



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

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Phototesting

The following tests are necessary for many patients with skin conditions caused or aggravated by sun exposure ([photosensitivity](#)), in order to make a specific diagnosis and to determine the best treatment.

- [Patch Tests](#)
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Photopatch Tests

Photopatch tests are additional [patch tests](#) applied when the dermatologist suspects contact allergy to a substance, occurring only in the presence of sunlight.

After the additional patches are removed, they are exposed to a small dose of long wave ultraviolet light (UVA). The dose of UVA, 5J/cm², is much smaller than that necessary to cause sunburn.

Phototests

Phototests are specialized tests which confirm the presence of an abnormal sunburn reaction. This may occur when a [photosensitivity](#) is due to medications or chronic photosensitivity dermatitis. It is also helpful in the diagnosis of solar urticaria.

The most sophisticated are done with a monochromator, but none exists in New Zealand.

In Hamilton, a tungsten-halogen solar simulator and fluorescent bulbs are used to detect abnormal sensitivity to short wave ultraviolet radiation (UVB) and to long wave ultraviolet radiation (UVA). One centimeter areas of skin (usually the lower back or buttocks) are exposed to different doses of UVB and UVA. These areas are examined 24 hours later, and minimal erythema doses (MED) recorded. These are the lowest doses of UVB and of UVA which produce a clearly identifiable pink mark.

Photoprovocation Tests

Photoprovocation tests are performed in many patients with skin disorders provoked by sun exposure, when the sunburn reaction is normal. The commonest of these is [polymorphic light eruption](#), but actinic prurigo, juvenile spring eruption and hydroa vacciniforme can also be diagnosed by this test. A negative test does not rule these conditions out.

Daily for three days, a 10 x 5 cm area on one forearm is exposed to UVB (one and a half MEDs) from a fluorescent lamp source. A similar area on the other arm is exposed to UVA (30 J/cm²). These doses are equivalent to those received in about an hour of midday summer sun.

It may be necessary first to measure the MED to UVB in a small area near the test site. The exposures will usually be to sites which have been affected by the photosensitive rash.

If the rash develops, a [biopsy](#) may be performed.

Laboratory Investigations

Many patients will have blood tests: blood count and antinuclear antibody are usually necessary.

Blood, urine and faecal biochemical tests for [porphyria](#) may be required.

Skin biopsies may be requested if the diagnosis of the skin rash is unclear, or if [lupus erythematosus](#) is suspected.

Related information

On DermNet NZ:

- [Photosensitivity](#)
- [Polymorphic light eruption](#)
- [Patch tests](#)

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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