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Solar urticaria

Solar urticaria is a rare form of physical [urticaria](#) (hives) in which the skin swells within minutes of exposure to natural sunlight or an artificial light source emitting ultraviolet radiation. The reaction may subside within a few minutes or it may persist for up to an hour or more where it can become very disabling.

What causes solar urticaria?

The cause of solar urticaria is not clearly defined but may be due to an antigen-antibody reaction. It seems that a chemical created in the body (photoallergen) reacts with UV radiation to cause an allergic reaction that manifests as urticaria.

Who gets solar urticaria?

Solar urticaria is rare. It can occur in both males and females at any time of life. The mean age of onset is 35 years, but it has occurred in infant children through to those aged 70 years.

What are the clinical features of solar urticaria?

A stinging, itchy rash develops within minutes after a short period (less than 30 minutes) of sun exposure. The rash may look like weals and be red and swollen. Often the rash affects areas of exposed skin that are normally shielded from sunlight by clothing, e.g. back. The face and upper sides of the hands that are constantly exposed to the sun may be unaffected or only slightly affected. This may be put due acclimatisation or "hardening" of these chronically exposed areas.

If large areas of the body are affected, the loss of fluid into the skin may result in light-headedness, headache, nausea and vomiting.

Areas covered with thin clothing may also be affected, depending on the ultraviolet rays being emitted and the sheerness of the fabric.

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How to diagnose solar urticaria?

The clinical features of solar urticaria may appear similar to other photodermatoses so it is important to take an

accurate history from patients. Defining features of solar urticaria include:

- Rash appearing within a few minutes of exposure. In rare cases, some solar urticaria patients may show a delayed reaction to sunlight.
- Upon cessation of sun exposure the rash quickly disappears (within minutes to a few hours, rarely lasting more than 24 hours).

[Phototesting](#) is used to confirm diagnosis.

What is the treatment for solar urticaria?

As soon as a patient is shielded from sun exposure the rash begins to disappear spontaneously within several minutes to a few hours. The rash clears away completely without leaving a mark.

Patients with solar urticaria must take measures to avoid or minimise sun exposure by following [sun protection](#) strategies. Oral [antihistamines](#) may be helpful in reducing weals and minimising pruritus but they rarely prevent the reaction altogether.

For patients that react severely and are unable to manage their condition through preventative measures, [phototherapy](#) and/or [photochemotherapy](#) may be considered. These treatments desensitise the patient to UV radiation and are often performed prior to the summer months. Unfortunately desensitisation is often short-lived and repeat therapy is needed.

Related information

References:

- Book: Textbook of Dermatology. Ed Rook A, Wilkinson DS, Ebling FJB, Champion RH, Burton JL. Fourth edition. Blackwell Scientific Publications.

On DermNet NZ:

- [Photosensitivity](#)
- [Sun protection](#)
- [Sun protective clothing](#)
- [Sunscreens](#)
- [Urticaria](#)

Other websites:

- [Urticaria, Solar](#) – emedicine dermatology, the online textbook

Books about skin diseases:

See the [DermNet NZ bookstore](#)

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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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