



Authoritative facts about the skin from the [New Zealand Dermatological Society Incorporated](#).

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Photosensitivity

Some people are sensitive to sunlight; this is known as *photosensitivity*. Photosensitivity may produce a rash, which is known by the general term, *photodermatosis*.

Patients may not associate their skin complaint with exposure to light. It is not always the bright summer sun which is responsible; some people also react to sunlight in winter, and very sensitive subjects may even be affected by fluorescent lamps indoors.

Photosensitivity



Ultraviolet Radiation

Sunlight contains both ordinary visible light and shorter invisible light rays called ultraviolet radiation (UVR). UVR can produce tanning but also causes burning and [skin cancer](#).

UVR is divided into UVB (short wavelength rays that cause [sunburn](#) and tan) and UVA (longer wavelength tanning rays). Patients can be sensitive to one kind of sunlight (i.e. only to UVB, UVA or visible light) or to a wider range of radiation. The most common photosensitivity is to UVA.

Cause of photosensitivity and photodermatoses

Photosensitivity occurs for a variety of reasons. These can be classified into the following groups:

Photodermatoses	Causes
Idiopathic photodermatoses	<p>Cause is unknown but exposure to UV light produces a clearly defined disease entity. These include:</p> <ul style="list-style-type: none"> • Polymorphic light eruption • Actinic prurigo • Solar urticaria • Chronic actinic dermatitis • Hydroa vacciniforme • Pseudoporphyria
Exogenous	Photosensitivity is caused by the introduction of an external agent that is applied topically or

photodermatoses	administered internally. These agents are called photosensitisers and include: <ul style="list-style-type: none"> • Medicines e.g. amiodarone, tetracyclines • Contact with plant, vegetable, fruit, chemicals, fragrances, dyes, disinfectants
Metabolic photodermatoses	Photosensitivity is caused by a metabolic defect or imbalance of a body chemical. The most common disorders of this type are porphyrias , in which there are increased porphyrins in the skin. <ul style="list-style-type: none"> • Porphyria cutanea tarda • Erythropoietic protoporphyria • Variegate porphyria • Erythropoietic porphyria (Gunther's disease)
Photoexacerbated dermatoses	Photosensitivity is caused by a pre-existing disease or skin. These include conditions such as: <ul style="list-style-type: none"> • Lupus erythematosus (especially subacute and systemic forms) • Dermatomyositis • Darier's disease • Rosacea • Pemphigus • Atopic dermatitis • Psoriasis
Genetic photodermatoses	Photosensitivity is caused by a pre-existing genetic disorder, e.g.: <ul style="list-style-type: none"> • xeroderma pigmentosum • Bloom syndrome • Rothmund Thompson syndrome

Although most people with the common skin conditions [psoriasis](#) and [atopic dermatitis](#) (eczema) find sun exposure or ultraviolet light treatment helpful, about 10% report they cause flare-ups.

How do you confirm the skin is photosensitive?

Photosensitivity can be confirmed by [phototests](#) – artificial light from various different sources is shone on small areas of the skin to see whether the rash can be reproduced, or if sunburn occurs more easily than expected.

Photosensitivity induced by contact with certain items can be tested by [photopatch tests](#). Adhesive patches containing known photosensitizing materials are applied to the upper back, removed after two days, and light is shone on the area. The reaction is observed two days later.

Sun protection

UVR is present in significant quantities in New Zealand between September and April. There is enough UVR to cause a rash on photosensitive skin between 10 a.m. and 5 p.m. even on a cloudy day. Bright surfaces, like snow, concrete and sand, reflect UVR and can nearly double the amount that gets to the skin.

- Confine summer excursions out of doors to early in the morning or late in the evening.
- [Sun protection](#) is needed whatever the weather. It is needed even if you sit in the shade.
- Protect yourself in the car and house too; UVA can pass through window glass.

There are two basic ways of protecting your skin from the damaging effects of UVR:

- Block out all light with an opaque material such as [sun protective clothing](#). Dark coloured and densely woven fabric is the most effective. Wear shirts with high collar and long sleeves, trousers or a long skirt,

socks and shoes, a wide-brimmed hat and if possible gloves. Some clothes are now labelled with UPF, the sun protection factor for fabrics. Choose those with a UPF of 40+.

- Use topical [sunscreen](#) agents
 - Physical blocker/reflectant sunscreens. These are very effective sunscreens as they block out UVA and UVB by reflecting the ultraviolet radiation. Their only drawback is they can be messy to use and cosmetically unappealing.
 - Chemical sunscreens. It is vital that photosensitive individuals select a sunscreen with a very high Sun Protection Factor (SPF 30+), which is a water resistant and broad spectrum product that complies with current Australian and New Zealand [Standard](#) for Sunscreens (AS/NZS2604:1998). Ask your dermatologist which products are most suitable for you.

Unfortunately, photosensitive patients often find it difficult to find a [sunscreen](#) they can tolerate. [Contact allergy](#) or [contact photodermatitis](#) to the sunscreening chemicals themselves can occur, although this is uncommon, particularly benzophenone or butyl methoxy dibenzoylmethane, and in the past, PABA. Patch and photopatch tests will identify which ones are safe for you.

Other measures

[Oral antioxidants](#) may provide some extra protection, particularly [Polypodium leucotomas](#).

UVR-absorbing film can be applied to windows at home or in the car (e.g. [Bonwyke DermaGard](#)). Masks can be made to cover the face for trips outside too (clear ones are available), but not surprisingly, only the most disabled patients are prepared to wear these.

Unguarded fluorescent daylight lamps can occasionally provoke a rash, because they may produce some ultraviolet radiation (UVA). Ordinary tungsten light bulbs are usually alright. It is perfectly safe to watch television.

For the most severely light sensitive patients, normal activities may be severely curtailed. Some find night work and sleep during the day, others put up with the rash. Nearly always, medications in the form of ointments or tablets, can help to a variable extent.

Related information

On DermNet NZ:

- [Porphyria cutanea tarda](#)
- [Erythropoietic protoporphyria](#)
- [Lupus erythematosus](#)
- [Polymorphic light eruption](#)
- [Photocontact dermatitis](#)
- [Drug induced photosensitivity](#)
- [Solar urticaria](#)
- [Actinic prurigo](#)
- [Hydroa vacciniforme](#)
- [Chronic actinic dermatitis](#)
- [Patch tests](#)
- [Phototesting](#)

Other websites:

- [Drug induced photosensitivity](#) – medicine dermatology, the online textbook

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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