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Skin problems from stomas

Worldwide, millions of individuals have stomas. Skin problems relating to the stoma are extremely common.

What is a stoma?

A stoma is a surgically created opening of the intestinal or urinary tract on to the body surface. Stomas most often open via a short spout onto the surface of the abdominal wall. They may be permanent or temporary (another surgical operation is required to rejoin the bowel).

- **Ileostomy** is an opening of the ileum (small bowel) and can be an end or loop stoma, most often placed in the lower right abdomen
- **Colostomy** is an opening of the colon (large bowel) and can be end or loop stoma, most often placed in the lower left abdomen
- **Urostomy** enables urine to be excreted, is always an end stoma and may be situated on the center, the left or the right side of the lower abdomen, the perineum or the flank. Urostomies include nephrostomy, ureterostomy, cystostomy, urethrostomy, ileal conduit and continent pouch/diversion depending on the site of the diversion and the type of surgery.

Why is a stoma necessary?

Common reasons for an ileostomy include:

- Inflammatory bowel disease (ulcerative colitis, Crohn's disease)
- Intestinal polyps
- Bowel cancer
- Bowel infection (e.g. peritonitis)

Common reasons for a colostomy include:

- Bowel cancer resulting in obstruction or bleeding
- Inflammatory bowel disease
- Congenital developmental problems
- Bowel infection
- Trauma

Common reasons for a urostomy include:

- Congenital conditions e.g. spina bifida
- Cancer
- Obstruction from stones (calculus)
- Trauma

What are the complications of a stoma?

Early complications may include:

- Inadequate blood supply (ischaemia)
- Retraction of the bowel back into the abdomen
- Separation of the bowel mucosa from the skin (dehiscence)
- Infection
- Bleeding
- An undesired passage between the bowel and the skin (fistula)
- Prolonged paralysis of the bowel (ileus), which if not treated may cause a swollen abdomen, vomiting, dehydration, electrolyte imbalance, kidney failure

Later complications may include:

- Prolapse of the bowel out onto the skin
- Scarring and narrowing of the stoma (stenosis)
- Leaking of bowel contents onto the skin resulting in irritation, erosion and digestion of the skin
- Bowel obstruction
- Excessive protrusion of bowel under the skin surrounding the stoma (hernia)
- Persistent infection
- Skin disorders ([see below](#))
- Varicose veins around the stoma
- High output of fluid from an ileostomy, causing dehydration and electrolyte imbalance
- Constipation or diarrhoea
- Cancer

Stoma appliances

A specialist nurse will advise on the most appropriate appliance and will support a patient adjusting to life with a stoma.

The pouch may be pre-cut, or require cutting to the exact size and shape of the stoma to protect the surrounding skin from damage and to prevent leakage. The flange in contact with the skin is made of sticky hydrocolloid. The pouch is made of clear or flesh-coloured plastic.

Colostomy appliances may be a closed-end bag which can be changed once or twice each day, or an open-ended bag that may be drained as required. Ileostomy bags are drainable and changed every two or three days. Urostomy pouches may also be drained as required and changed every two or three days. Bags may be one-piece or two-piece, closed or drainable.

Carefully designed products have the following properties:

- Comfortable soft low-irritant materials that don't rustle
- Adhesives that stick to irregular body contours without leaks
- A bag that is waterproof
- Odour-free, with integrated charcoal filter

Skin care

- Cleanse the skin around the stoma with water alone, using a cotton wipe. If a [cleanser](#) is used, it should be thoroughly rinsed away. Avoid oily and perfumed products.
- Shave hairy areas about once a week, using a clean razorblade.
- If required, cover raw areas of skin with a thin hydrocolloid wafer before applying the stoma bag.
- If required, use barrier films, pastes or powder to protect the skin and manage leaks.

Skin infection

Micro-organisms may proliferate because the stoma is warm, humid and soiled. They may colonise the stoma without causing disease. True skin infection is more likely if the patient suffers from general ill-health or [diabetes](#), or takes immunosuppressive medication.

[Bacterial infections](#) are confirmed by swabs. They may present as:

- [Secondary infection](#) of a surgical wound
- Bacterial [folliculitis](#) or [boils](#)
- [Impetigo](#)
- [Cellulitis](#).

Cleansing with an [antiseptic](#) may be sufficient. Treatment with specific oral [antibiotics](#) may be necessary to clear more severe infection.

[Fungal infections](#) may be confirmed by [skin scrapings](#). They may include:

- [Thrush \(candida\)](#)
- [Tinea corporis \(dermatophyte infection\)](#)
- [Pityriasis versicolor \(malassezia\)](#)

[Viral infections](#) may include:

- [Herpes simplex](#) (cold sores)
- [Viral warts](#)
- [Molluscum contagiosum](#)

Inflammatory skin disease

The skin around a stoma may become inflamed (red, swollen, painful) because the stoma is leaking, because of an underlying skin disease, or because of infection.

Papules (small bumps) and nodules (large ones) can develop due to ongoing irritation, granulation tissue, viral warts, cancer or [Crohn's disease](#).

Ulceration may be due to trauma (surgery, appliance, clothing), wound breakdown ([pyoderma gangrenosum](#), malnutrition) or skin disease.

Skin rashes around stomas



Irritant contact dermatitis



Spreading autosensitisation reaction



Pyoderma gangrenosum

Irritant contact dermatitis

Unfortunately many people with a stoma suffer from skin irritation from time to time. The main causes are:

- Skin bathed in stoma effluent (bowel content or alkaline urine)

- Skin stripped by repeatedly removing the appliance
- Occlusion and humidity
- Friction or pressure from the appliance or clothing
- Pre-existing sensitive skin or dermatitis (especially atopic eczema)
- Application of irritating chemicals such as detergents, deodorisers or bleach in wipes and cleansers

The appliance may leak for the following reasons:

- It may be the wrong size
- It may be incorrectly sited
- There may be skin folds due to obesity or scarring from surgery
- Excessive sweating prevents sticking
- Underlying skin rash prevents it sticking to the skin properly
- The effluent may be excessive
- It may corrode the hydrocolloid

The result is [irritant contact dermatitis](#) i.e. red papules (small bumps) and plaques (larger thickened patches) and scaling. The dermatitis may affect a crescent area below the appliance or affect the whole area in contact with it. It may be very sore or itchy.

Treatment of the dermatitis may include:

- Modification of the appliance to improve the fit
- Filler paste to achieve a flat surface on which to stick the bag
- Hydrocolloid dressing under the bag
- Sucralfate powder dusted onto erosions
- Roll-on [antiperspirant](#) to reduce sweat
- [Topical steroid](#) ([see below](#))

Prolonged irritation may result in over-granulation (moist red thickened areas), warty papules and pseudoepitheliomatous hyperplasia (cancer-like growths). Treatment may include:

- Acidification of the urine and acetic acid compresses (dilute vinegar)
- Chemical cautery (silver nitrate stick) or [cryotherapy](#) (freezing) to destroy granulation tissue
- Surgery to refashion the stoma (rarely required).

Allergic contact dermatitis

Allergy to acrylic adhesive or resin components of the appliance is rare. The appearance is similar to irritant contact dermatitis but [allergic contact dermatitis](#) affects all areas in contact with the appliance, and may also spread more widely to surrounding or distant skin.

Allergy may also be due to a deodoriser, [fragrance](#) or preservative such as [parabens](#), [kathon cq](#) or [imidazolidinyl urea](#) in a cleanser. If dermatitis is very persistent, [patch tests](#) should be performed to relevant allergens such as the standard series, glues and plastics, preservatives, fragrances and medicaments.

Granulomas

Granulomas are lumpy lesions due to inflammation in the dermis. Stomal granulomas may be due to:

- Granulation tissue (poor wound healing and infection)
- Bowel metaplasia (stomal skin morphing into bowel tissue)
- Crohn's disease (a type of inflammatory bowel disease)

Colour changes

The skin surrounding the stoma may be discoloured.

- Brown colour is usually due to [postinflammatory pigmentation](#) and fades in time
- Red, pink or mauve colours may be due to the growth of new blood vessels
- Other coloured stains may be due to urinary compounds

Psoriasis

[Psoriasis](#) presents as patches of scaly red skin. It may arise around a stoma in patients who have psoriasis in other sites or who have a genetic predisposition to it. It is particularly common in patients who have inflammatory bowel disease. Stripping off the skin when the appliance is changed may provoke psoriasis (this is known as the Koebner reaction).

Plaques of psoriasis are generally sharply defined. They tend to extend beyond the stoma and may be more prominent outside it because the moist environment under hydrocolloid may be beneficial in treating psoriasis.

Psoriasis relating to a stoma may be treated with topical steroids ([see below](#)). Occasionally other treatments such as [phototherapy](#), [methotrexate](#) or [ciclosporin](#) may be necessary.

Pyoderma gangrenosum

[Pyoderma gangrenosum](#) is a painful ulcerating skin disorder. It is sometimes associated with inflammatory bowel disease or cancer. The ulcers may be triggered by an injury to the skin, such as trauma from a tight appliance or surgery. This is known as pathergy.

- The ulcers may be shallow or deep
- They have a bluish undermined and ragged edge
- Surrounding skin tends to be red and swollen
- Healing ulcers result in cribriform scars (these appear to have small holes like a sieve).

Treatment may include topical steroids ([see below](#)), topical [tacrolimus](#), [systemic steroids](#), ciclosporin, [dapson](#)e and [minocycline](#). Further surgery should be avoided if possible, as it may provoke larger ulcers.

Seborrhoeic dermatitis

[Seborrhoeic dermatitis](#) may appear similar to irritant dermatitis or psoriasis, causing a scaling pink rash around the stoma as well as other typical sites (scalp, behind ears, nose crease, chest, under arms and navel).

Treatment involves [antifungal lotions](#) and occasional courses of topical steroids ([see below](#)).

Other skin conditions

The following skin conditions should be considered if a rash affects a stoma or there is delayed wound healing:

- [Seborrhoeic keratoses](#) (warty lesions)
- Cancer secondaries ([metastases](#))
- [Crohn's disease](#) (ulcers or cobblestone granulomas)
- Malnutrition (red cracks and sores)
- [Cutaneous vasculitis](#) (purple bumps called [purpura](#))
- Drug eruptions
- [Radiotherapy-related dermatitis](#)
- Surgical complications

Topical corticosteroids

[Topical steroid](#) lotions or scalp solutions may be used directly onto the stoma when the bag is changed to treat inflammatory skin conditions including dermatitis, psoriasis and pyoderma gangrenosum.

- To avoid stinging, the solution can be applied onto the adhesive barrier of the stoma bag, and allowed to dry before the bag is put onto the skin.
- Creams and ointments are usually not practical as the appliance will not stick.

- If the desired preparation is only available in a cream formulation, it can be applied under a hydrocolloid or vapour permeable membrane, and the appliance can be stuck onto this.
- A paste formulation such as triamcinolone acetonide in orabase may be used to fill an ulcer.
- The topical steroid may be applied once daily for up to 3 to 4 weeks.
- If necessary, the topical steroid can be applied once each week as on-going treatment.

Related information

References:

- Abdominal stomas and their skin disorders; an atlas of diagnosis and management. Eds Calum Lyon, Amanda Smith. Martin Dunitz 2001

On DermNet NZ:

- [Synthetic wound dressings](#)

Other websites:

- [Ostomy Wound Management](#) Journal
- [Convatec Ostomy Care](#)
- [Stomas of the Small and Large Intestine](#) - emedicine

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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