULAR PSORIASIS (GPP) QUESTIONS**





WHAT OUR PATIENTS  
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PUSTULAR PSORIASIS

## HOW DID I GET GENERALIZED PUSTULAR PSORIASIS (GPP)? HOW DO YOU KNOW THAT I HAVE GPP AND NOT SOMETHING ELSE?

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While we don't know exactly what causes GPP, its development is linked to some genetic factors, medications, infections, and other risk factors. For example, we know there are some specific genes that can be mutated in patients with GPP. These genes are involved in modifying your immune system or regulating inflammation in your body. In the future, it may be possible for people to undergo genetic screening to determine their risk of developing GPP.<sup>1</sup>

For unknown reasons, starting or stopping certain drugs may also be associated with the development of GPP. The culprits include analgesics—including aspirin and non-steroidal anti-inflammatory drugs (or NSAIDs)—high blood pressure medications, antibiotics, topical treatments, steroids, and some injectable treatments for dermatologic

conditions (ie, TNF inhibitors). Flu and COVID-19 vaccines have also been implicated in the development of GPP.<sup>1</sup>

There are many other factors linked to the development of GPP. These include a variety of infections such as fungal nail and skin infections, strep throat, influenza, chickenpox, shingles, and mononucleosis. There are a variety of other potential causes that have been implicated, including emotional stress, menstruation, pregnancy, and even sunburn. People with low levels of calcium in the blood may be at risk, as could those who undergo a procedure called stem cell transplantation to treat certain medical conditions.<sup>1</sup> And while it's not exactly a cause, we know that there is a strong link between pustular psoriasis and the more standard plaque psoriasis.



## HOW DID I GET GENERALIZED PUSTULAR PSORIASIS (GPP)? HOW DO YOU KNOW THAT I HAVE GPP AND NOT SOMETHING ELSE?

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In fact, it's thought that about 3% of psoriasis patients will develop pustular psoriasis at some time in their lives. It is even possible for patients to have plaque psoriasis and GPP at the same time.<sup>2</sup>

If our team suspects that you have GPP, we'll likely perform a thorough physical examination, review your medical history, and order specific blood tests.<sup>3</sup> Your medical history could be an important clue, especially if you have a previous history of psoriasis or specific symptoms such as fever or a general feeling of tiredness. We'll look

at your medication history to see if any potential culprit drugs have recently been stopped or started. In addition, smoking cessation will typically be recommended for current smokers to improve the course of disease. Of course, we'll also look carefully at your skin to determine the type of lesions you have and how much of your skin is affected. In some case, a skin biopsy will be performed, which requires a small skin sample to be removed and examined. The biopsy results may help us distinguish between GPP and other possible causes of widespread pustular eruptions.<sup>4</sup>

### REFERENCES

1. DermNet. Generalised pustular psoriasis. Available at [dermnetnz.org/topics/generalised-pustular-psoriasis](https://dermnetnz.org/topics/generalised-pustular-psoriasis). Accessed December 28, 2022.
2. National Psoriasis Foundation. Pustular psoriasis. Available at [www.psoriasis.org/pustular/](https://www.psoriasis.org/pustular/). Accessed December 28, 2022.
3. Kalb RE. Pustular psoriasis: Pathogenesis, clinical manifestations, and diagnosis. UpToDate. Available at [www.uptodate.com/contents/pustular-psoriasis-pathogenesis-clinical-manifestations-and-diagnosis#H22208841](https://www.uptodate.com/contents/pustular-psoriasis-pathogenesis-clinical-manifestations-and-diagnosis#H22208841). Accessed December 28, 2022.
4. Mirza HA, Badri T, Kwan E. Generalized pustular psoriasis. In: StatPearls. StatPearls Publishing; 2022. Available at [www.ncbi.nlm.nih.gov/books/NBK493189/](https://www.ncbi.nlm.nih.gov/books/NBK493189/). Accessed December 28, 2022.



HOW DID I GET  
GENERALIZED  
PUSTULAR  
PSORIASIS (GPP)?  
HOW DO YOU  
KNOW THAT I HAVE  
GPP AND NOT  
SOMETHING ELSE?

### Generalized Pustular Psoriasis

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## WHAT ARE THE TREATMENT OPTIONS FOR GPP?

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In general, it's critical that GPP is treated promptly to improve your skin, manage symptoms, and prevent potentially serious complications.<sup>1</sup> Our healthcare team will work with you to assess your unique individual situation to determine an appropriate treatment plan based on the severity of your symptoms, your medical history, your goals of therapy, and your preferences.

There are a range of treatments that may be used for the treatment of GPP, including topical treatments, phototherapy, oral drugs, and biologics.<sup>2</sup> In some cases, topical emollients or mild topical steroids may be appropriate as part of your treatment plan.<sup>3</sup> In general, however, the first line of treatment for GPP will include oral agents or biological therapies such as retinoids, methotrexate, cyclosporine, or infliximab.<sup>4</sup>

The only therapy specifically approved for the treatment of GPP by the U.S. Food and Drug Administration is called spesolimab. Spesolimab is a targeted therapy that is indicated for the treatment of GPP flares in adults.<sup>5</sup> If you have a GPP flare, your healthcare provider may administer spesolimab as an intravenous infusion, meaning that the medication is given through your veins. The infusion should take about 90 minutes. If you still have flare symptoms a week later, the provider may administer a second 90-minute infusion.

Before you receive potential treatment with spesolimab, you should be sure your healthcare provider knows about all of your current medical conditions, particularly if you have tuberculosis or recently were in close contact with someone who has tuberculosis. You should also let our team



# WHAT ARE THE TREATMENT OPTIONS FOR GPP?

know if you recently received any vaccines or have any scheduled. If you do receive spesolimab, you should not receive any live vaccines, meaning vaccines that contain a weakened form of the germ that cause the

disease.<sup>6</sup> Live vaccines are used to protect against diseases such as measles, mumps, and rubella (MMR combined vaccine), rotavirus, smallpox, chickenpox, and yellow fever.<sup>7</sup>

## REFERENCES

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1. Kalb RE. Pustular psoriasis: management. Available at [www.uptodate.com/contents/pustular-psoriasis-management](http://www.uptodate.com/contents/pustular-psoriasis-management). Accessed December 28, 2022.

2. National Psoriasis Foundation. Pustular psoriasis. Available at [www.psoriasis.org/pustular/](http://www.psoriasis.org/pustular/). Accessed December 28, 2022.

3. Mirza HA, Badri T, Kwan E. Generalized pustular psoriasis. In: StatPearls. StatPearls Publishing; 2022. Available at [www.ncbi.nlm.nih.gov/books/NBK493189/](http://www.ncbi.nlm.nih.gov/books/NBK493189/). Accessed December 28, 2022.

4. Strober B, Leman J, Mockenhaupt M, et al. Unmet educational needs and clinical practice gaps in the management of generalized pustular psoriasis: Global perspectives from the front line. *Dermatol Ther (Heidelb)*. 2022;12(2):381-393.

5. Blair HA. Spesolimab: First Approval. *Drugs*. 2022;82(17):1681-1686.

6. Spesolimab-sbzo injection, for intravenous use [Prescribing Information]. Available at [www.accessdata.fda.gov/drugsatfda\\_docs/label/2022/761244s000lbl.pdf](http://www.accessdata.fda.gov/drugsatfda_docs/label/2022/761244s000lbl.pdf). Accessed December 28, 2022.

7. U.S. Department of Health and Human Services. Vaccine types. Available at [www.hhs.gov/immunization/basics/types/index.html](http://www.hhs.gov/immunization/basics/types/index.html). Accessed December 28, 2022.

8. Kromer C, Loewe E, Schaarschmidt ML, et al. Drug survival in the treatment of generalized pustular psoriasis: A retrospective multicenter study. *Dermatol Ther*. 2021;34(2):e14814.



# WHAT ARE THE TREATMENT OPTIONS FOR GPP?

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Treatment Options for Generalized Pustular Psoriasis (GPP)

| Treatment Setting  | Treatments/Route of Administration   |
|--|--|
| General Care   | <ul style="list-style-type: none"><li>• Determine need for hospitalization and supportive care</li><li>• Identify and discontinue the causative drug (in drug-induced cases)</li><li>• Manage extracutaneous complications</li></ul> |
| Tolerable Non-Disabling Disease<br><i>First-Line Therapy</i> | <ul style="list-style-type: none"><li>• Acitretin</li><li>• Methotrexate</li></ul>   |
| <i>Second-Line Therapy</i>                                   | <ul style="list-style-type: none"><li>• PUVA</li><li>• Other biologic agents (adalimumab, etanercept, certolizumab)</li></ul>  |
| Severe, Acute Disease  | <ul style="list-style-type: none"><li>• Cyclosporine</li><li>• Infliximab</li><li>• Other biologic agents (ixekizumab, brodalumab, secukinumab, ustekinumab, guselkumab)</li></ul>   |
| Other Potential Therapies                                    | <ul style="list-style-type: none"><li>• Systemic glucocorticoids</li><li>• Spesolimab</li></ul>  |
| Investigational Treatments                                   | <ul style="list-style-type: none"><li>• IL-23 inhibitors (risankizumab)</li></ul>  |





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## HOW CAN I AVOID ANOTHER GPP FLARE IN THE FUTURE?

Over the long term, our goal should be to delay or prevent future GPP flares.<sup>1</sup> There are a few steps you can take so we can achieve that goal together. First, it's important to follow your treatment plan, which may include general skin care recommendations, medications, and other interventions. When it comes to building a treatment plan, it is important that you work with our care team throughout the decision-making process. By devising a treatment plan that matches your preferences and goals, it's more likely that you will stick to the regimen, increasing the chances of treatment success.<sup>2</sup>

It's also important to know that there are various triggers that may cause a flare of your GPP. We can't tell you exactly what your triggers may be since they are different for each individual patient, although some known triggers include emotional stress, starting or stopping certain medications (ie, systemic glucocorticoids, TNF inhibitors), cigarette smoking, and infections, including COVID-19. Although some of these triggers

are unavoidable, minimizing your exposure and developing coping mechanisms when you can't avoid them are crucial steps. For example, stress can trigger a disease flare in some patients, so you may find yoga or meditation to be helpful.<sup>3</sup> A flare could also be triggered by pregnancy or other medical conditions such as a low level of calcium in the blood in people with a hormonal disorder.<sup>4</sup>

Finally, it's important to maintain a healthy lifestyle, including a balanced diet and regular exercise. There is some evidence that losing weight can help reduce the severity of psoriasis and improve your quality of life.<sup>5</sup> Smoking and drinking alcohol have also been linked to exacerbations of psoriasis, so we recommend that you stop smoking and limit your alcohol consumption as much as possible. Both of these steps could have overall health benefits above and beyond your skin condition. We know it can be hard to get rid of old habits, but we can connect you with the resources you need to start making these lifestyle changes.<sup>6</sup>



# HOW CAN I AVOID ANOTHER GPP FLARE IN THE FUTURE?

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## REFERENCES

---

1. Strober B, Leman J, Mockenhaupt M, et al. Unmet educational needs and clinical practice gaps in the management of generalized pustular psoriasis: Global perspectives from the front line. *Dermatol Ther (Heidelb)*. 2022;12(2):381-393.
2. Bewley A, van de Kerkhof P. Engaging psoriasis patients in adherence and outcomes to topical treatments: A summary from the Symposium 'Tailoring topical psoriasis treatments to patients' needs and expectations' of the 30(th) EADV Congress 2021. *J Eur Acad Dermatol Venereol*. 2023;37 Suppl 1:9-13.
3. American Academy of Dermatology (AAD). Are triggers causing your psoriasis flare-ups? Available at [www.aad.org/public/diseases/psoriasis/triggers/flare](http://www.aad.org/public/diseases/psoriasis/triggers/flare). Accessed December 28, 2022.
4. Fujita H, Gooderham M, Romiti R. Diagnosis of generalized pustular psoriasis. *Am J Clin Dermatol*. 2022;23(Suppl 1):31-38.
5. Ko SH, Chi CC, Yeh ML, Wang SH, Tsai YS, Hsu MY. Lifestyle changes for treating psoriasis. *Cochrane Database Syst Rev*. 2019;7(7):Cd011972.
6. Kearney N, Kirby B. Alcohol and psoriasis for the dermatologist: Know, screen, intervene. *Am J Clin Dermatol*. 2022;23(6):881-890.



SECTION 3:

# **PALMOPLANTAR PUSTULOSIS (PPP) QUESTIONS**





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## HOW DID I GET PALMOPLANTAR PUSTULOSIS (PPP)? HOW DO YOU KNOW THAT I HAVE PPP AND NOT SOMETHING ELSE?

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If you have PPP, you have the most common type of pustular psoriasis, occurring in approximately 1 in 10,000 people.<sup>1</sup> While we don't know exactly what causes PPP, we do know that the condition is more common in women than men and that it is strongly linked to one specific environmental risk factor: namely, many patients with PPP are past or current smokers.<sup>2</sup> Some researchers believe that nicotine interacts with cells in the sweat glands, triggering an inflammatory response in the body.<sup>3</sup> Mutations in certain genes that play a role in the immune system may also be associated with an increased risk of developing PPP. Another theory is that the condition may be caused by the use of certain medications, particularly tumor necrosis factor (TNF) inhibitors commonly used to treat autoimmune conditions.

Diagnosing PPP can be challenging due to the presence of concomitant conditions such as plaque psoriasis, which is seen in up to

25% of patients with PPP.<sup>4</sup> Nevertheless, it is crucial that you get an accurate diagnosis so that we can start immediate treatment. A misdiagnosis may lead to delays in care, which can result in a worsening of your symptoms and a greater risk of complications.

Toward that end, our team of providers will take a thorough medical history and perform a complete physical examination. We'll also order specific laboratory tests that may help us pinpoint the specifics of your condition. It is possible that we'll also look at a skin biopsy to see you have PPP or another condition that simply looks like PPP.<sup>5</sup>

PPP can be easily mistaken for other skin conditions that have similar symptoms. During the diagnostic process, it is important that our team consider other conditions that may have similar symptoms to PPP, such as dyshidrotic eczema, contact



# HOW DID I GET PALMOPLANTAR PUSTULOSIS (PPP)? HOW DO YOU KNOW THAT I HAVE PPP AND NOT SOMETHING ELSE?

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## Palmoplantar Pustulosis

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dermatitis, pityriasis rubra pilaris, acquired palmoplantar keratoderma, and tinea pedis/manuum. Based upon your physical presentation, you could also have a condition called acrodermatitis continua of Hallopeau,

a close cousin of PPP.<sup>5</sup> By accurately diagnosing PPP, our team will help ensure that you receive appropriate treatment and achieve the best possible outcomes.

## REFERENCES

1. Bachelez H. Pustular psoriasis: The dawn of a new era. *Acta Derm Venereol*. 2020;100(3):adv00034.
2. de Waal AC, van de Kerkhof PC. Pustulosis palmoplantaris is a disease distinct from psoriasis. *J Dermatolog Treat*. 2011;22(2):102-105.
3. Kobayashi K, Kamekura R, Kato J, et al. Cigarette smoke underlies the pathogenesis of palmoplantar pustulosis via an IL-17A-induced production of IL-36γ in tonsillar epithelial cells. *J Invest Dermatol*. 2021;141(6):1533-1541. e1534.
4. DermNet. Palmoplantar pustulosis. Available at [dermnetnz.org/topics/palmoplantar-pustulosis](http://dermnetnz.org/topics/palmoplantar-pustulosis). Accessed December 28, 2022.
5. Miceli A, Schmieder GJ. Palmoplantar psoriasis. In: StatPearls. StatPearls Publishing; 2022. Available at [www.ncbi.nlm.nih.gov/books/NBK448142/](http://www.ncbi.nlm.nih.gov/books/NBK448142/). Accessed December 28, 2022.





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## WHAT ARE THE TREATMENT OPTIONS FOR PPP?

Although different providers may offer varying guidance, there is one thing that the entire medical community agrees upon: if you currently smoke, it's critical that you stop smoking, or at least reduce your smoking habit.<sup>1</sup> Although we don't know for sure whether it will help, there are some small studies and case reports that suggest your PPP could improve after quitting smoking.<sup>2</sup> While there are no guarantees, it can't hurt to quit, and will only help in terms of other health benefits, such as reducing your risk of lung cancer, heart disease, and stroke.

Otherwise, treatment for PPP is primarily focused on controlling your symptoms or treating the disease itself with medical therapies. First, it is critical to keep your skin moisturized and avoid irritants that may exacerbate your condition. These basic steps will improve your overall skin health. Initial medical treatment for PPP may include topical therapy, including corticosteroids, medications given orally such as acitretin, or psoralen plus ultraviolet A, a type of

light therapy commonly referred to as PUVA. If your initial treatment is ineffective, further treatment may include combination therapy with acitretin and PUVA, or systemic treatment with medications such as cyclosporine or methotrexate.

Treatment of PPP is challenging in part because we can't predict how well you will respond to a given therapy.<sup>1</sup> Also, there are no therapies approved by the FDA specifically for the treatment of PPP, although recent research has suggested that targeted therapy may be helpful.<sup>3</sup> Spesolimab, a targeted therapy that has been approved by the FDA for the treatment of disease flares among patients with generalized pustular psoriasis, has been evaluated in a pilot study for the treatment of PPP. Early results of this study suggest that spesolimab may be effective in treating PPP, although further research is needed to fully understand the drug's potential benefits and risks.<sup>4</sup> Guselkumab is another investigative agent that appears to have promise in the treatment of PPP.<sup>5</sup>



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## REFERENCES

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1. Brunasso G, Massone C. Palmoplantar pustulosis: treatment. Available at [www.uptodate.com/contents/palmoplantar-pustulosis-treatment](http://www.uptodate.com/contents/palmoplantar-pustulosis-treatment). Accessed December 28, 2022.
2. Immediate response of palmoplantar pustulosis after cessation of smoking. *J Am Acad Dermatol*. 2015;72(5):AB237.
3. National Psoriasis Foundation. Pustular psoriasis. Available at [www.psoriasis.org/pustular/](http://www.psoriasis.org/pustular/). Accessed December 28, 2022.
4. Mrowietz U, Burden AD, Pinter A, et al. Spesolimab, an anti-interleukin-36 receptor antibody, in patients with palmoplantar pustulosis: Results of a Phase IIa, multicenter, double-blind, randomized, placebo-controlled pilot study. *Dermatol Ther (Heidelb)*. 2021;11(2):571-585.
5. Okubo Y, Morishima H, Zheng R, Terui T. Sustained efficacy and safety of guselkumab in patients with palmoplantar pustulosis through 1.5 years in a randomized phase 3 study. *J Dermatol*. 2021;48(12):1838-1853.



# WHAT ARE THE TREATMENT OPTIONS FOR PPP?

WHAT OUR PATIENTS  
ARE ASKING US ABOUT  
PUSTULAR PSORIASIS

Treatment Options for Palmoplantar Pustulosis (PPP)

| Treatment Setting          | Treatments/Route of Administration   |
|----------------------------|--|
| General Care               | <ul style="list-style-type: none"><li>• Skin moisturization</li><li>• Avoidance of irritants</li><li>• Smoking cessation</li></ul>   |
| First-Line Therapy         | <ul style="list-style-type: none"><li>• Topical corticosteroids</li><li>• Oral retinoids</li><li>• Photochemotherapy (PUVA)</li></ul>  |
| Second-Line Therapy        | <ul style="list-style-type: none"><li>• Combination therapy with oral retinoid and PUVA</li><li>• Immunosuppressants (cyclosporine, methotrexate)</li></ul>  |
| Difficult-to-Treat Disease | <ul style="list-style-type: none"><li>• Biologic agents (infliximab, etanercept, adalimumab, ustekinumab, guselkumab, secukinumab)</li></ul>   |
| Other Potential Therapies  | <ul style="list-style-type: none"><li>• Topical therapies (retinoids, tar, anthralin, calcipotriol)</li><li>• Oral tetracyclines</li><li>• Itraconazole</li><li>• Superficial radiation therapy</li></ul>  |
| Investigational Treatments | <ul style="list-style-type: none"><li>• IL-36 inhibitors (spesolimab and imsidolimab)</li><li>• RIST4721 (a CXC chemokine receptor type 2 antagonist)</li><li>• CSL324 (a recombinant anti-granulocyte colony-stimulating factor receptor monoclonal antibody)</li></ul> |





WHAT OUR PATIENTS  
ARE ASKING US ABOUT  
PUSTULAR PSORIASIS

## WHEN WILL MY HANDS AND FEET STOP HURTING SO MUCH?

While we understand that this is a critical issue for you, it's unfortunately an extremely difficult question to answer. Living with PPP is undoubtedly challenging, and your team of providers can appreciate the significant impact it is having on your daily life. Clearly, PPP makes walking difficult, not to mention other everyday activities.<sup>1</sup> It also potentially limits your employment choices since your symptoms make it challenging, if not impossible, to work in certain manual occupations or jobs that require a lot of walking.<sup>2</sup> Because many patients with PPP have additional medical issues such as nail disease, arthritis, and other inflammatory or autoimmune conditions, the impact of the condition on quality of life must be recognized.<sup>3</sup>

That said, it is difficult to predict what will happen after you start treatment. Some patients start to experience immediate improvement, while others will need multiple lines of therapy before getting any symptom relief. It may feel like a battle now, but it's really a journey—PPP is a chronic condition marked by peaks and valleys of exacerbations and partial remissions. PPP is difficult to treat even with symptom management, medical therapy, and smoking cessation, but our team will work with you to normalize your life as much as possible.<sup>4</sup> We can also help connect you to resources specifically designed to help people with pustular psoriasis, including PPP, live a healthy and happy life.<sup>5</sup>

### REFERENCES

1. Crowley JJ, Pariser DM, Yamauchi PS. A brief guide to pustular psoriasis for primary care providers. *Postgrad Med*. 2021;133(3):330-344.
2. DermNet. Palmoplantar pustulosis. Available at [dermnetnz.org/topics/palmoplantar-pustulosis](https://dermnetnz.org/topics/palmoplantar-pustulosis). Accessed December 28, 2022.
3. Bachelez H. Pustular psoriasis: The dawn of a new era. *Acta Derm Venereol*. 2020;100(3):adv00034.
4. Brunasso G, Massone C. Palmoplantar pustulosis: treatment. Available at <https://www.uptodate.com/contents/palmoplantar-pustulosis-treatment>. Accessed December 28, 2022.
5. National Psoriasis Foundation. Pustular psoriasis resource center. Available at [www.psoriasis.org/pustular-psoriasis-resource-center/](https://www.psoriasis.org/pustular-psoriasis-resource-center/). Accessed December 28, 2022.



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