



Convexity

Your questions answered.

What is Convexity?

There are two types of skin barrier / base plate within Ostomy pouching systems¹:

Flat - a skin barrier which is flat against the skin surface.

Convex - an outward curving of the skin barrier towards the skin.^{2,3}



Benefits of Convexity

Convex skin barriers are designed to push down on the peristomal skin to protrude the stoma so that output is emptied into the pouching system.¹

- Furnish peristomal skin protection by providing a sustained and predictable wear time.^{1,4}
- Helps maintain a secure seal between the pouch and the skin.^{4,5}
- Helps protect from leakage and peristomal skin breakdown.^{3,4,5}
- Helps the wearer feel more comfortable and secure.¹
- Provides simple-to-use stoma care.^{4,5}

Why use Convexity?



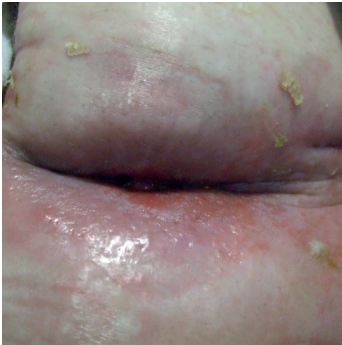

- To manage irregularities of the stoma.²
- To press down the peristomal skin uniformly to improve the protrusion of the stoma.⁶
- To minimise leaks with a waterproof, secure fitting appliance.⁷
- To simplify stoma management for the patient.^{4,7}
- To help enhance the patient's quality of life.⁷

What is the ideal stoma?

An ideal stoma will protrude/have a spout. It should be well-sited pre-operatively so that it can be located away from planned incision line, creases, skin folds, waistline, scars, bony prominences and in line with the patient's vision (where they can see it).⁵

When to use Convexity

Convexity may be used for management of difficult stomas including:

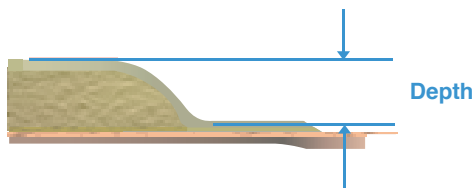
Flush stoma	Retracted stoma	Skin fold	Soft or flaccid abdomen
			
<p>Located at the same level as the abdomen skin surface.⁸</p> <ul style="list-style-type: none">• Does not protrude.• No spout.• Highly susceptible to leaking and skin irritation.³	<p>Stoma pulled into the abdomen below skin level or having little or no spout.⁹</p> <p>Highly susceptible to leaking and skin irritation.⁹</p>	<p>A stoma which is deep in a skin fold / crease.⁴</p>	<p>An abdomen requiring firm level of support to stabilise the pouching system.⁸</p>

What makes Convexity successful?

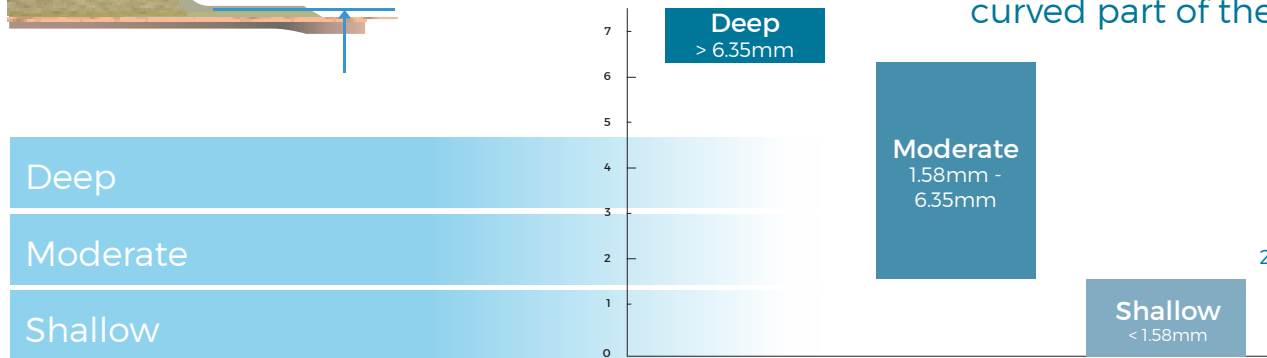
It must press down on the peristomal skin enough to make a **good seal** around the base of the stoma with **enough force to make it protrude** and / or seal to the skin, and **be flexible enough to conform** and seal to variable tissue profiles during postural changes.⁴

What are the main features of Convexity?

Depth



The **depth** of the **convexity** is the measurement from the base of the wafer to the top of the curved part of the wafer.¹⁰



Flexibility



The **flexibility** of the **convexity** is the degree of rigidity required to depress the peristomal skin.¹⁰



Profile



The **profile** of the **convexity** describes the gradient / slope of the convex part.¹⁰

Slope / Gradient

Risks of Convexity

- Convex skin barrier may leave imprint on the peristomal skin.¹
- Accumulative peristomal skin pressure can lead to capillary trauma / skin discolouration.^{8,10}
- Constant pressure exerted by rigid convexity might cause patient discomfort around the stoma.^{1,4}

Hints & Tips for using Convexity

- Refer patient for stoma care assessment prior to use.¹
- For skin creases / folds or a flaccid abdomen a wider plateau helps to flatten out the skin.
- Pull tummy upwards to flatten out creases and lift stoma upwards during application of the skin barrier.
- When moving to convexity, it is advisable to start with flexible convexity as this is less likely to cause trauma to the peristomal skin. If problems are still experienced (accessories may be added or) a move to a more rigid convexity may be required.

Rationale for flexible convex

- Can conform into creases, skin folds, and flaccid abdomens, which increases adherence.¹⁰
- Increased flexibility feels more comfortable to wear.^{8,10,11}
- Flexibility is less likely to cause pressure on the peristomal skin, therefore lessening the possibility of causing skin damage.⁸

FAQs

When should I use flexible convexity?

Flexible convexity is often selected when the stoma spout is shorter than the recommended height (stoma protrudes at least 2cm above the surface of the abdominal wall) and the patient is experiencing leakage under their appliance. It may also be selected for a stoma which points downwards or curves into the abdomen, as well as for lifting the stoma above skin creases / folds on a flaccid abdomen.

Flexible convexity offers a light pressure on the abdomen, whilst lifting the stoma to create a good seal.

When should I use rigid convexity?

Rigid convexity is beneficial when a more firm pressure is required on the peristomal skin to create a good seal around the stoma and help it to protrude into the stoma appliance.

Sometimes a rigid convexity will be selected when a flexible convexity does not appear to conform enough to create a good seal around the stoma or create a secure enough seal.

How soon post-operatively can I use convexity?

It is recommended to proceed with caution when using convexity on the peristomal skin immediately post operatively as the area may still be tender and the mucutaneous junction wound is still healing.

A clinical assessment must identify whether potential leakage of effluent by not using convexity will cause more harm to the patient and peristomal skin. In this situation, flexible convexity might provide a good solution. Rigid convexity should only be considered if an acceptable seal cannot be achieved.

In this situation it would be recommended to try flexible convexity initially as this provides a light pressure to the peristomal skin, only moving on to rigid convexity if a good seal cannot be achieved.

How often should I monitor a patient using convexity?

Monitor the patient's peristomal skin frequently; at least every 2 weeks for the first month, at the 3 month and 6 month post operative points. The patient should be informed about potential problems with the use of convexity and asked to contact the stoma nurse should any of these arise.

This document has been produced in consultation with Caroline Rudoni, BSc(Hons) Nursing Studies – 1st Class, ENB 980, ENB 216

References

1. Wound, Ostomy and Continence Nurses Society. Convex Pouching Systems: A Best Practice Document for Clinicians. Mount Laurel, NJ: Wound, Ostomy, and Continence Nurses Society; 2007
2. Rolstad BS. Principles and techniques in the use of convexity. *Ostomy Wound Manage.* 1996; 42(1):24-32.
3. Pontieri-Lewis V. Basics of ostomy care. *Medsurg Nurs.* 2006; 15(4):199-202.
4. Turnbull GB. The convexity controversy. *Ostomy Wound Manage.* 2003; 49(1):16-17. www.o-wm.com/article/1203 Accessed 29 February, 2016.
5. Wright J. Managing retracted stomas, *Journal of Community Nursing.* 2008; 22(3): 49(1):16-17.
6. Hanley J. Convex stoma appliances: are we getting it right? *British Journal of Nursing (Stoma Supplement).* 2013; 22 (16).
7. Cronin E. A guide to the appropriate use of convex stoma care products. *Gastrointestinal nursing.* 2008; 6 (2): 12-16
8. Boyd. K. Clinical Protocols for Stoma Care - Use of convex appliances. *Nursing Standard.* 2004; 18(20): 37-38.
9. Burch, 2011; Management of Stoma Complications, *Nursing Times.net*, 10 Nov 2011.
10. Hoeflok J. Use of Convexity in Pouching - A Comprehensive Review. *J Wound Ostomy Continence Nurs.* 2012; 40(5):506-512
11. Kruse and Storling, Considering the benefits of a new stoma appliance: a clinical trial, *BJN*, Vol 24, issue sup 22, pS12-18.

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