CONDITION

Pityriasis rubra pilaris

Pityriasis rubra pilaris is a rare inflammatory skin condition that causes red-orange scaling, rough bumps, and thickened palms and soles.

WHAT IT IS
Rare inflammatory condition causing red-orange, thickened, scaly skin

BODY SYSTEM
Skin

MAIN SYMPTOMS
Scaly patches, rough bumps, thick palms and soles, itching

WHAT CAUSES IT
Usually unknown; immune changes, rarely inherited

HOW IT IS DIAGNOSED
Skin examination and biopsy

MAIN TREATMENT
Skin care and specialist-directed medicines

CAN IT BE CURED?
Sometimes - many cases eventually clear

IS IT AN EMERGENCY?
Sometimes - widespread redness with fever or weakness

LONG-TERM OUTLOOK
Many improve, but some forms persist for years

Overview

Pityriasis rubra pilaris, often shortened to PRP, is a rare condition that causes inflammation and abnormal thickening of the skin. It can affect adults or children.

PRP often begins with small, rough bumps around hair follicles. These may join into red-orange, scaly areas that spread across the body. Small patches of normal-looking skin may remain between affected areas. These are called "islands of sparing."

The palms and soles commonly become thick, yellow-orange, and painful. When inflammation covers most of the body, it is called erythroderma . Widespread skin inflammation can interfere with temperature control and fluid balance, so it sometimes needs urgent medical care.

PRP is not contagious. You cannot catch it through touch, shared clothing, sex, or close contact.

Several forms of PRP have been described. They differ by age at onset, appearance, and how long they tend to last. Some forms settle over several years, while others remain active much longer. Because PRP can resemble psoriasis and other skin conditions, diagnosis may take time.

Symptoms

PRP can begin gradually or spread over days to weeks. In adults, the first changes often appear on the head, neck, or upper body. In children, the pattern may be more limited.

Possible symptoms include:

Redness may look different across skin tones. On brown or Black skin, affected areas may appear deep red, purple, brown, or grey rather than bright orange-red. Changes in skin colour can remain after the inflammation improves.

Severe scaling or thickening can make walking, bending the hands, sleeping, or wearing clothes uncomfortable. Some people lose hair from areas of heavy scalp inflammation, although permanent hair loss is not typical.

If the skin around the eyelids becomes tight, it may pull an eyelid outward. This is called ectropion . It can lead to dry, irritated eyes because the eye is no longer fully protected.

- Small, firm, rough bumps centred on hair follicles
- Red, orange-red, or salmon-coloured scaly patches
- Areas of normal skin within a widespread rash
- Thick, waxy skin on the palms and soles
- Painful cracks in thickened skin
- Itching, burning, tightness, or tenderness
- Flaking of the scalp
- Thickened, ridged, or discoloured nails

Causes and risk factors

The cause of most PRP is unknown. It is thought to involve changes in immune signals that

control skin inflammation and the normal production of skin cells. It is not caused by poor hygiene, and it is not an allergic reaction to another person.

A small number of cases run in families. Some inherited cases involve changes in the CARD14 gene, which helps regulate inflammation in the skin. Having a family member with PRP does not mean that you will necessarily develop it.

PRP has occasionally appeared after an infection, medicine, or another immune stress. These links do not prove that the event caused the condition.

A PRP-like eruption may occur in people with HIV. For that reason, HIV testing may be discussed when the appearance or medical history makes it relevant. Reports have also described PRP alongside other health conditions, but there is not enough evidence to treat most of these as direct causes.

PRP can affect people of any sex or ethnic background. It is not caused by something you ate, and there is no established PRP-specific diet.

Diagnosis

There is no single blood test that confirms PRP. Diagnosis is based on the pattern of the rash, your medical history, and a skin biopsy.

During a biopsy, a clinician numbs a small area and removes a sample of skin. A specialist examines it under a microscope. PRP can show a characteristic pattern of thickened skin and inflammation, but biopsy findings may overlap with psoriasis or other conditions. Sometimes more than one biopsy is needed.

The assessment may also include:

PRP is often confused with psoriasis. Other possible look-alikes include eczema, medication reactions, fungal infection, and some less common inflammatory or cancer-related skin conditions. A dermatologist, a clinician specialising in skin, may need to observe how the rash changes over time before the diagnosis becomes clear.

- Examination of the scalp, nails, palms, and soles
- Review of medicines and when the rash began
- Blood tests before or during systemic treatment
- Tests for fungal infection when scaling has a similar appearance
- HIV testing when clinically appropriate

Treatment and management

Treatment aims to reduce inflammation, soften thick skin, relieve discomfort, and protect daily function. There is no single treatment that works for everyone. Evidence is limited because PRP is rare, and many treatments are based on specialist experience, case reports, and small patient series.

Regular moisturisers can reduce dryness, scaling, and cracking. Thick ointments are often more protective than thin lotions. Products containing ingredients such as urea or lactic acid may soften thick skin, although they can sting in open cracks.

Topical corticosteroids may reduce inflammation in selected areas. Other topical medicines that affect skin-cell growth or immune activity may also be considered. Large areas of PRP are often difficult to control with creams alone.

For extensive or disabling PRP, a dermatologist may discuss medicines that work throughout the body. Options can include:

Some of these treatments are used "off-label," meaning they are licensed for another condition but may be considered for PRP. Their risks differ. Blood tests and other monitoring may be needed. Oral retinoids and several immune-modifying medicines can cause serious harm during pregnancy, so medication-specific pregnancy prevention and planning are important.

Light treatment is sometimes considered, but ultraviolet exposure can worsen PRP in some people. It should therefore be planned and monitored by a dermatology team rather than attempted through tanning beds.

Helpful daily measures include keeping baths or showers lukewarm, using fragrance-free cleansers, applying moisturiser soon after washing, and choosing loose clothing. Dressings, protective gloves, or cushioned footwear may help painful cracks.

- Oral retinoids, which reduce abnormal skin thickening
- Methotrexate or other medicines that modify immune activity
- Biologic medicines targeting specific inflammatory signals
- Short-term use of other immune-suppressing treatment in selected cases

Complications

Thickened palms and soles can split and bleed. These cracks may become infected and can limit walking or hand movement.

When PRP affects most of the skin, the body may struggle to control heat, conserve fluid, and protect itself from infection. This widespread form can also cause chills, swelling, dehydration, and physical exhaustion. Serious complications are uncommon, but erythroderma requires close medical assessment.

Other possible complications include:

Medicines can also cause side effects. The type of monitoring needed depends on the treatment and may include blood counts, liver or kidney tests, cholesterol testing, or checks for infection.

- Skin infection around open cracks
- Sleep loss from itching, pain, or overheating
- Dry eyes or corneal injury from eyelid changes
- Reduced mobility and difficulty working
- Hair or nail changes
- Anxiety, low mood, or social isolation

Prevention

Most cases of PRP cannot be prevented because their cause is unknown. There is no proven food, supplement, soap, or lifestyle change that prevents the condition from starting.

Avoiding skin irritation may reduce discomfort but does not prevent PRP itself. This can include avoiding very hot water, harsh exfoliation, and products that sting inflamed skin.

Inherited PRP also cannot be prevented through ordinary lifestyle measures. If several relatives are affected or a genetic change has been identified, genetic counselling can explain inheritance and testing options without predicting exactly how severe the condition would be.

Living with it and what to expect

The course of PRP is different for each clinical form. Classic adult-onset PRP often improves gradually and may clear within several years. Some adult and childhood forms can persist for many years. Improvement is not always steady, and relapse can occur after the skin has cleared.

Even when treatment is effective, change may take weeks or months. Redness and scaling may improve before thickened palms, soles, or nails return to normal. Darker or lighter areas

can remain after active inflammation settles.

Follow-up usually focuses on the amount of skin involved, pain or itching, eye symptoms, mobility, treatment side effects, and the effect on daily life. Blood tests may be part of routine follow-up for systemic medicines.

Practical adjustments can make long periods of active PRP easier to manage. Keeping moisturiser at work or school, protecting cracked hands, planning rest during severe flares, and telling trusted people why the skin looks different may help. PRP is not infectious, so ordinary contact with family, friends, and colleagues is safe.

The visible nature of PRP can affect confidence and mood. Support from a counsellor, patient group, or dermatology service may be useful if the condition is affecting relationships, sleep, school, or work.

When to get medical help

Arrange a routine medical appointment if you develop a persistent, spreading, or unexplained scaly rash. Assessment is also appropriate if thickened palms or soles are cracking, or if a known PRP rash is no longer controlled by the current plan.

Contact your dermatology or primary care team promptly if:

Seek urgent same-day care for eye pain, light sensitivity, or a change in vision. These symptoms can mean that the eye surface is being damaged.

Seek emergency care if widespread redness or peeling occurs with fever, chills, marked weakness, dizziness, confusion, breathing difficulty, very little urine, or an inability to keep warm. These can be signs that extensive skin inflammation is affecting the rest of the body.

- The rash spreads rapidly
- Cracks become increasingly painful, warm, swollen, or produce pus
- An eyelid turns outward or your eyes become dry and irritated
- Treatment causes troublesome side effects
- Symptoms significantly limit sleep, walking, hand use, or eating

Common questions

Is pityriasis rubra pilaris contagious?

No. PRP does not spread between people through skin contact, shared objects, coughing, sex,

or swimming pools. It is an inflammatory condition, not a contagious infection.

Is PRP the same as psoriasis?

No, although they can look similar and may involve some of the same immune pathways. PRP more often has orange-red scaling, rough follicular bumps, islands of normal skin, and waxy thickening of the palms and soles. A biopsy can help distinguish them, but the findings sometimes overlap.

Will pityriasis rubra pilaris go away?

It can. Many people with classic adult-onset PRP improve over several years, but other forms can last much longer. Treatment may control symptoms while the condition remains active. No test can predict an individual course with certainty.

Can PRP make my hair or nails change?

Yes. Scalp inflammation may cause heavy flaking and temporary hair shedding. Nails can become thick, ridged, brittle, or discoloured. These changes may take months to improve after skin inflammation settles.

Does sunlight help PRP?

Not reliably. Some people report improvement, while others develop more redness or burning after ultraviolet exposure. Tanning beds are not a safe treatment. Any medical light therapy should be directed by a dermatology team.

Do I need a special diet for PRP?

There is no established diet that treats or cures PRP. A balanced diet may support general health, but eliminating foods without a separate medical reason can cause nutritional problems. Supplements should not replace prescribed treatment.

Sources

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