

STOMA CARE

Background Information

'The word stoma comes from the Greek word for mouth or opening' ¹

A stoma is formed surgically by opening part of the bowel, to the outside of the abdomen for the output of faeces. If there is more than one stoma, the proximal stoma is the functioning one and the distal stoma is called a mucous fistula. Stoma formation in infants is generally temporary, or may be permanent, depending on the indication for surgery¹. A temporary stoma is most often created to divert faeces away from an operation site (anastomosis) to allow healing to occur or to provide an outlet for faeces when an obstruction is present. This stoma can then be reversed by surgery with minimal or no loss of intestinal function.²

Aims of stoma care

To observe stoma and to apply stomal bag appropriately, minimising leakage and removing appliance carefully, preventing stripping of skin.

Successful stoma management can be measured by the maintenance of skin and stoma integrity.³

Indications for stoma formation – Conditions for which a stoma may be necessary: ^{1,3,4,5}

- Necrotising Enterocolitis
- Hirschsprung's disease
- High imperforate anus
- Complex malrotation/Volvulus
- Duodenal Atresia

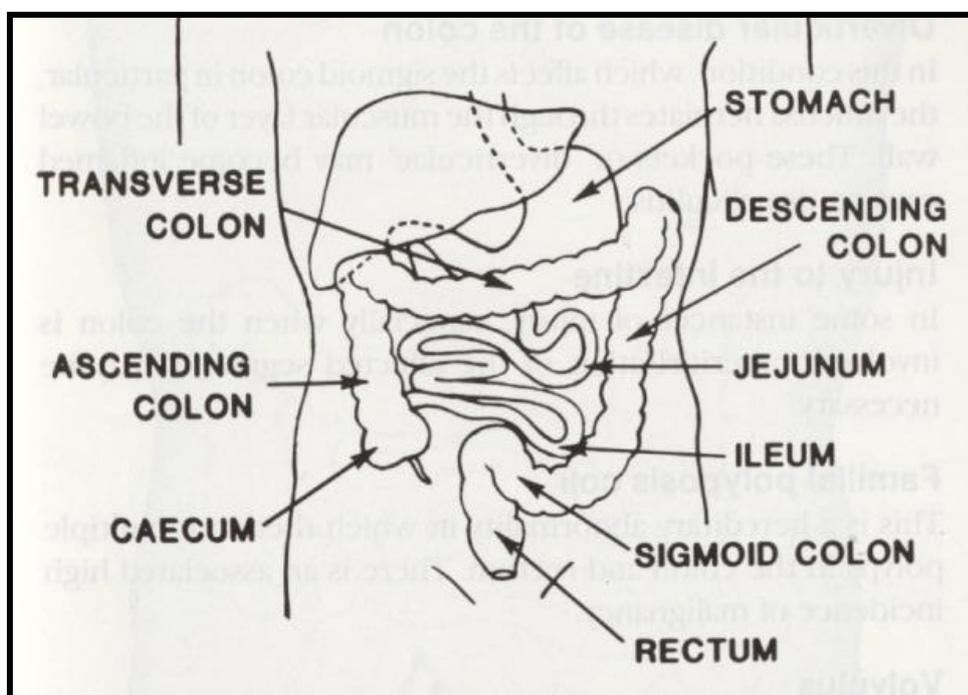


Figure 1 Anatomy of the intestine. Reproduced with permission

Definitions

ILEOSTOMY

- Is a stoma into the ileum (small intestine) through an opening in the abdominal wall. It is usually sited in the right iliac fossa.²
- Ileostomy output varies from liquid to paste consistency, which usually occurs from an established stoma.
- Prone to skin excoriation, dehydration, electrolyte imbalance particularly Na⁺ and K⁺³

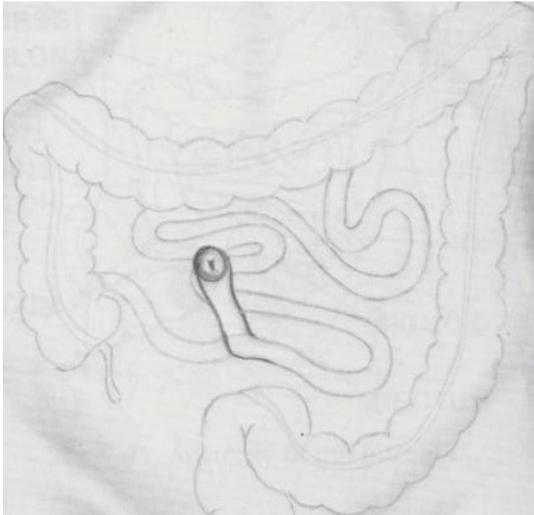


Figure 2 Ileostomy

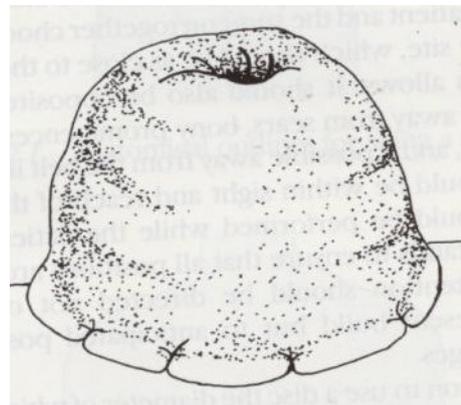


Figure 3 Ileostomy stoma

COLOSTOMY

- Is a stoma that is made into the large bowel. It can be placed in the ascending colon, transverse colon, descending colon or sigmoid colon. The bowel is then brought through the abdominal wall onto the skin.⁶
- The consistency and frequency of output from the colostomy is linked to the colonic absorption and propulsion characteristics.⁶
- The closer the colostomy is located to the ileum, the more liquid the output and the further from the ileum, the more formed the output.⁶

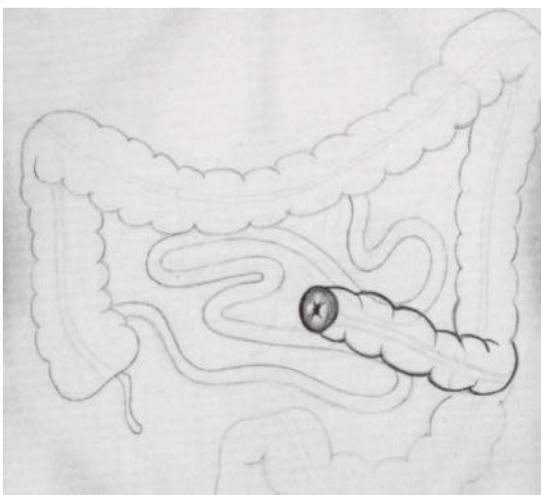


Figure 4 Colostomy

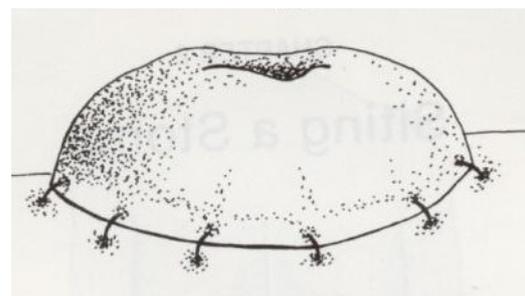


Figure 5 Colostomy stoma

Nursing care of an infant with ileostomy / colostomy

Principles of Care

- All babies admitted to RPA Newborn Care with a stoma should be referred to Stomal Therapist CNC: Lesley Everingham Pager 80887 or Kris Louis Pager 80151.
- Change bag immediately if leakage occurs, to prevent excoriation of peristomal skin.³
- One-piece drainable system stoma bags are designed to adhere for 1 to 3 days.⁶
- Baseplate of two-piece system stoma bags are designed to adhere for 4 days to 1 week.⁶
- A full bag can lead to leakages, therefore it is best to empty when 1/3 full or distended with air.¹
- Observe and document stoma for colour, prolapse, retraction, oedema, bleeding and mucocutaneous separation with every nappy change. Mucocutaneous separation is the breakdown of the suture line securing the stoma to the abdominal surface.²
- Observe and document output for amount and consistency (fluid, curds or paste).²
- Observe and document skin for redness and excoriation.²
- Assess Reducing Substances (R/S) if baby is not absorbing feed (eg increase in stomal output or more liquid in output) If R/S are greater than 1% it may indicate carbohydrate malabsorption.¹
- Bag should not be irrigated as this will loosen the adhesive bond and permit the underlying excoriation of skin.¹
- Clean stoma with warm saline for 2 to 4 days post-op, afterwards warm water can be used.⁴
- Oral sucrose for procedural pain (see sucrose policy), if peristomal skin is excoriated or if baby is showing signs of discomfort or pain. Routine stomal bag change does not require sucrose, because the stoma has no sensory nerves.⁵

Emptying Stoma Bag

Items required for emptying stoma bag

- A pair of non-sterile gloves
- One 10 ml or 20 ml syringe for measuring output
- 1 gallipot or kidney dish if output is large
- Soft absorbent cloth or non-sterile pad

Procedure for emptying stoma bag

- Put on non-sterile gloves.
- **For One-piece stoma bag**, hold the bag with the opening upward.

- Open the clip and position the bag into a gallipot or kidney dish for easy emptying if output is large. (Can be syringed out if the output is small).
- Wipe end of bag with absorbent cloth or non-sterile pad, empty air out of bag, fold up open end twice and reapply clip.
- **For a two-piece stoma bag.** Apply light pressure to the baseplate with one hand and remove bag with other hand.
- Measure output and observe consistency. Inform Medical staff if output is more than 20mls/kg/day.
- Dispose of gloves and output in contaminated waste bin.
- Wash hands.

Stoma Bag Change

Items required for stoma bag change

- Scissors and pen
- Stoma template
- Stoma bag: one-piece (Dansac Nova 1) or two-piece (Easiflow Coloplast) stoma bag, as indicated by Stomal Therapist (eg. currently Dansac or Easiflex)
- Stoma powder and Seal (eg. currently Dansac GX-tra seal or Eakin Seal). Apply only if peri stomal skin is excoriated.
- Cavilon™ No sting barrier skin wipe 3M (assists bag to seal)
- 1 Dressing Pack or Steri-field (optional)
- 1 Sterile 10ml Water ampoule (warmed)
- A pair of non sterile gloves
- 1 Nappy
- Soft absorbent cloth or non sterile pad
- One 10ml or 20ml syringe for measuring output
- An assistant can be helpful



Figure 6 one-piece stoma bag
Dansac Nova 1



Figure 7 two-piece stoma bag
Easiflex Coloplast

Nursing Management of an infant with ileostomy / colostomy

Customising Stoma Bag

- Measure stoma and draw size of stoma on Comfeel™ / paper as a template. This measurement may change for up to 6 weeks after surgery.³
- Copy stoma template on reverse side of stoma bag or baseplate.
- Cut the hole for stoma size on reverse side of stoma bag or baseplate to fit perfectly.²
- Opening can be cut off - centre to move bag away from umbilicus or incision site.³
- Smooth cut edge by running a finger around the circle.³



Figure 8 Appliance cut to size

Removing the stoma bag

- Put on non-sterile gloves.
- **For one-piece stoma bag**, hold onto the Comfeel™ and peel gently from top edge downward. Hold skin down with free hand.^{2,6}
- **For a two-piece stoma bag**, apply light pressure to the baseplate with one hand and remove bag with the other by pulling the blue tag. Baseplate can stay for 4 to 7 days. To remove baseplate, slowly and gently pull the tab and keep the skin taut with the other hand.⁶
- The skin surrounding the stoma should be gently cleaned using warm water and soft absorbent cloth / non-sterile pad and thoroughly dried.²
- Dispose of gloves and old bag in contaminated waste bin.
- Wash hands.

Preparing the skin for new Stoma bag

- Clean stoma and around skin with soft absorbent cloth or non-sterile pad, using warm water. Occasionally it is normal to see a small amount of bleeding from the surface of the stoma or skin edges when cleaning the stoma. Bleeding will stop on its own.
- Ensure all the old adhesive is removed.
- Using a soft absorbent cloth or non-sterile pad, dry around stoma and dab stoma to remove excess moisture.
- Ensure the skin is thoroughly dry.³
- Inspect colour and condition of stoma and peristomal skin.⁸
- Report any excoriation to registrar / fellow and Stomal Therapist and neonatal CNC.

Applying the stoma bag

- Apply Cavilon™ no sting barrier skin wipe (3M) or equivalent, to peristomal skin, to assist bag to seal. Allow to dry.³
- **If skin is reddened or excoriated**, apply stomal powder very lightly (dust off excess); apply no sting barrier skin wipe and seal (eg. Dansac GX-tra Seal or Eakin Seal) around peristomal skin.
- Apply reverse side of stoma bag opening or baseplate perfectly over stoma, after removing plastic backing, without peristomal skin exposed.²
- **For a two-piece stoma bag**, remove the white protective paper from the foam on the bag. Try to avoid touching the adhesive, as it is very strong. Place the bag from the bottom of the base plate. Position gently and lightly press on bag and baseplate with fingers to ensure a perfect fit around the stoma.⁶
- Apply bag at an angle (so opening is towards the side) for easy drainage.²
- **For one-piece stoma bag**, press gently but firmly on the skin immediately surrounding the stoma for 1 to 2mins, as the warmth from your hand will enhance adhesion. (Bag can also be warmed between the hands before applying).³
- Fold up open end and apply plastic clip for one - piece bag.



Figure 9 Seal & Cavilon™ No sting barrier skin wipe (3M)

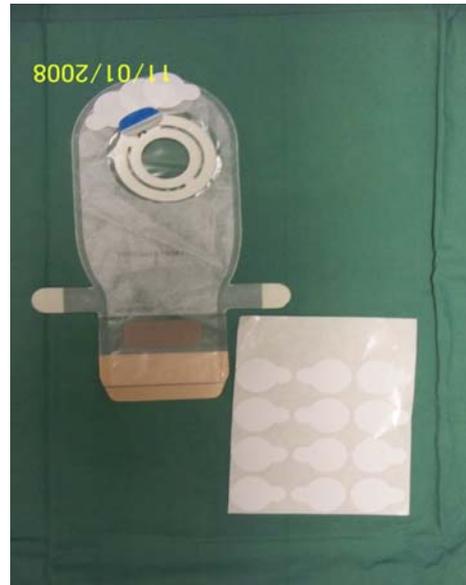


Figure 10 Stickers to cover filter during bath

Once the abdominal wound has healed, baby may have a bath without the stoma bag in place.² For a two-piece stoma bag, if output is minimal, baby may have a bath with the bag in situ and stickers covering the filter. The purpose of the filter is to permit the discharge of gas so as to prevent the stoma bag from inflating, and the sticker is to prevent water from entering the bag through the filter during a bath.

Documentation

- Date and time of stoma bag/pouch changed.
- Amount of output and consistency (fluid, curds or paste).
- Colour of stoma – normal/healthy, dark red or plum coloured, cyanotic, extreme pallor or necrotic. Healthy stoma should be pink/red in colour; very similar to the colour of the mucosa in the mouth.^{2,3}
- Condition of stoma - prolapse, retraction, oedema, bleeding and mucocutaneous separation.²
- Degree of stomal protrusion - 1cm, 2cm.
- Condition of peristomal skin – redness, excoriation.⁸
- Any complications, inform registrar / fellow and Stomal Therapist and neonatal CNC.
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- Document in Individualised baby care plan and baby's progress notes.

Different conditions of stoma – Reproduced with permission

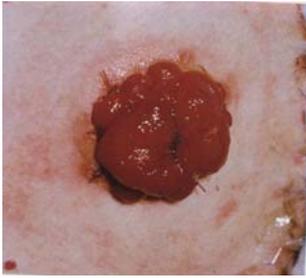


Figure 11 Normal Post-op stoma



Figure 12 Oedematous stoma



Figure 13 Protruding Stoma



Figure 14 Necrotic Stoma



Figure 15 Skin Excoriation

Nutrition

- For the first few days following bowel surgery, baby will be nil by mouth until bowel sounds are heard. Fluid requirements will be administered via intravenous infusion.²
- Preferably expressed breast milk (EBM has anti infective properties) and/or total parenteral nutrition (TPN provides carbohydrate, fat, protein, electrolytes, minerals and vitamins).⁹
- Lactose free milks eg. Neocate, Monogen, Pepti Junior (Nutricia) or Alfare (Nestle) if ordered.⁹
- Additional energy may be provided with MCT oil (medium chain triglycerides), providing 9kcal/g (39kJ/g) and given as 1gm/kg/day to 4gm/kg/day (1g = 1ml).⁹
- Occasionally dehydration may occur if ileostomy output is high. Particularly high output or sudden increases in ostomy output should be discussed with medical staff as in some circumstances enteral feeds may need to be temporarily stopped or reduced. Monitor infant's feed, weight and electrolytes (Na⁺ and K⁺). Fluid and electrolyte losses may need to be replaced.⁷

Education of Parents

- Encourage parents to be involved in stomal care as soon as possible. Teach skills through demonstration and return demonstration.³
- Provide support by a therapeutic relationship, holistic individualised care, and teaching.

- Assess parent's confidence and competence. Make time for questions.
- Appropriate care and cuddling by parents should be encouraged to aid bonding and help the parents to come to terms with their baby's condition.²
- Prior to discharge, Stomal Therapist CNC will arrange parents to join either the Ileostomy or Colostomy Association. A joining fee is required and all stoma bags are supplied free of charge.

References

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10. Figures 1-5, Figure 8 and Figures 11-15 were reproduced with kind permission from: Bokey EL and Shell R (eds.), *Stomal Therapy, A Guide for Nurses Practitioners and Patients* (Sydney: Pergamon Press Pty Ltd/Elsevier, 1985), pp. 3-57.