

# Coloplast for Security

Stoma Assessment Guide



**3 steps** to stoma assessment:

- 1 Assess** body type
- 2 Define** stoma type
- 3 Select** solution

# Dilemmas of choice around convexity and accessory usage in clinical scenarios

## Background: The incidence and evidence surrounding stoma complications

This guide explores the rationale for the use of convexity in the management of clinical stomal scenarios, identifies the potential complications associated with convexity usage and presents the best available evidence to guide clinical decision making.

There are 102,000 people living with a stoma in the UK, with an additional 21,000 new stoma patients per annum (High Impact Actions for Stoma Care 2010). In addition to the known physical, psychological and social implications following stoma formation surgery, long term stoma complications have been reported in up to 39% of colostomists, and 55% of ileostomists and urostomists will experience a complication with their stoma (Nastro et al 2010). Complications with a stoma can undermine the person's self-management and adaptation, as well as leading to repeated hospitalization for treatment (Lee & Morris 2003).

We have evidence to support our daily clinical observations – that stomal complications are prevalent and are associated with considerable mortality (Nastro et al 2010). In daily practice this means that many of our patients will have stomal complications and require expert advice and may need to use accessory products or integral convex products in order to achieve a secure, leak free daily life.

<b>Flush stoma</b>	The optimum length of an ileostomy spout is considered to be around 2.5 cms, an ileostomy would be considered flush when it is level with the abdominal skin. (Hampton and Byrant 1992). Short spouted ileostomies, less than 2.5 cms, can also cause management problems although not entirely flush. A colostomy with a small spout is associated with less post-operative complications (Cottam et al 2007, 2011) and therefore a flush colostomy may cause management issues for some individuals.
<b>Retracted stoma</b> <b>Telescoping stoma</b>	The stoma is below skin level, retraction means the stoma is under tension and is pulled back into the abdomen (McKenzie & Ingram 2001). Mainly causes night time problems, when the patient is supine the stoma slides back to skin level or below.
<b>Peristomal skin creases/wrinkles/scarring (variable skin contours)</b>	These skin creases can form channels (gullies) along which leakage can occur. Variable peristomal skin contours can form dips above or below the stoma and are caused by tension around the stoma or because of close proximity to the abdominal wound.
<b>Stoma opening near or at skin level</b>	Causing effluent to leak under flange.
<b>Soft abdominal surface</b>	An abdomen with poor muscle tone provides little support for the stoma. This clinical scenario is included in all of the other clinical guides and so is not discussed separately.

Table 1. When might a convexity product be indicated?

## What is the purpose of convexity?

- Selection of suitable convexity for an individual should result in increased wear time, prevent leakage, improve peristomal skin integrity and be more cost effective (WOCNS 1998, 2007).
- Convexity products can be integrated into the barrier of the appliance or can be added to flat barriers (rings, seals, pastes).
- Convex products cause a degree of protrusion of the stoma, provide better tension to the skin around the stoma and flatten peristomal skin contours (Hoeflok 2010).
- The aim of convexity is to increase protrusion of the stoma above the surrounding skin level, to achieve a leak free seal and enhance a patient's quality of life (Cronin 2005).
- Convexity levels can vary from soft, light and deep depending on the type of convexity product used (Table 2).

Degree of convexity	Effect	Product type
<b>Soft</b> up to 3mm convexity	Minimal tension/pressure on the skin, fills in minor gullies or flattens small creases but will not alter stomal protrusion	Flat flexible and elastic barrier, may be supplemented with paste or ring.  Soft convexity integral to pouch.
<b>Light</b> up to 5mm convexity	Moderate tension/pressure on the skin, fills shallow gullies and tips the stoma up or makes it protrude more	Integral flange convexity or flat flexible and elastic barrier with ring and belt
<b>Deep</b> up to 7mm convexity	Places significant tension on the skin which tips or protrudes the stoma and fills deep gullies and skin creases	Integral flange convexity

Table 2. Convexity (also see section *What pressure do convexity products place on the peristomal skin?*)

## Potential problems caused by convexity usage

In clinical practice, we now have a large range of convexity products which offer different levels of convexity, and this range of convexity options can lead to confusion about what might be suitable for an individual patient.

### Mucocutaneous separation

There is no clinical evidence of mucocutaneous separation occurring from convex product usage, there is a suggested risk of mucocutaneous separation occurring if convexity is used within the first week following stoma formation (Rolstad & Boarini 1998, Cronin 2008).

### Granulomas

Can be caused as a result of friction from an ill fitting appliance which rubs against the stoma. Therefore it is reasonable to assume that convex products may also cause friction and therefore granulomas (Cronin 2008).

### Accumulative peristomal skin pressure

Localized erythema or bruising of the skin (discolouration). This can be painful and may lead to ulceration of the skin. In some patients, the continued and long-term use of a convex product can cause irreversible pigmental skin changes, pyoderma and overstretching of the skin. The peristomal skin takes on the shape and width of the convex flange. This can create further management problems as this defect will always require building up or filling in (Cronin 2008). Anecdotal evidence from nurses suggest ulcers, when seen, are often caused by the belt attachment, not the convex product.

## Nursing assessment to inform and rationalise clinical decision making

A thorough nursing assessment is required prior to consideration of convexity products. It is not uncommon for patients to have one of the clinical scenarios listed in Table 2, but to have healthy skin and no leakage problems. Therefore clinical observation alone does not automatically mean a convex product is required. Careful assessment and history taking should inform your management in conjunction with clinical observation. The patient's abdomen should be examined in the lying, sitting and standing position and note made of the consistency/variation of the stomal output and condition of the peristomal skin. To aid your assessment of the patient consider the following questions:

- **Is the area around the stoma – regular, inward, outward?**
- **If the stoma is inward, is the inward area uniform or variable?**
- **Is the abdomen soft or firm?**
- **Are there superficial or deep creases around the stoma?**
- **Is the stoma flush with the skin level, protruding or retracted?**
- **A standardized history and assessment tool is available for use on the enclosed pad**

## Products and accessories

There are a variety of options available to produce a degree of convexity. These are outlined in Table 1.

- A one piece, flat appliance, with a flexible and mouldable adhesive may be all that is required to provide security and prevent leakage in those with skin creases (Metcalf 2001).
- A stoma paste can be used to create a level pouching area and then a flat appliance can be used (Hampton and Bryant 1992).
- Rings can be used to fill dips or provide a degree of convexity around a stoma which has its opening near or at skin level. A belt can provide added support (Hampton and Bryant 1992) and provide a degree of convexity.
- There are a range of products with varying depths of convexity integrated into the flange, it is important to select an appliance with the correct form of convexity; soft, light, or deep.

## What pressure do convexity products place on the peristomal skin?

There is no evidence of published studies from product development which identify skin pressure parameters. What we do know is that light convexity (if used with a belt) may place the same or more pressure on the peristomal skin than deep convexity. It is considered that the size of the aperture in the convex flange, the softness of the abdomen and the use of a belt all influence pressure. Patients should be educated and advised of the potential problems associated with convexity usage and be told to contact their SCN if they experience pain around their stoma or notice purple discolouration of the skin. Given that there are potential risks associated with the use of convexity, regular follow up by the SCN is recommended (McKenzie & Ingram 2001, Boyd et al 2004, Cronin 2008).

## Conclusion

Not all patients require a convex product but for those who do, a thorough assessment is required. For many, the addition of a seal or paste will be enough to ensure a secure and comfortable seal. Others may require pouches with an integral convexity and may also require a belt (although many patients appear to dislike wearing these). The guidance and decision making algorithms use best available evidence to suggest potential management strategies and is intended to support decision making but is not a rigid prescription for care. Each patient will require individual assessment and evaluation using the principles outlined in this guide.

## References

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