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*Title: Ostomy Management in the Obese Client*

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**AUTHOR DISCLOSURE STATEMENT**

Patricia Cropley has no conflicts of interest to disclose.

**Purpose**

**Discuss the challenges of caring for an obese patient with an ostomy.**

**Objectives**

- **Describe challenges to ostomy care when the client is obese.**
- **List possible complications.**
- **Describe care of the obese ostomy patient.**

**A Review of Words**

Stoma- It is an intentional opening constructed to manage traumatic bowel injury. Definition from a surgeon from the mid 18<sup>th</sup> century (Colwell et al., 2004).

Effluent - drainage that flows from the stoma (Colwell et al., 2004).

Peristomal - Skin surface surrounding the stoma (Colwell et al., 2004).

Convexity - An insert or integration into the flange or wafer system to create a downward pressure in the peristomal region. It is a bowl shaped configuration to help make the stoma protrude outward (Milne et al., 2003).

Mesentery- supports and anchors the abdominal organs to the abdominal wall. It is a double fold of peritoneum that contains blood vessels, lymphatics, and nerve fibers that supply and innervate the intestine (Milne et al., 2003).

### **Ostomy Management and Obesity**

Approximately 34% of the adult population is overweight and 30% of the population is obese in the United States. Obesity can be defined as the excess of body fat or one who has a Body Mass Index of 30. A Body Mass Index or BMI of 30 is the general standard to define obesity by the U.S. Department of Health and Human Services. A BMI is calculated by weight in kg / height in meters (Diagnosing and treating overweight and obese patients, n.d.).

Obesity results in over 300,000 premature deaths and nearly \$120 billion in associated costs. Obesity is a risk factor for

numerous diseases such as diabetes and coronary artery disease. Obesity places patients at a higher risk for medical problems (Diagnosing and treating overweight and obese patients, n.d.).

There is a clear association between obesity and certain cancers such as colorectal and urinary cancer, resulting in patients that require a fecal or urinary diversion (Colwell & Fichera, 2005). The purpose of this paper will discuss the challenges of caring for an obese patient with an ostomy.

### Challenges

Care of the obese patient with an ostomy presents many challenges. There is a higher risk of wound and cardiopulmonary complications with a higher incidence of comorbid conditions affecting surgical outcomes (Colwell & Fichera, 2005).

Caring for the obese patient requires a team approach and an understanding of Bariatric care. Clinicians must increase their knowledge of appropriate products and services to better help patients deal with their health care concerns to attain some level of normalcy and self-control (Turnbull, 2006).

### Preoperative Care

There is an increased incidence of intraoperative and postoperative complications for the obese patient, including intraoperative blood loss, anastomotic failure and septic complications (Colwell & Fichera, 2005).

Obese patients that have ostomy surgery have been shown to have more complications than the general population; these complications affect their outcome. Complications include difficult airway management, anastomotic failure, stomal complications, infection, cardiovascular events, deep vein thrombosis, pulmonary embolism, increased blood loss and increased operative time (Colwell & Fichera, 2005).

Stoma complications arise as much as 36% for the obese patient. Complications arise due to mechanical factors. It is challenging to create a stoma for an obese patient. The obese patient has a thick layer of subcutaneous fat through which the intestine has to be placed, and they have a foreshortened mesentery, which can cause tension on the mesentery (Colwell & Fichera, 2005).

#### Preoperative Education

It is important to provide preoperative information prior to ostomy surgery. A care conference with a surgeon may help in the decision making process of stoma placement (Gallagher & Gates, 2004). Preoperative patient education should include a review of the Gastrointestinal and Urinary System. If a facility is fortunate to have a Wound Ostomy Continence Nurse (WOCN) on staff, the WOCN can prepare the patient with the appropriate teaching and proper stoma marking (Gallagher & Gates, 2004).

The wound ostomy continence nurse is a specialist in the management of wounds, such as vascular ulcers, chronic wounds, pressure ulcers, neuropathic wounds and fistulas. The WOCN manages ostomy patients related to cancer, trauma, urinary and bowel diseases and patients with fecal and urinary incontinence (Wound, Ostomy & Continence, n.d.).

Before surgery, patients are marked on their abdomen for the proper placement of their stoma. This is done either by the surgeon or WOCN. Prior to stoma marking, the educator should review with the patient the process for stoma creation, visualization of a stoma, and how the stoma functions and what the patient's expectations are after surgery. This may be done through teaching booklets and pictures. Time should be spent answering questions from the patient, family members or significant other (Colwell et al., 2004).

#### Stoma Marking

When marking the abdomen for a stoma, it is important to avoid skin folds, deep creases, uneven and scarred areas, bony prominences, and the belt line if possible. Other considerations include: placing the stoma within the borders of the rectus muscle, and placing the stoma in a location visible to the patient. Another consideration is to place the stoma on the abdomen with approximately 2.5 inches of adhesive surface for a

pouching system and placing the stoma in an area that is acceptable to the patient (Colwell et al., 2004).

When marking an obese patient with a protruding abdomen, the rectus muscle may not be easily palpated. It would then be best to follow the nipple line down to the abdomen where the possible stoma site is to be considered (Colwell et al., 2004).

For the obese male patient, the belt line is often in the lower abdominal fold. Since there is no flat pouching surface below the lower abdominal fold, the stoma site is marked in the upper quadrant, where it is also visible to the patient. The patient should be assessed in the sitting position. Patients, either male or female should be evaluated for site marking in the lying, sitting and standing position if possible (Colwell et al., 2004). In some cases, it may be a good idea to mark more than one stoma site, because the location of the stoma may change once the surgeon enters the abdomen. As a general rule, marking a stoma higher on the obese abdomen should allow the person good visualization of the stoma and make the stoma accessible for self care (Colwell & Fichera, 2005).



Photo of placement of stoma marking (Stoma Marking, n.d.).

#### Postoperative Education and Complications

The creation of an ostomy creates the need for many adjustments, whether the stoma is temporary or permanent. There is a change in body image, to self-esteem and the adjustment to route of elimination (Colwell et al., 2004).

Collaborating with the health care team is fundamental in encouraging the patient and their family/significant other to achieve optimal rehabilitation. The health care team includes the surgeon, the medical physician, the WOCN and the health care staff (Colwell et al., 2004).

#### Ostomy Adjustment

Ostomy surgery involves major changes in body appearance and functioning. The new ostomy patient has many concerns such as stoma care, stool leakage, odor, pouch changing and the need to rely on others (Colwell et al., 2004). Coping styles vary from individual to individual and need to be assessed by asking patients to provide examples of how they have coped with other

stressful situations. Patients should be assessed for prior knowledge or experience of ostomy care to reinforce or address any misconceptions (Colwell et al., 2004). The need to determine a patient's self-efficacy is an important measure to evaluate and will determine the adaptive skills of a patient with a stoma. Being aware of patient's adaptive skills will assist health care practitioners to strengthen a patient's self-efficacy (Bekkers et al., 1996).

The Psychological Adjustment to Illness Scale (PAIS-SR) has been utilized to measure a patient's self-efficacy and is the basis for creating a tool called the Stoma self-efficacy questionnaire. In the study utilizing the scale in the Netherlands Primary Health Care, 59 stoma patients were studied on medical, sociodemographic and psychological factors. Patients that had health problems before surgery such as heart disease and cancer had lower levels of adaptation after surgery and patients that had lower levels of adaptation after surgery also had many stoma problems (Bekkers et al., 1996). By having patients complete a self-efficacy questionnaire, insight was gained on what their concerns were and how to address their problems. There were a number of issues raised. Some of the ways in which self-efficacy was encouraged was by addressing the patient's stoma problems and by encouraging them to take care of

their stoma. Patients were provided with information on taking care of their stoma at home and in social situations. (Bekkers et al., 1996).

#### Pouch Emptying

The majority of patients empty their pouch while sitting on the toilet but if the patient is having difficulty, there are other options to pouch emptying, depending on the type of stoma. Emptying the pouch on the toilet is achieved by draining the output from the drainable pouch between one's legs into the commode. Since it is difficult for an obese patient to lean forward enough to allow the tail of the drainable pouch to drain into the toilet, a 2 piece pouching system may be more convenient. It can be removed from the flange and emptied into the commode and reapplied. A Pouch liner is another alternative. The liner is inserted into the pouch of a 2 piece system. The pouch is snapped off the flange, the liner is removed and disposed of and a new liner is inserted and the pouch is snapped back on. A closed end pouch is another choice depending on the type of stoma. The pouch can be applied, removed and discarded and a new pouch applied (Colwell et al., 2004).

#### Visualizing the Stoma

For some patients, the stoma may have been placed in the ideal area for pouching but maybe difficult to see because of a

large abdomen. For the patient who has difficulty seeing the stoma, using a mirror can aid in visualizing the stoma. A mirror will aid in assessment and to assist in seeing the peristomal skin for cleaning but for most patients using a mirror to put on a pouch is difficult (Colwell & Fichera, 2005). By marking a line where the old pouch meets the adhesive with a marker, this leaves a guide for the patient to place the new pouching system. The patient simply lines up the new adhesive with the line (Colwell & Fichera, 2005).

### Stoma Complications

#### *Necrosis*

A high rate of necrosis has been reported for both the obese and acutely ill patients. Stoma necrosis occurs when the blood flow is impaired or interrupted from or to the stoma. Ischemia can occur within 24 hours postoperatively (Barr, 2004). Necrosis can occur if there is tension on the mesentery, excessive stripping of the mesentery and if sutures are too narrowly spaced. An interruption of blood flow due to an embolism or an anomaly such as impaired blood flow can cause necrosis (Barr, 2004). Degrees of necrosis can vary. The stoma can appear either dark to maroon in color, or have a small patch of necrosis on the stoma or the entire stoma can be necrotic. To determine the degree of necrosis, the physician may insert a

small lubricated glass test tube into the stoma and inspect the stoma mucosa with a pen light. If necrosis has occurred below the fascial level, urgent attention is needed. Necrotic tissue on the stoma above fascial level will usually slough off in time. Mucocutaneous separation or stenosis might occur and the stoma should be evaluated at frequent intervals (Colwell & Fichera, 2005).



Photo of necrotic stoma (Surgical-tutor, n.d.).

### *Retraction*

Retraction occurs when the stoma is below skin level. This may involve the entire stoma or partially at the site of mucocutaneous separation (Barr, 2004). Stoma retractions can occur for similar reasons as necrosis. It can occur when there is inadequate fixation of the bowel to the parietal perineum or

if the loop device is removed prematurely. Retraction can also occur because of short mesentery, excessive scar or adhesion formation and inadequate stoma length (Colwell & Fichera, 2004). Retraction may also occur secondary to conditions such as obesity. There is a high risk of retraction when there is a high Body Mass Index (BMI) score (Barr, 2005).

Patients with retraction problems will note the stoma disappears especially when sitting and they will have more difficulty pouching their stoma and maintaining a seal. Effluent will leak under the seal and patients will need to switch to a convex system. Soft adipose tissue surrounding a retracted stoma may cause creases and folds on the peristomal skin creating an irregular pouching surface and be the cause for effluent leaking under the pouching system (Colwell & Fichera, 2004). The use of barrier paste, strips and adhesive will aid in filling in creases and providing adherence. In addition to adding barriers to fill in creases, a convex pouching system may help to create a more secure pouching system (Barr, 2004).

Convexity on the face plate of the pouching system can increase stomal protrusion by pressing into the tissue around the stoma. Convexity reduces the risk of undermining of stomal output beneath the pouching system (Barr, 2004).

In some cases, convexity may not be appropriate. A thin flexible pouching system may be more suitable. The flexibility of the system will allow for adhesion in a deep crease (Colwell & Fichera, 2004). Surgical revision may be necessary if the patient is unable to maintain a seal that protects the peristomal skin. Surgical revision is possible if there is adequate intestine to mobilize a stoma above skin level (Colwell & Fichera, 2004).



This patient has two stomas. The arrow indicates a retracted stoma (Surgical-tutor, n.d.).

#### *Mucocutaneous Separation*

Mucocutaneous separation is the detachment between the surrounding skin and the stoma. It can occur because of poor

healing, tension on the mesentery, problems with surgical stoma construction, retraction or necrosis (Barr, 2004). Patients that experience mucocutaneous separation are those that are: obese, immunocompromised, malnourished, have diabetes or are on corticosteroid therapy (Barr, 2004).

Erythema or induration proximal to the site of separation is the beginning signs of mucocutaneous separation. The stoma can partially or circumferentially separate from the peristomal skin. The clinician assessing the site should gently probe the area with a cotton tip applicator to assess the depth of separation. The patient may complain of pain or burning with the evaluation. The tissue type that is exposed during the separation is usually a fibrin slough that produces mild to moderate drainage. Drainage that is producing stool or urine, indicates a fistula. Measures to support and promote wound healing include flushing the separated area with normal saline, filling in the dead space with skin barrier paste, powder, strips or an absorptive dressing if it is draining. This will help provide a flat pouching service for the application of a pouching system and aid in healing. If the mucocutaneous separation occurs below the fascial level, surgical intervention may be necessary (Barr, 2004). The tissue that fills in the separated area often results in scar tissue which can cause

stoma stenosis. It is important to continually assess the area for stenosis or retraction (Colwell & Fichera, 2004).



Photo of barrier supplies that protect the peristomal skin (Case Studies, 2007).

### *Stenosis*

Stenosis is the narrowing of the lumen of the stoma at the skin or fascial level. Extreme stenosis, can threaten normal stoma function, impairing the output of the effluent (Barr, 2004). Stenosis can occur as a result of ischemia, excessive tension on the mesentery, retraction and mucocutaneous separation (Barr, 2004).

Stoma stenosis appears as a small lumen at the skin or fascial level or can appear normal but the stool will be narrow or ribbon like. There can be pain at stoma emptying and excessive, explosive, high pitched gas (Barr, 2004). The patient

may also have constipation followed by a large volume of output or have a normal appearing stoma lumen and symptoms of partial obstruction (Barr, 2004). A digital exam by an experienced clinician, using a gloved lubricated finger is performed to evaluate the size of the opening. A retrograde contrast study is performed through a small rubber catheter if a digital exam is not possible. For mild symptoms of stenosis, the patient may be put on a low residue diet, stool softeners and adequate hydration. For patients who are having more severe symptoms, dilation maybe performed. The smallest gloved finger is lubricated and gently inserted into the stoma until the fascial opening is reached and held for 10 seconds without twisting. This is repeated for several times until the appropriate opening is achieved. Dilation is controversial as it does not always work. Sometimes dilation can cause further stenosis and surgical intervention may be necessary (Barr, 2004).

#### Skin Care

Some obese patients have skin folds or creases on their abdomen and it is important to keep the skin clean and dry. Excess moisture and bacteria can accumulate in the skin folds. Care must be taken to keep skin folds free of pouch contents if there is a tendency for effluent leakage and spillage to occur (Gallagher & Gates, 2004). Establishing a pouch change schedule

is important. However, it is important to change the system even if it is not on the pouch change schedule when there is leakage. Leakage is signaled by patient complaints of burning and excessive itching under the wafer even though there may not be visible signs (Rolstad & Erwin-Toth, 2004). A stoma in the upper ileum or jejunum is considered a high output stoma and the effluent is corrosive to the skin. These patients have to pay particular attention to leakage (Colwell et al., 2004).

#### Support Systems

If the stoma is located in the belt plane, it is a good idea to add a belt to the pouching system. A belt adds support at the 3 o'clock and 9 o'clock, position. Binders are another type of support and a better choice when the stoma is not located in the belt plane (Barr, 2004).

#### Conclusion

There are many challenges when managing a patient with an ostomy. Care of the obese patient, requires a team approach and knowledge of the challenges and issues an obese patient faces are important factors in ostomy care and teaching.

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From <http://www.nursing.Virgina.edu>

**ENROLLMENT FORM****POST-TEST****EVALUATION FORM**

**Program Title:** Ostomy Care in the Obese Client

**Program Number:** P2.44

**Date:** Please return by JULY 30, 2010 to NDNA 531 Airport Rd, Suite D,  
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**I. ENROLLMENT FORM**

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**II. POST-TEST**

Choose the one correct answer

**Ostomy Care in the Obese Client****P2.44**

1. There are many challenges when caring for an obese patient.	<b>T</b>	<b>F</b>
2. Obese patients have more complications during surgery.	<b>T</b>	<b>F</b>
3. The obese patient never has stoma complications.	<b>T</b>	<b>F</b>
4. Tension on the mesentery can cause stoma retraction.	<b>T</b>	<b>F</b>
5. A WOCN can prepare and educate the patient for ostomy surgery.	<b>T</b>	<b>F</b>
6. An obese patient should be marked for stoma placement.	<b>T</b>	<b>F</b>
7. It is a good idea to mark the stoma in the belt line.	<b>T</b>	<b>F</b>
8. The creation of a stoma can alter a patient's self-esteem.	<b>T</b>	<b>F</b>
9. Stoma necrosis results in a red stoma.	<b>T</b>	<b>F</b>
10. Retraction occurs above skin level.	<b>T</b>	<b>F</b>
11. Obese patients never have problems pouching.	<b>T</b>	<b>F</b>
12. Mucocutaneous separation can occur if you are malnourished.	<b>T</b>	<b>F</b>
13. Stenosis can cause ribbon like stools and pain.	<b>T</b>	<b>F</b>
14. Patients with mild stenosis should be on fluid restriction.	<b>T</b>	<b>F</b>
15. A flat pouching surface is important.	<b>T</b>	<b>F</b>
16. Having a pouch changing schedule is not necessary.	<b>T</b>	<b>F</b>

17. Effluent can be corrosive.	<b>T</b>	<b>F</b>
18. Teamwork is important when caring for the obese patient.	<b>T</b>	<b>F</b>
19. Patients that have difficulty adapting with their stoma after surgery can have stoma problems.	<b>T</b>	<b>F</b>
20. The skin surround the stoma is called periwound skin.	<b>T</b>	<b>F</b>

## II. EVALUATION (Check Yes or No)

HAVE YOU ACHIEVED EACH OBJECTIVE?	✓Yes	✓No
1. Objectives: <ul style="list-style-type: none"> <li>• Describe challenges to ostomy care when the client is obese</li> <li>• List possible complications</li> <li>• Describe care of the obese ostomy patient</li> </ul>		
2. Did the objectives <i>relate to the overall purpose/goal of the activity</i> ? Purpose: Discuss the challenges of caring for an obese patient with an ostomy.		
3. Were the teaching/learning resources appropriate?		
4. How would you rate your knowledge of this content <i>before</i> reading this article? (0- no knowledge to 10-expert knowledge)	Write number⇒	
5. How would you rate your knowledge of this content <i>after</i> reading this article? (0- no knowledge to 10-expert knowledge)	Write number⇒	
HOW LONG DID IT TAKE YOU TO COMPLETE THIS ACTIVITY?	Write MINUTES⇒	

Please print your name as you would like it to appear on your certificate of successful completion:

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COMMENTS FOR IMPROVEMENTS OR FUTURE CONTINUING EDUCATION: