CONDITION

Physical allergy urticaria

Physical allergy urticaria causes itchy welts or swelling after triggers such as pressure, cold, heat, sunlight, or friction.

WHAT IT IS
Hives triggered by physical contact or environmental conditions

BODY SYSTEM
Skin and immune system

MAIN SYMPTOMS
Itchy welts, redness, burning, deeper swelling

WHAT CAUSES IT
Immune release of histamine after physical triggers

HOW IT IS DIAGNOSED
Medical history and controlled physical trigger tests

MAIN TREATMENT
Trigger management and non-drowsy antihistamines

CAN IT BE CURED?
Sometimes - some types fade over time

IS IT AN EMERGENCY?
Sometimes - breathing difficulty or throat swelling

LONG-TERM OUTLOOK
Often manageable, but duration is unpredictable

Overview

Physical allergy urticaria is a group of conditions in which a physical trigger causes hives. Hives, also called wheals or welts, are raised and often itchy areas of skin. Deeper swelling under the skin is called angioedema.

The current medical term is chronic inducible urticaria when episodes continue or recur for more than six weeks and have a clear trigger. "Physical allergy" is an older, informal name. It can be misleading because this is usually not an allergy to a substance such as food, pollen, or medicine.

Possible triggers include:

More than one type can occur in the same person. Some people also develop hives without a

clear trigger.

The reaction happens when mast cells in the skin release histamine and other chemicals. These chemicals make small blood vessels widen and leak fluid, producing redness, itching, and swelling.

Most episodes affect only the skin. However, certain forms-particularly cold-triggered urticaria involving a large area of the body-can occasionally cause a more serious whole-body reaction.

- Scratching, rubbing, or firm pressure
- Cold air, cold objects, or cold water
- Heat or a rise in body temperature
- Sunlight
- Vibration
- Water, regardless of its temperature

Symptoms

The main symptom is raised welts that appear after a particular physical trigger. They may be pale, pink, red, or similar in colour to the surrounding skin. Redness can be harder to see on brown or black skin.

Individual welts usually change shape or fade without leaving a mark. Their timing depends on the type of urticaria. Some appear within minutes, while delayed pressure urticaria may take several hours to develop.

Symptoms can include:

The pattern may suggest the trigger. Dermatographism produces raised lines after rubbing or scratching. Pressure urticaria can cause deeper, painful swelling beneath a bag strap, waistband, shoe, or after prolonged standing. Cold urticaria may affect skin exposed to cold wind, objects, food, or water.

Heat, exercise, sweating, or emotional stress can produce many small, itchy bumps in cholinergic urticaria. Sunlight can trigger solar urticaria on exposed skin. Aquagenic urticaria, which is rare, develops after skin contact with water at different temperatures.

More extensive reactions may cause dizziness, faintness, wheezing, trouble breathing, abdominal symptoms, or a rapid drop in blood pressure. These are not routine hive symptoms and need urgent attention.

- Itching, stinging, or burning
- Raised welts of different sizes
- Redness or warmth
- Swelling beneath the skin
- Soreness after sustained pressure

Causes and risk factors

Physical urticaria results from an unusually sensitive mast-cell response to a specific stimulus. Histamine released by these cells acts on nearby nerves and blood vessels.

Why this sensitivity develops is often unknown. It does not mean that your immune system is generally weak, and the condition is not contagious.

Different forms have different triggers. Examples include cold exposure, repeated rubbing, vibration, sunlight, heat, or sustained pressure. The force, temperature, or exposure time needed to cause symptoms differs between people and can change over time.

Physical urticaria may occur by itself or alongside chronic spontaneous urticaria, in which hives arise without an obvious external trigger. In a small number of cases, cold urticaria is associated with another health condition, but most cases do not have an identifiable underlying cause.

Having other allergic conditions does not by itself confirm physical urticaria. Food allergy is also unlikely when symptoms consistently match a physical trigger rather than eating a particular food.

Diagnosis

Diagnosis starts with the pattern of your symptoms. A clinician may ask what happened before the welts appeared, how quickly they developed, how long they lasted, and whether you had swelling or symptoms elsewhere in the body.

Photographs can help because the skin may look normal by the time of an appointment. A record of triggers, timing, and activities can also reveal a consistent pattern.

Controlled provocation testing may confirm the diagnosis. This means exposing a small area to the suspected trigger under supervised conditions. Depending on the type, testing might involve controlled cooling, warming, pressure, scratching, vibration, exercise, water, or specific

wavelengths of light.

These tests can sometimes measure your trigger threshold-the amount of cold, pressure, or other stimulus needed to cause a reaction. Testing should not be attempted with unsafe exposures such as cold-water immersion.

Blood tests are not usually able to confirm physical urticaria. They may be considered when symptoms or examination findings suggest another condition. Allergy skin-prick tests are generally not useful unless there is a separate concern about a substance allergy.

Some antihistamines like cetirizine or loratadine can affect provocation test results. Do not stop prescribed medicine unless the testing service gives you instructions.

Treatment and management

Management aims to reduce exposure to known triggers and prevent or control symptoms. Completely avoiding every trigger is not always practical, especially when pressure, temperature changes, or exercise are involved.

Trigger adjustments should match the type of urticaria. Examples include protecting skin from cold, avoiding sudden cold-water exposure, reducing sustained pressure from tight straps or clothing, and using sun protection when sunlight is the trigger. These steps are intended to reduce reactions, not restrict normal activity unnecessarily.

Non-drowsy, second-generation H1 antihistamines are the main medicine used. They block the effects of histamine and may be taken regularly when exposure is frequent or timed around predictable exposure under professional guidance.

A clinician may adjust antihistamine treatment when standard use does not control symptoms. Do not increase the amount on your own. Some antihistamines cause drowsiness or interact with alcohol and other medicines, so follow the product information and professional advice.

If symptoms remain troublesome, referral to a dermatologist or allergy specialist may be appropriate. Specialist treatment can include medicines that affect mast cells or immune signalling. Omalizumab, a biological medicine given by injection, is used for some forms of chronic urticaria, although its approval and use for particular inducible forms differ by country.

Short courses of corticosteroids like prednisone or hydrocortisone are sometimes used for severe flare-ups, but they are not a good long-term treatment because repeated or prolonged use can cause significant side effects.

People at risk of a severe whole-body reaction may be prescribed adrenaline, also called epinephrine, to carry. This is particularly relevant to some people with cold urticaria. If

prescribed, you should receive instructions on when and how to use it.

Complications

Repeated itching and swelling can disturb sleep, work, exercise, travel, and daily routines. Pressure urticaria may make walking, carrying bags, or using tools uncomfortable. Fear of a reaction can also lead people to avoid activities more than necessary.

Scratching may damage the skin, although typical hives themselves do not usually scar. Bruising, blistering, persistent marks, or a single welt lasting longer than 24 hours may point to another skin condition and should be assessed.

Angioedema can affect the eyelids, lips, hands, feet, or other areas. Swelling of the tongue or throat is more serious because it can interfere with breathing.

A severe whole-body reaction, called anaphylaxis, is uncommon but possible. Cold-water swimming is a recognised risk for people with cold urticaria because a large skin area cools at once. This can cause widespread hives, faintness, breathing problems, or loss of consciousness in the water.

Prevention

There is no established way to prevent physical urticaria from developing. It is usually not caused by something you did.

Once the trigger is known, reactions may be reduced by changing how and when exposure happens. The safest approach is specific to the trigger. For example, someone with cold urticaria may need to avoid sudden full-body cold exposure, while someone with pressure urticaria may benefit from reducing tight or prolonged pressure.

Do not deliberately test your limits through intense cold, heat, sunlight, pressure, or exercise. A previous mild skin reaction does not guarantee that every future reaction will remain mild.

Preventive antihistamine use may help some people when exposure is expected, but this should be discussed with a healthcare professional rather than planned through trial and error.

Living with it and what to expect

Physical urticaria can last for months or years. Some types settle over time, while others remain active for a prolonged period. It is not possible to predict an exact course for one

person.

Your trigger threshold may change. An exposure that was previously tolerated may cause symptoms at another time, especially when several factors occur together. For example, cold, wind, and a large exposed skin area may produce a stronger response than mild cooling alone.

Most people can continue work, school, exercise, and travel with an appropriate management plan. The plan may include knowing your trigger, using preventive medicine as advised, and preparing for higher-risk situations.

Regular follow-up is useful when symptoms are not controlled, the trigger pattern changes, medicines cause side effects, or hives begin occurring without the usual trigger. Follow-up is also a chance to review whether treatment is still needed.

When to get medical help

Arrange a routine medical appointment if hives repeatedly follow cold, pressure, friction, heat, sunlight, exercise, water, or vibration. Assessment is also appropriate if episodes last longer than six weeks, interfere with daily life, or do not respond to your usual management.

Seek prompt medical advice if:

Call emergency services immediately for trouble breathing, throat or tongue swelling, fainting, severe wheezing, confusion, or rapidly worsening whole-body symptoms. Use prescribed adrenaline immediately if your emergency plan tells you to, then call emergency services.

A reaction while swimming is also an emergency if there is weakness, dizziness, breathing difficulty, or widespread hives. The person should be removed from the water safely without putting another person at risk.

- Swelling affects your lips, face, or eyelids
- Reactions are becoming more extensive or severe
- Welts last in one place for more than 24 hours
- Lesions bruise, blister, or leave persistent marks
- You develop fever, joint pain, or feel generally unwell
- You have had dizziness or breathing symptoms during a reaction

Common questions

Is physical urticaria a true allergy?

Usually not in the usual sense of an allergy to food, medicine, or another substance. The immune system's mast cells release histamine after a physical stimulus. This is why antihistamines can help even though no allergen has been identified.

Is physical urticaria contagious?

No. You cannot catch it from someone or pass it through skin contact, shared towels, water, or food.

Why do I get hives when I scratch my skin?

Raised lines after light scratching or rubbing may be dermatographism, a common form of inducible urticaria. A clinician can check this pattern and rule out other causes of persistent itching.

Can I exercise if heat or sweating triggers hives?

Many people can remain active after identifying safer conditions and an appropriate treatment plan. Exercise-related symptoms need assessment because breathing difficulty, faintness, or symptoms linked to eating before exercise may have other causes and can be more serious.

Can cold urticaria go away?

It can improve or resolve, but the timing is unpredictable. Until testing or medical review shows otherwise, continue taking precautions around cold exposure, especially swimming and sudden full-body cooling.

Are physical urticaria and chronic spontaneous urticaria the same?

No. Physical or inducible urticaria has a repeatable trigger. Chronic spontaneous urticaria produces recurring hives or swelling without a specific external trigger. Some people have both.

Sources

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