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Urticaria

Urticaria refers to a group of disorders in which red patches and weals occur in the skin. The release of chemicals from mast cells in the skin causes small blood vessels to leak and results in tissue swelling. The weals can be a few millimetres or several centimetres in diameter, coloured white or red, often surrounded by a red flare, and frequently itchy. Each weal may last a few minutes or several hours, and may change shape. Weals may be round, or form rings, a map-like pattern or giant patches.

The surface weals may be accompanied by deeper swelling of eyelids, lips, hands and elsewhere. The swelling is called *angioedema*. [Angioedema](#) may occur with or without urticarial weals (10%).

Urticaria



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Angioedema
Image provided by Dr Shahbaz A Janjua

Angioedema

Generalised urticaria

Generalized urticaria (hives) is often classified according to how long it has been present.

- Acute urticaria is of recent onset (hours, days or a few weeks).
- Chronic urticaria has persisted for several months or years.

Urticaria may not be present all the time. Some find it more noticeable at certain times of day, or when they are warm or emotionally upset.

Acute urticaria is sometimes due to allergy. Allergy depends on previous exposure to the material, and the development of an immune reaction to it. An immunoglobulin called IgE is involved, which attaches itself to a receptor on the mast cell and causes it to release its chemical mediators.

The cause of an allergy may be:

- Medicine: most often an antibiotic, but many other drugs have been reported.
- Food: tiny amounts of fish, eggs, nuts and kiwifruit (many others have been reported less often).
- Bee or wasp stings.
- While most allergies involve ingestion, injection or inhalation of the allergen, sometimes allergic urticaria can result from skin or mucosal contact with an allergen e.g. [rubber latex](#).

Most allergies are mild, but very allergic individuals may develop serious *anaphylactic shock* within a few minutes of exposure. The most frequent causes are antibiotic injections, bee stings or ingestion of peanuts. [Anaphylaxis](#) results in urticaria, a tight chest, wheezing, faintness and collapse. Medical attention must be sought urgently. A subcutaneous adrenaline (epinephrine) injection will usually be given. Those prone to anaphylaxis should carry an emergency supply (an EpiPen).

Most cases of urticaria are NOT due to allergy. Histamine and other vasoactive chemicals can be released into the skin for many reasons. In these cases urticaria can occur the first time that a person is exposed to the material.

Non-allergic causes of acute urticaria include:

- Infection, including sinusitis, helicobacter (a cause of stomach ulcers), dental abscess, viral hepatitis, [infectious mononucleosis](#) and [candida](#) (thrush).
- Serum sickness, due to blood transfusion, viral infection or medicines (e.g. Ceclor™); urticaria is accompanied by fever, swollen lymph glands, painful joints and nausea.
- Non-allergic reactions to medicines (especially morphine, codeine, quinine, aspirin and other non-steroidal anti-inflammatory drugs).
- Non-allergic recurrent angioedema, also provoked by medicines (particularly ACE inhibitors such as captopril, quinapril, enalapril and others).
- Non-allergic food reactions, from salicylates in fruit, azo dye food colouring agents, benzoate preservatives and other [food additives](#), or from histamine due to bacterial decomposition e.g. [scombroid fish poisoning](#).

Chronic urticaria is often due to autoimmune disease (allergy to one's self), and may be associated with other autoimmune conditions such as thyroid disease. Circulating 'anti-idiotypic' antibodies cause excessive release of chemicals from mast cells.

Recurrent angioedema without urticaria may be due to C1 esterase deficiency (the protein C1 INH is missing or abnormal); there is often a family history of similar problems.

Physical Urticaria

Physical urticaria refers to urticaria caused by external physical influences. The weals take about 5 minutes to develop, and last 15 to 30 minutes. Some people suffer from a mixture of different types of physical urticaria and generalized urticaria. The cause is unknown.

- [Dermographism](#) means 'skin writing'. Stroking the skin causes it to weal in the line of the stroke. This is very itchy, but scratching causes more wealing. Dermographism usually starts quite suddenly. Weals come up where clothes or furniture touch, especially when the affected person is hot or upset. A warm shower followed by rubbing with a towel can result in itchy weals all over.
- [Cholinergic urticaria](#) results from sweating. In severe cases, hundreds of tiny red itchy spots develop after running, when warm, or when concentrating.
- [Cold urticaria](#) affects skin warming up after a reduction in temperature, especially in winter. Weals can be widespread and may cause fainting attacks. Affected individuals should not expose large areas of the skin to the cold or wind. They should never swim alone.
- [Contact urticaria](#) may be allergic or non-allergic in origin. Allergy to chemicals in white flour, cosmetics, and textiles, or to proteins in latex rubber, saliva, meat, fish and vegetables may cause contact urticaria. Non-allergic examples include the stinging reaction of certain plants (e.g. nettles), animals (hairy caterpillar) and medicines.

- Localised heat urticaria, aquagenic urticaria (water contact), [solar urticaria](#) (sunlight), vibratory and delayed pressure urticaria are less common.

Treatment of urticaria

Treatment depends on which type or types of urticaria you have.

[Oral antihistamines](#) control wealing and itching for the majority of patients with urticaria. They do not affect the underlying cause of the rash. Antihistamines may need to be taken intermittently or continuously until the underlying tendency to urticaria disappears.

Non-sedating antihistamines (loratidine, fexofenadine, terfenadine, cetirazine, and astemizole) are less likely to cause drowsiness than the less expensive conventional antihistamines. They may be unsuitable in pregnancy. Terfenadine and astemizole may increase the risk of abnormal heart rhythms. They should be avoided if you have heart disease or you are also taking [erythromycin](#), [ketoconazole](#) and some other medications. Fexofenadine, loratidine, desloratidine and cetirazine are safe.

If the first antihistamine you try is not effective, consult your doctor. You may need to increase the dose, or use a different drug. Sometimes a combination of antihistamines works better than a single type alone. Adding H2 blockers such as cimetidine & ranitidine can also reduce urticaria but these medications are more often prescribed to reduce stomach acidity.

Urticaria that fails to clear with antihistamines may be helped by:

- [Oral steroids](#) (prednisone) are useful for severe acute urticaria but unsuitable long term because of serious adverse effects.
- [Ultraviolet radiation](#) treatment ([narrowband UVB](#) or [PUVA](#)).
- Antibiotics and [antifungal agents](#), used to clear an assumed underlying infection or for non-specific anti-inflammatory action.
- Immunosuppressive medications ([ciclosporin](#), plasmapheresis).
- Antifibrinolytic agents (tranexamic acid, androgenetic steroids such as danazol).
- Tricyclic medications such as [amitriptyline](#), nortriptyline and doxepin (which have antihistaminic and neuropathic properties).

General measures

- Do not take the medications your doctor has told you to avoid.
- Avoid aspirin and codeine. It is usually safe to take paracetamol and the newer Cox-II inhibitor anti-inflammatories.
- Reduce your intake of acidic fruits.
- Some urticaria is aggravated by salicylates, amines, tartrazine ([numbered 102](#) in the list of ingredients on the container), benzoates ([210-220](#)) and other food chemicals. Whether or not these need to be avoided can be determined by appropriate food challenge tests.
- Avoid alcohol (it causes the surface blood vessels to dilate).
- Try not to overheat.
- Cool the affected area with a fan, cold flannel, ice pack or soothing moisturising lotion.

Related information

On DermNet NZ:

- [Angioedema](#)
- [Contact urticaria](#)
- [Cholinergic urticaria](#)
- [Cold urticaria](#)
- [Dermographism](#)

- [Solar urticaria](#)

Other websites:

- [AllAllergy.Net](#) Allergy and intolerance information resource
- [Grossbart.com](#) Research-based approaches from a Harvard Med School Psychologist
- [emedicine dermatology](#), the on-line textbook has several chapters on urticaria

Books:

See the [DermNet NZ bookstore](#)

DermNet does not provide an on-line consultation service.

If you have any concerns with your skin or its treatment, see a [dermatologist](#) for advice.

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