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[Home](#) | [Skin reactions to external agents](#)

Pyoderma gangrenosum

Pyoderma gangrenosum is an uncommon cause of skin ulceration. It may affect any part of the skin, but the lower legs are the most common site. It is thought to be an autoimmune disorder.

Pyoderma gangrenosum



Superficial bullous pyoderma gangrenosum



Typical ulcerated pyoderma gangrenosum

Pyoderma gangrenosum often affects a person with an underlying internal disease such as:

- Inflammatory bowel diseases (ulcerative colitis and Crohn disease)
- [Rheumatoid arthritis](#)
- Myeloid blood dyscrasias
- Chronic active hepatitis.
- [Wegener granulomatosis](#)
- [PAPA syndrome](#)
- Miscellaneous less common associations.

Pyoderma gangrenosum usually starts quite suddenly, often at the site of a minor injury. It may start as a small pustule, red bump or blood-blister. The skin then breaks down resulting in an ulcer. The ulcer can deepen and widen rapidly. Characteristically, the edge of the ulcer is purple and undermined as it enlarges. It is usually very painful. Several ulcers may develop at the same time.

Untreated, the ulcers may continue to enlarge, persist unchanged or may slowly heal. Treatment is usually successful in arresting the process, but complete healing may take months.

Investigations

Pyoderma gangrenosum is diagnosed by its characteristic appearance. There is no specific test. The wound should be swabbed and cultured for micro-organisms, but these are not the cause of pyoderma gangrenosum. Biopsy may be necessary to rule out other causes of ulceration.

Mostly, blood tests are not particularly helpful. Some patients may have a positive ANCA (antineutrophil cytoplasmic antibody).

Patients with pyoderma gangrenosum are normally cared for by a specialist [dermatologist](#).

Treatment

Treatment is non-surgical. The necrotic tissue should be gently removed. Wide surgical debridement should be avoided because it may result in enlargement of the ulcer.

Often conventional antibiotics such as [flucloxacillin](#) are prescribed prior to making the correct diagnosis. These may be continued if bacteria are cultured in the wound (secondary infection) or there is surrounding [cellulitis](#) (red hot painful skin), but they are not helpful for uncomplicated pyoderma gangrenosum.

Small ulcers are best treated with:

- [Topical steroid](#) creams
- Intralesional steroid injections
- [Special dressings](#) eg. silver sulfadiazine cream or hydrocolloids.
- Oral anti-inflammatory antibiotics such as [dapson](#)e or [minocycline](#).
- If tolerated, careful [compression bandaging](#) for swollen legs
- [Potassium iodide solution](#)

More severe disease requires immunosuppressive therapy:

- [Tacrolimus](#) ointment is an immune modulating drug that inhibits calcineurin and has been reported to improve pyoderma gangrenosum. It is not yet available in New Zealand (2005).
- [Oral steroids](#). These have important side effects and should be taken carefully according to the doctor's instructions. They may be required for several months in high dose.
- [Ciclosporin](#). This does not have PHARMAC funding in New Zealand for this indication. It also has important side effects.
- [Methotrexate](#).
- [Cyclophosphamide](#) .
- [Mycophenolate mofetil](#).

Treatment with the biological agent [infliximab](#) has also been reported to be effective.

Related information

On DermNet NZ:

- [Ulcers & erosions](#)
- [Synthetic wound dressings](#)

Other websites:

- [Pyoderma gangrenosum](#) - e-medicine dermatology, the online textbook

Books about skin diseases:

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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