

Dansac Comprehensive
Assessment Guide for



PATIENT STOMA SKIN CONVEX

Introduction

A holistic patient assessment, that takes important medical, physical and psychological variables into account, will help the nurse define and decide on the best possible individual solution. Nurse assessment is central in providing his/her patient with a dependable, secure pouching system that decreases complications such as leakage, odour, peristomal skin breakdown, pain and loss of self-esteem.

Ultimately, this can result in a more efficient process for the nurse, resulting in better patient outcomes, increased quality of life – and impacting cost effectiveness.

This booklet is a tool combining the elements of a holistic approach to ostomy care. It is an easy to use, practical guide describing why, what, when and how in relation to:

- Patient assessment
- Stoma assessment
- Peristomal skin assessment
- Assessing for convexity

For outstanding contribution towards making the Comprehensive Assessment Guide a success Dansac would like to thank the Dansac Convex Advisory Board:

Rosine van den Bulck, Gabriele Stern, Julia Williams, Claudia van Tienderen and Calum Lyon.

We would also like to thank the following for contributing towards the Stoma and Skin Assessment sections, which have been adapted from the Dansac Practical Guide to Stoma and Peristomal Skin problems:

Amanda Smith, Frances McKenzie, Beverly Colton, Bart Tappe and Doreen Woolley.¹

Disclaimer:

We recognise that nurses in other practices may have different ways of treating identified problems. The scope of this guide is to give easy to use, practical advice that is generally accepted internationally.

1] See List of Contributors for further details.

Patient Assessment

This section provides the nurse with some important points to consider in the overall assessment of new or existing patients or those being assessed prior to stoma surgery. It can help identify and prevent potential stoma complications and skin problems and create an awareness of factors that can influence the choice of product.

Important points to consider in the overall assessment of your patients:

- 1 *Are there any aspects of the patient's lifestyle that may influence management of the stoma? Such as:*
 - a. Active hobbies or work
 - b. Personal hygiene habits
 - c. Alcohol or drug abuse
 - d. Clothing preferences
 - e. Diet
 - f. Sexuality

- 2 *Does the patient have any other conditions or problems that might affect the skin or their ability to manage their stoma? Such as:*
 - a. Extra intestinal manifestations, e.g. pyoderma gangrenosum
 - b. Neurological diseases, e.g. Multiple Sclerosis, carpal tunnel syndrome, stroke
 - c. Arthritis
 - d. Limited manual dexterity
 - e. Visual impairment
 - f. Limited mobility
 - g. Cognitive impairment

3 *Might their body shape influence the stoma site? Such as:*

- a. BMI
- b. Distended abdomen
- c. Spinal deformity, e.g. scoliosis
- d. Pregnancy

4 *On examination, how does the surface of the abdominal skin appear? Such as:*

- a. Hernia
- b. Scars
- c. Striae stretch marks
- d. Body piercings or tattoos
- e. Hairy abdomen
- f. Skin folds, wrinkles and creases

5 *On examination, does the patient have sensitive skin or a history of any skin problems? Such as:*

- a. Skin sensitivity or allergy
- b. Eczema
- c. Psoriasis
- d. Urticaria
- e. Skin fragility or congenital problems
- f. Age, e.g. perimenopausal skin

continued...

- 6** *Is the patient taking any medications that might affect the stoma or skin? Such as:*
- a. Immunosuppressives
 - b. Chemotherapy agents
 - c. Diuretics
 - d. Anticoagulants
 - e. Vasodilators, such as Nicorandil

Summary:

A detailed pre-op patient history and physical examination are important aspects of good stoma care. Both subjective and objective data are critical in overall patient assessment. The questions outlined in this guide are a help to holistic patient assessment and ultimately to choosing the right product for your individual patient.

Remember to consider the factors that may influence:

- Stoma management
- Healing of the skin
- Infections of the skin
- Bleeding
- Onset of peristomal skin problems
- Proper seal around the stoma



Normal Stoma

Stoma assessment

This section will assist in the identification and management of common stoma problems and may lead to early detection and appropriate intervention ensuring a high standard of stoma care.

We recognise that nurses in other practices may have different ways of treating the identified problems. The scope of this guide is to give first step, easy to use, practical advice that is recognised and generally accepted internationally.

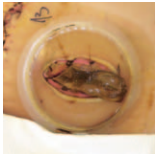
Stoma	Status	Definition/Presentation
 * See also the convex section	Flush	Mucosa level with the skin.
	Prolapsed	Notable increased length of stoma.

Proposed intervention and management

Most flush stomas do not cause problems.

- If causing leakage it may require soft or shallow convexity. Contact your Stoma Care Nurse Specialist for appropriate advice.
- If causing pancaking the aim is to keep the pouch away from the stoma surface to prevent a vacuum. One or more of the following may be effective; trap air in the pouch, occlude the filter opening with an adhesive sticker, add lubricating gel in the pouch, change the consistency of the output by fluid and dietary intake, consider bulking agents. Avoid using oil based products as these can impact filter performance and damage pouch films.

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- This is not necessarily a medical emergency unless there is a change in stoma colour, the stoma is non-functioning, the patient has severe pain at the stoma site or is vomiting. The patient should be reviewed by the Stoma Care Nurse Specialist or medical practitioner.
 - To accommodate the oedematous stoma the hole of the skin barrier should be cut larger, this will cause the peristomal skin to be exposed. The use of seals/washers will protect the exposed skin. Cover the stoma with a swab while placing the pouch; this will stop the skin barrier getting wet.
 - Many patients are able to manage their prolapsed stoma by using a flexible 1-piece pouching system. Depending on the length of the prolapse a large capacity pouching system may be required.

Stoma	Status	Definition/Presentation
	Necrosis	Lack of blood supply causing partial or complete tissue death.
	Laceration	Mucosa that is jagged/torn or ulcerated due to trauma.
	Oedema	Gross swelling of the stoma.
	Entero-cutaneous fistula	An abnormal tract between the bowel and the skin surface.

Proposed intervention and management

- Reassure the patient.
- Close observation of colour and temperature of the stoma.
- Report changes immediately.
- The stoma may be examined via an endoscope to identify the depth of the necrosis and check the viability of the bowel.
- Apply a clear pouch for easier assessment.
- May require surgical intervention.

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- Observe and identify the cause, it might be accidental or non accidental (inappropriate use of belts, convex skin barriers, self harm etc).
 - Remove the cause, re-educate the patient and refer to other agencies as necessary (Stoma Care Nurse Specialist, Clinical Psychologist etc).
 - Surgical intervention is unlikely unless the stoma is completely cut through.

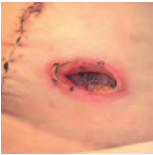
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- Post operative oedema is normal after surgery. It will slowly reduce within 10 days. Unexplained gross oedema needs further investigation.
 - Review the stoma size daily and adjust the aperture of the skin barrier to avoid exposure of the peristomal skin.
 - If the stoma is very oedematous the use of a cold compress may help reduce the swelling before applying the pouch.
 - After cutting the aperture to the correct size, the adhesive can be cut with radial slits (feathering/frilling) to enable easier application of the pouch.

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- Make sure the skin barrier does not cover the fistula.
 - Consider seal or paste to protect the peristomal skin.
 - Use of convex pouching system may be indicated under supervision of the Stoma Care Nurse Specialist.

Stoma	Status	Definition/Presentation
	Hernia	Bowel entering parastomal space.
	Stenosis	Tightening of stomal orifice.

Proposed intervention and management

- Check the stoma size regularly as the hernia will usually cause the stoma to change shape. This should be assessed in both a sitting and standing position.
 - Large / oval shaped skin barriers may give more security. "Picture framing" of the skin barrier with retention strips/tape may prolong wear time. **However, if the seal is broken and the pouch is leaking it must be changed!**
 - After assessment the Stoma Care Nurse Specialist may refer the patient for surgical review.
 - Use of support garments or abdominal belts are only effective if the hernia is reducible. Belts or garments should be fitted by an appropriately trained specialist.
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- This is not necessarily a medical emergency unless the stoma is non-functioning, the patient is in pain or vomiting.
 - Pouch management does not need to be changed. However ensure the aperture is sufficient to allow faeces to enter the pouch.
 - The stoma may require dilation. Refer the patient to a medical practitioner or Stoma Care Nurse Specialist for assessment.
 - Surgical correction may be required.

Stoma	Status	Definition/Presentation
	Separation	Mucocutaneous separation, partial or circumferential.
	Granulomas	Raised nodules/lumps on the stoma.

Proposed intervention and management

No treatment is required for superficial separation. If there is a deep cavity, filler paste/seals or alginates may be used.

Reassure the patient that this will heal in time. Stoma care practice differs when treating this condition. Common forms of management are:

1. Cut the skin barrier to the edge of the separation.
Change the pouching system according to local protocol.
2. Use non-alcohol based paste/seals or alginates in the separation.
Cut the skin barrier to the stoma size so it seals as a lid over the separation.
Change the pouching system according to local protocol.

Convex products should only be used under the supervision of a Stoma Care Nurse Specialist and according to local protocol.

- The granulomas may be painful, bleed easily and cause the pouch to leak. They may be due to friction from the skin barrier, belts, clothing or patient behaviour.
- Treat the stoma very gently. Excessive bleeding may be stopped by using a cold compress.
- Use a soft and flexible pouching system to reduce friction.
- Contact your Stoma Care Nurse Specialist who will initiate treatment according to local protocol.



Normal Peristomal Skin

Peristomal skin assessment and management

Peristomal skin is the skin immediately surrounding the stoma. Intact peristomal skin is vital in stoma care as it provides the surface on which the skin barrier is adhered.

Management of any peristomal skin problem should begin with a review of stoma care practice.

Good stoma care practice includes:

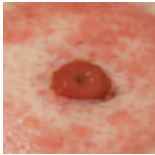
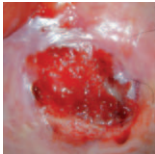
- Assessment of patient's ability to self care
- Measurement of stoma size and appropriate skin barrier fit to stoma aperture
- Educating the patient to understand the importance of maintaining skin integrity
- Empowering the patient to take responsibility for the care of their peristomal skin

In the following pages you will find examples of different peristomal skin conditions and we will provide suggestions for treatment, intervention and management.

Peristomal skin	Status	Definition/Presentation
	Erythema	Red intact skin. Transient erythema or “blushing” of the skin is normal when removing the skin barrier. Common causes of erythema are: skin barrier cut too large, excessive changing of the skin barrier or poor stoma care technique.
	Macerated	Excoriated; moist.
	Eroded	Excoriated; moist and often weeping and bleeding.

Proposed intervention and management

- Educate the patient to measure their stoma regularly.
 - Educate the patient to support the skin whilst removing the skin barrier.
 - Provide the patient with written information on correct pouch changing technique.
 - Check output consistency is appropriate to stoma type; consider antimotility drugs if necessary.
 - Skin protecting accessories are not normally required, however local practices may advise use. They should be discontinued when problem resolves, to avoid residue build up.
 - Consider seals and paste to protect the peristomal skin.
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- Review frequency of pouch change.
 - Use protective powder on moist areas only and discontinue use when the problem is resolved.
 - Consider the use of seals or change of product.
 - Alcohol based paste should not be used on broken skin.
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- Apply topical treatments as per local stoma care protocols.

Peristomal skin	Status	Definition/Presentation
	Infection	Infection can be bacterial or fungal. Skin can appear dry and flaky or raised, red and moist.
	Pyoderma Gangrenosum	Purple edged, very painful ulcers which ooze exudate, skin bridges/strands may be present.
	Psoriasis/ eczema	Common skin disorders that appear on other parts of the body as well. Well defined, pink or scaly plaques.
	Folliculitis	Infected hair follicles.

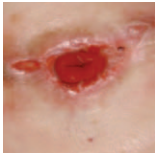
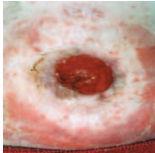
Proposed intervention and management

- Assess patient need for re-education.
- Take a skin scraping or a swab for culture.
- Following positive results, appropriate treatment to be used under the supervision of the Stoma Care Nurse Specialist.

Take a microbiology swab to culture the ulcer and exclude secondary infection. A biopsy will determine if this is PG and depending on the severity there are various treatment options. Refer to the Stoma Care Nurse Specialist/Dermatologist for further assessment and treatment.

Swab and culture the skin to exclude any secondary infection and refer to the Stoma Care Nurse Specialist for further advice on how to apply topical treatments in conjunction with stoma care products.

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- Assess patient technique for peristomal hair removal. Re-educate the patient on shaving technique using single use razor and water or an electric clipper.
 - If very severe, oral antibiotic treatment/skin washes as per patient group directives.

Peristomal skin	Status	Definition/Presentation
	Ulcerated	Skin defect reaching in to subcutaneous layer.
	Irritated	External irritant causing skin to be inflamed, sore, itchy and red. Most common cause for the skin to be irritated is faecal or urine leakage onto the peristomal skin. Allergic reactions are very rare and diagnoses can only be confirmed after patch testing (ref. Lyon and Smith 2010).

Proposed intervention and management

- Skin protecting skin barriers and/or seal to fit the area; can be used in conjunction with topical treatments following local protocols.
- Check medication.
- Consider:
 - Pyoderma Gangrenosum
 - Trauma/self harm or infection.

1. Check whether there have been any changes/additions to their stoma care technique and products used for example: soaps, wipes, lotions, washing powder, adhesives. If so, discontinue use of the irritant.
2. Swab and culture the skin and refer to a Stoma Care Nurse Specialist for further assessment.
3. If no infection is present, apply a prescribed local topical steroid treatment (non-oil based) until resolved or for a maximum of 4 weeks (under supervision of the Stoma Care Nurse Specialist). If persistent refer to Dermatologist.

Peristomal skin	Status	Definition/Presentation
	Granulomas	Nodules or papules comprising granulation tissue (blood vessels) on skin. The granulomas may be painful, bleed easily and cause the pouching system to leak. It is important to maintain the aperture of the skin barrier to fit the stoma only, do not include granulated tissue and /or healthy peristomal skin.
	Chronic papillomatous dermatitis (CPD)	Greyish, raised lumps on skin. Usually only urostomates are affected, this is due to peristomal skin being exposed to alkaline urine over a prolonged period of time.

Proposed intervention and management

- When cleaning the area treat the skin very gently and pat dry.
- Management options may include:
 - Silver Nitrate
 - Liquid Nitrogen
 - Convex products
 - Steroid cream (non oil-based).

All of the above as prescribed and under the supervision of a Stoma Care Nurse Specialist.

- Large areas of over-granulation may need surgical intervention.

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- Re-educate the patient on good peristomal hygiene.
 - Consider using a pre-cut convex product with a belt until resolved. Review within 4 weeks.

Management options may include:

1. Wash the lumps with a vinegar solution (1 part vinegar to 5 parts water) at every pouch change.
2. Oral intake, of no more than, 1 gram Vitamin C tablets per day may help to acidify urine.
3. Cranberry juice /tablets may also help to acidify urine.
(NB: Cranberry juice/tablets is contraindicated if your patient is on Warfarin).

Assessing for convexity

For people living with a stoma, it is of utmost importance to have a secure pouching system. Therefore the nurses assessment is pivotal, as highlighted in the previous sections.

One of the management options available to ensure a dependable and secure pouching system is the use of firm convex products.

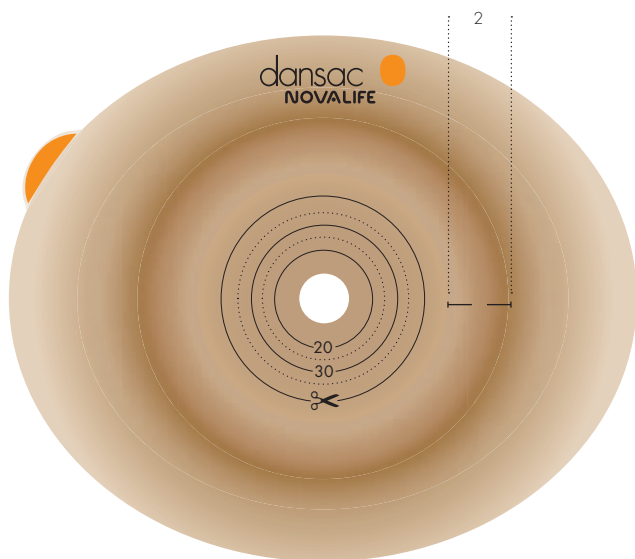
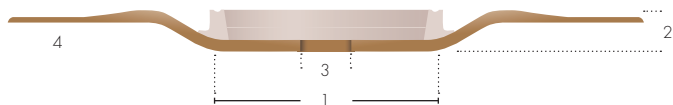
The role of convexity is:

- To provide support to the peristomal area.
- To allow for continuous contact between the skin and the skin barrier to create a secure seal.
- To create pressure on the peristomal skin increasing the stoma protrusion into the pouching system.

Ever since firm convex products were launched there have been varying approaches to measuring and selecting the best possible convex product in order to solve the stoma problem. Most firm convex products are constructed with a round rigid plastic moulded insert inside the skin barrier to provide pressure and support to the peristomal area. These inserts vary from manufacturer to manufacturer in shape, depth, and gradient.

This guide aims to provide the nurse with an easy to understand practical approach on how and when to use firm convexity.

Convexity



Firm convex - terminology

1. Plateau size:

The area on the skin where pressure is applied.

2. Depth:

A combination of the firm insert and the thickness of the skin barrier itself which together enables the stoma to extend into the pouch. The use of paste, seals or a belt will also increase the depth.

3. Hole size:

The opening in the skin barrier that matches the stoma size for a snug fit to reduce the risk of leakage.

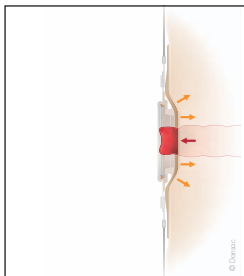
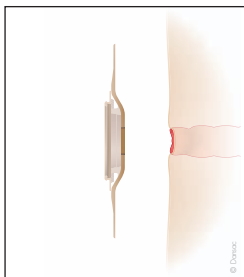
4. Tapered barrier:

Flattening of the skin barrier towards the outer surface to reduce edge roll and increase skin barrier flexibility.

Stoma	Status	Cause
 Definition: The stoma mucosa is at skin level, either partially or complete. A flush stoma may cause problems in obtaining and maintaining a secure and leak proof seal particularly in the management of an ileostomy or urostomy. This is due to the liquid output from these stomas. Leakage underneath the barrier results in irritant dermatitis of the peristomal area.	Flush	The aetiology of a flush stoma varies and can occur in the post-operative phase or as a complication later on. When seen in the immediate post-operative phase a flush stoma can be caused by: • Inadequate mobilisation of the intestine. • Obesity: It is not possible to expose enough intestine to create the needed stoma length. • Premature removal of the stoma rod, especially if the intestine is looped over the rod under tension. When seen in a later phase: • Excessive weight gain post surgery. • Development of a peristomal hernia.* • Scar tissue caused by chronic irritation of the peristomal skin. • Adhesion formation of the mucocutaneous junction.

Proposed intervention

It is important to find a pouching system that can maintain a good and secure seal between the skin and the skin barrier and most often a firm convex product will help solve this problem.



In addition to convexity, you may consider:

- A belt to increase pressure to assist stoma protrusion
- Seals or paste as fillers
- Surgical intervention if problem persists

*It is a contraindication to use a firm convex product if the reason for the stoma being flush is the development of a hernia, in case of peristomal hernia a flexible/flat barrier and a barrier ring might be the best solution.

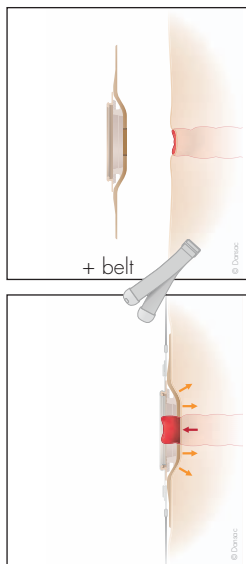
Stoma	Status	Cause
 Definition: When the stoma is drawn or pulled back behind skin level. It can be either partial or complete.	Retracted	The aetiology of a stoma retraction is varied and can occur in the post-operative phase or as a complication later on. When seen in the immediate post-operative phase it can be caused by: • Inadequate mobilisation of the intestine. • Obesity. It may not be possible for the surgeon to mobilise enough intestine to create length on the stoma. • Inadequate fixation of the intestine to peritoneum. • Necrosis of the stoma/intestine. • Mucocutaneous separation. • Premature removal of the stoma rod, specially if the intestine is looped over the rod under tension when seen in a later phase. • Excessive weight gain post surgery. • Scar tissue caused by chronic irritation of the peristomal skin. • Adhesion formation of the mucocutaneous junction.

Proposed intervention

A retracted stoma often results in leakage underneath the skin barrier which result in irritant dermatitis of the peristomal area. It is important to find a pouching system that can maintain a good and secure seal between the skin and the skin barrier and most often a firm convex product will solve this problem.

In order to find the right pouching system it is important to examine the patient in different positions because the depth of the retraction may increase when sitting and can vary due to peristaltic movements. This will also help determine between use of a 1-piece or a 2-piece product and to define if a seal or paste would need to be added as well.

When examining the patient it is important to gently explore the stoma to identify any stenosis.



If the stoma is retracted due to obesity the best solution for the patient is to lose weight.

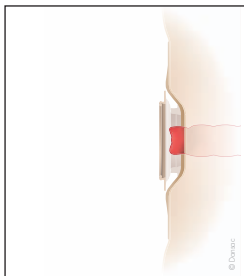
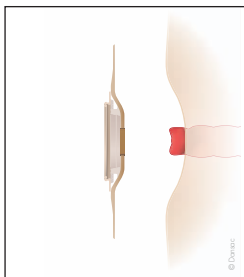
In addition to convexity, you may consider:

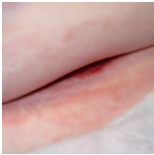
- A belt to increase pressure to assist stoma protrusion
- Seals or paste as fillers
- Surgical intervention if problem persists

Stoma	Status	Cause
 Definition: An indentation appears like a hollow that can be either all the way around the stoma or just partially around it.	Indentation	An indentation around the stoma can occur at any time following stoma surgery. Stoma siting pre-operatively is important to make sure that the stoma is located optimal, but with emergency surgeries, the likelihood of this being done pre-operatively is relative small. Abdominal contours may change with position change and abdominal folds and creases become more pronounced in the sitting position. Causes that may result in an indentation: • Post-operative infection. • Sutures that have been pulled too tight during surgery. • Scar tissue in the peristomal area caused by long term infection. • Constant and long term pressure from using firm convex.

Proposed intervention

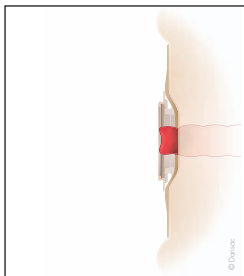
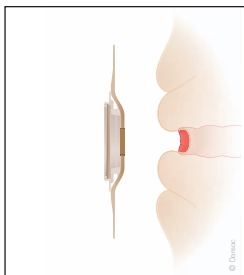
The indentation has to be examined to find a firm convex product with a suitable plateau. If there is scar tissue around the stoma it might be necessary to use paste or seals to fill any recesses/creases before fitting the firm convex product. This is done to achieve the best possible adherence to the skin. Also is it important to assess for a 1-piece or a 2-piece product and the use of a belt.



Stoma	Status	Cause
 Definition: Stoma is situated in a skin crease on the abdomen, this can be partial or circumferential.	Skin folds	Following surgery it is not uncommon for people to either gain weight or lose weight. As skin ages, tone and turgor are getting loose, causing the skin to wrinkle. If the stoma is situated in a skin fold, the skin barrier may not be able to work properly as it can be difficult to get a complete seal around the stoma. This will increase the potential for leakage between the peristomal skin and the skin barrier.

Proposed intervention

Prevention is the best management, and pre-operative stoma siting is key to finding the best possible stoma placement on the abdomen. If skin folds, scars or creases occur, the introduction of the appropriate convexity product is required.



Stoma	Status	Cause
 Definition: A loop stoma consists of two ends: proximal and distal. The proximal end is the functioning end and the distal is the non-functional end.	Loop Stomas	Ideally, the proximal end is slightly more proud than the distal end. However, this is not always the case, as the loop stoma may be under tension internally causing either the distal or proximal end to recess to skin level or below. Consequently the seepage of stoma effluent under the skin barrier may cause the barrier to lift.

Proposed intervention

If either the proximal or distal end of the stoma are recessed, the introduction of the appropriate convexity product is required.

Additional uses for firm convexity

Firm convexity also plays a major role in correcting: a stoma located at or below the skin level, an incorrectly constructed stoma which may tip toward the muco-cutaneous margin, stoma profile which is compromised due to necrosis.

Contraindications for firm convexity



Stomal prolapse:

Refers to an increased protrusion/lengthening of the mucosa of the stoma.

This is due to intussusception/telescoping of the bowel out through the stomal opening.

Contributing factors may be an excessively large opening in the abdominal wall (surgical technique) and/or increased abdominal pressure (e.g. heavy lifting, coughing). A prolapse occurs more frequently in transverse loop stomas. They will need a large skin barrier and a large volume pouch to accommodate the prolapse.

1-piece flexible products are usually the best solution.



Peristomal hernia:

This is caused by a weakness in the muscle layer where internal organs may protrude.

The hernia appears as a bulge around the stoma and this bulge contains loops of intestine that protrudes through the fascia defect around the stoma and into the subcutaneous tissue. Causes include surgical technique, muscle weakness, and coughing/straining. Parastomal herniation is a common complication which may occur weeks, months or years after stoma surgery.

The patient often experiences discomfort, problems with stoma pouching systems /clothing, and can find the appearance of the hernia very distressing.

Management can include fitting an abdominal product. Often a 1-piece product is more suited due to its flexibility. Occasionally surgical repair may be required.



Pyoderma Gangrenosum:

This is a rare ulcerative, inflammatory skin disorder. Lesions may appear as single or multiple painful papules, pustules or nodules that rapidly become indurated and ulcerated. These often extensive lesions appear raised with a dark red to purple irregular margin. PG constitutes for 4% of stoma skin problems (Lyon 2001).

The established ulcer is very painful and almost always interferes with the normal use of a stoma bag. Pressure from belt loops, convexity or clothing can trigger a Pyoderma ulcer, that is why firm convexity products are contraindicated. Paste and seals are all right to use, as well as soft convex products.



Caput Medusa:

A term used to describe a bluish-purple discoloration of the skin caused by dilation of the cutaneous veins around the stoma.

This is usually as a result of portal hypertension (some times seen in the terminal patient when liver metastasis are present).

In all these cases the use of a firm convex product is contraindicated, due to the pressure the convex product causes, this pressure will lead to pressure sores and an ischemic peristomal skin.

Conclusion

Conclusion:

Having a stoma affects the fundamental feeling of being in control of body functions and may also influence everyday activities that most people take for granted. There are many adjustments and considerations to be made by the individual, such as how to best contain stoma output, personal hygiene, skin protection, pouch system concealment and routines for changing and disposal.

To aid rehabilitation and adaptation to life with a stoma, it is important to define, decide and select the appropriate pouching system. Making the correct assessment of the patient, the stoma and the skin, and ensuring correct measurement of the stoma will help you to be better equipped to find the appropriate pouching system from the very beginning.

One management option is convex products. Finding the appropriate convexity for the management of difficult stomas and /or challenging peristomal skin is of utmost importance to secure patient outcomes, enhancing comfort and securing their quality of life. Convexity works best closest to the stoma. Pre-cut convexity works better if the stoma is round. If using cut-to-fit convexity use the plateau size closest to the stoma size for maximum convex effect.

The Comprehensive Assessment Guide covers in-depth patient assessment, comprehensive knowledge on stoma and skin, and explains when and how to use firm convex products. We hope this booklet can provide you with the tools needed to select the best possible pouching system for your individual patient.

List of Contributors:

Dansac Convex Advisory Board

Rosine van den Bulck

Clinical Nurse Specialist in Wound Care
and Stoma Care, Clinique Edith Cavell,
Belgium
rosine.vandenbulck@gmail.com

Calum Lyon

MA FRCP Dermatology Department Salford Royal
Hospital & York Hospital York District Hospital,
UK
calum.lyon@virgin.net

Julia Williams

Senior Lecturer in Gastrointestinal Nursing,
Bucks New University
106 Oxford Road, Uxbridge Missx. UB8 1NA,
UK
julia.williams@bucks.ac.uk

Gabriele Stern

Stoma Care Nurse Specialist
ATZ Stern am St. Agnes Hospital,
Germany
sternmail@atz-stern.de

Claudia van Tienderen

Stoma Care Nurse Specialist
Spaarne Hospital Hoofddrop
cvantienderen@spaarneziekenhuis.nl

A practical guide for Stoma and Peristomal Skin problems:

Based on the work done by:

Frances McKenzie, Amanda Smith, Doreen Woolley, Beverley Colton, Bart Tappe and Global Clinical Marketing, Dansac A/S.

Peer Review

The Comprehensive Assessment Guide for Patient, Stoma, Skin & Convex has been peer reviewed by:

Fran McKenzie

RGN, RMN, CNS Stoma Care
Scotland, United Kingdom

Jill Bisatt

RN, SCN
Yorkshire, United Kingdom

Paris Purnell

RN, STN
Melbourne, Australia

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Dansac A/S
Lille Kongevej • DK-3480 Fredensborg • Denmark
Tel +45 4846 5000 • Fax +45 4846 5010
www.dansac.com

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