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## More than Skin Deep: Peristomal Skin Complications & Implications

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# More than Skin Deep: Peristomal Skin Complications & Implications

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# Presenters' Bios

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**BONNIE SUE ROLSTAD, MS, RN, CWOCN, President of the webWOC Continuing Education Program & WEB WOC Nursing Education Program,** Over 40 years of WOC Nursing experience in all care settings. Founding partner of WEB WOC Nursing Education Program. Recognized national and international lecturer, extensive publications in peer reviewed journals and textbooks.



# Disclosures

- ▶ The speakers report no financial or off label use of medications or products.

## **Unrestricted educational grant:**

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# Objectives

- ▶ Identify three peristomal skin problems, causes and management.
- ▶ Discuss two implications of peristomal skin problems.
- ▶ Describe the overall impact of peristomal skin complications on health utility & healthcare economics.

# Scope of the problem

- ▶ Incidence: 29% – 63%
- ▶ 30% of outpatient stoma clinic visits
- ▶ 20% who experienced difficulties after surgery did not seek help.

# Impact:

## ▶ Top 5

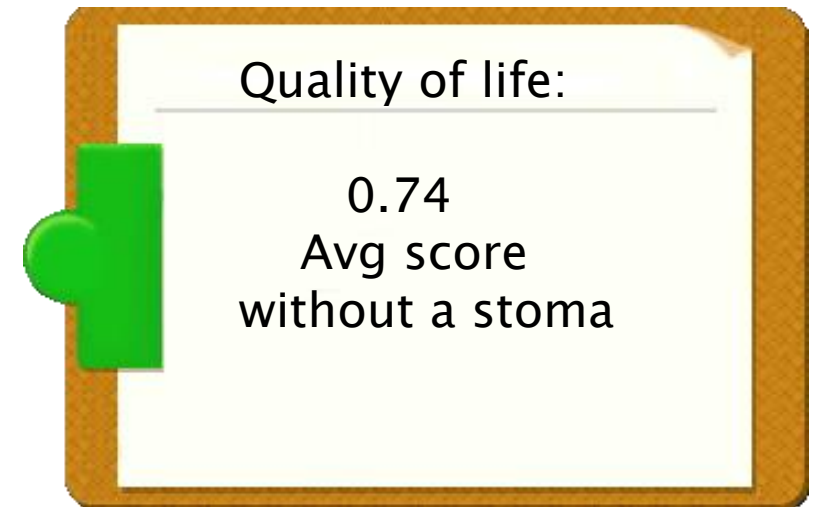
- peristomal skin irritation (76%)
- pouch leakage (62%)
- odor (59%)
- reduction in previously enjoyed activities (54%)
- depression/anxiety (53%)





# Impact on quality of life

- ▶ No PSCs = 0.75 healthy peristomal skin
- ▶ Mild PSCs = 0.697
- ▶ Moderate PSCs = 0.647
- ▶ Severe PSCs = 0.589



Nichols, T., Goldstine, J., Inglese, G. (2019). A multinational evaluation assessing the relationship between peristomal skin health and health utility. *British Journal of Nursing*, Vol 28, No 5 (Stoma Supplement).



# Health Utility

- ▶ What is the economical burden?
- ▶ 1 / 3 had evidence of PSCs in the 90–day period following surgery.



**Mean total healthcare charges over 120 days were \$78,160 higher among patients with vs without PSCs.**

Taneja, C., Netsch, D., Rolstad, B.S., Inglese, G., Lamerato, L., Oster, G. (2017). Clinical and economic burden of peristomal skin complications in patients with recent ostomies. *J Wound Ostomy Continence Nurs.* 44(4):350–357.

# Health Utility

- ▶ Patients with PSCs were more likely to be readmitted to hospital by day 120 (55.7% vs 35.5% for those without PSCs;  $p = .011$ ).
- ▶ The mean length of stay for patients readmitted to hospital was 11.0 days for those with PSCs and 6.8 days for those without PSCs ( $p = .111$ ).



**The mean total healthcare cost over 120 days was \$58,329 for patients with evidence of PSCs and \$50,298 for those without evidence of PSCs ( $p = .251$ ).**

# Peristomal skin complication

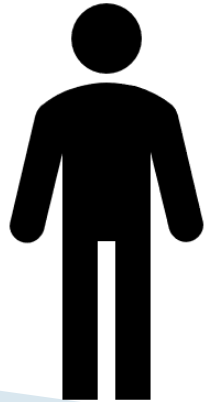
- ▶ Definition:  
Skin irritation to ulceration of the skin surrounding a stoma.



# Causative Factors

## Host Environment:

- ▶ Comorbid diseases
  - ▶ Compromised skin health
- ▶ Increased BMI
- ▶ Smoking
- ▶ Immunosuppression



## Surgical Factors:

- ▶ Preoperative marking can reduce complications
- ▶ Surgical implications:
  - Stoma construction & location

## Behavioral Factors:

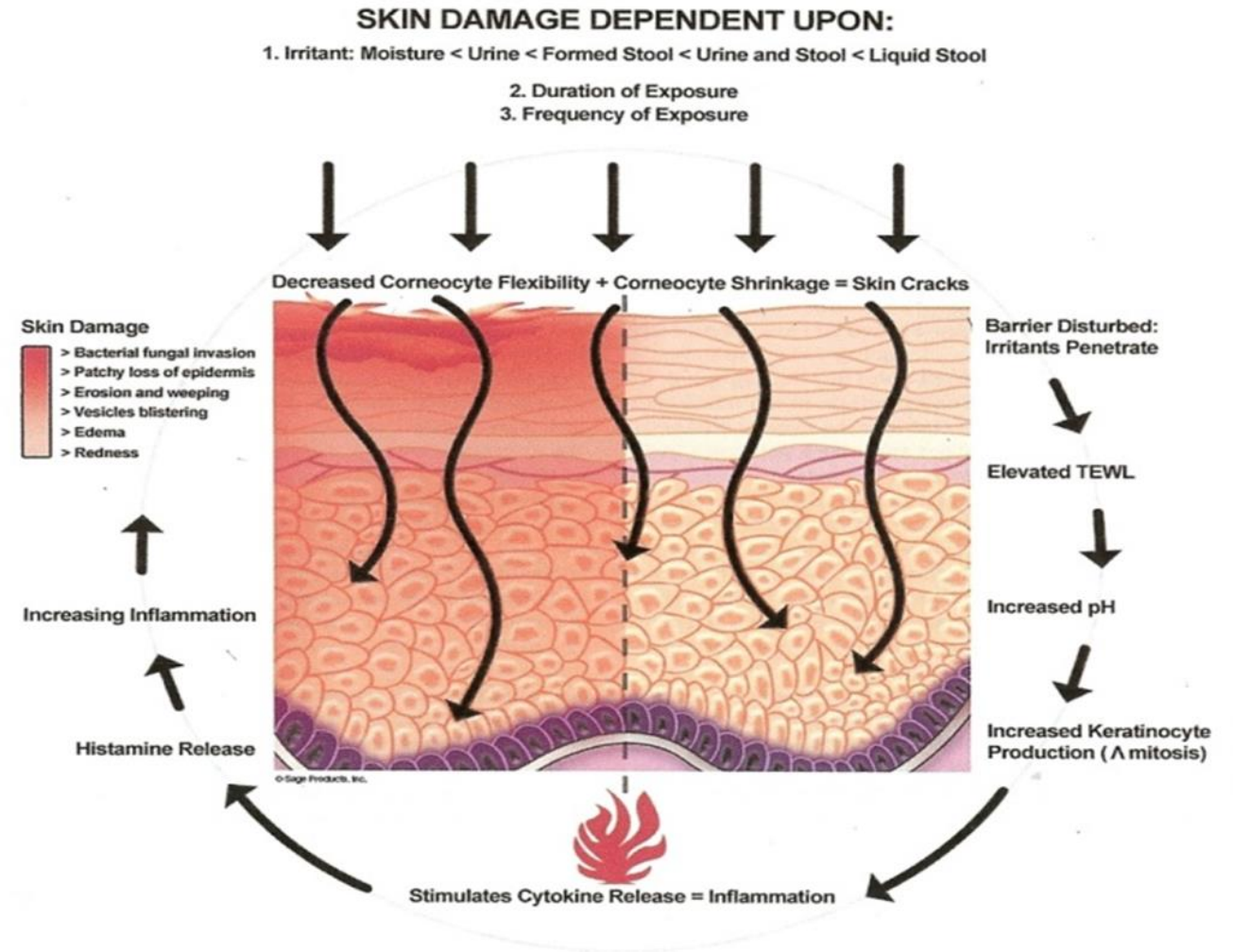
- ▶ Lack of early identification
- ▶ Not seeking treatment
- ▶ Inappropriate product use



# Pathophysiology

## Threats:

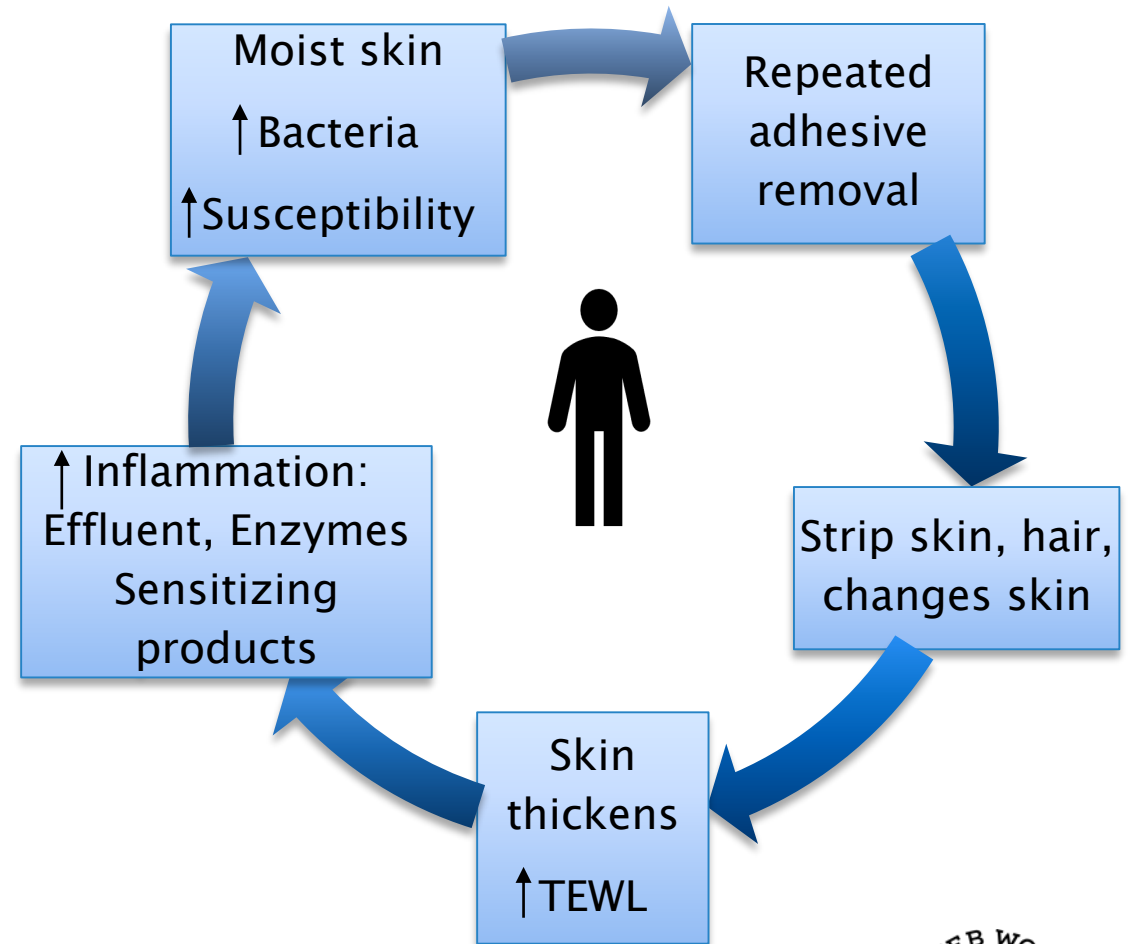
- Chemical
- Microbial



# Pathophysiology

## Threats:

- Mechanical
- Microbial



# Assessment

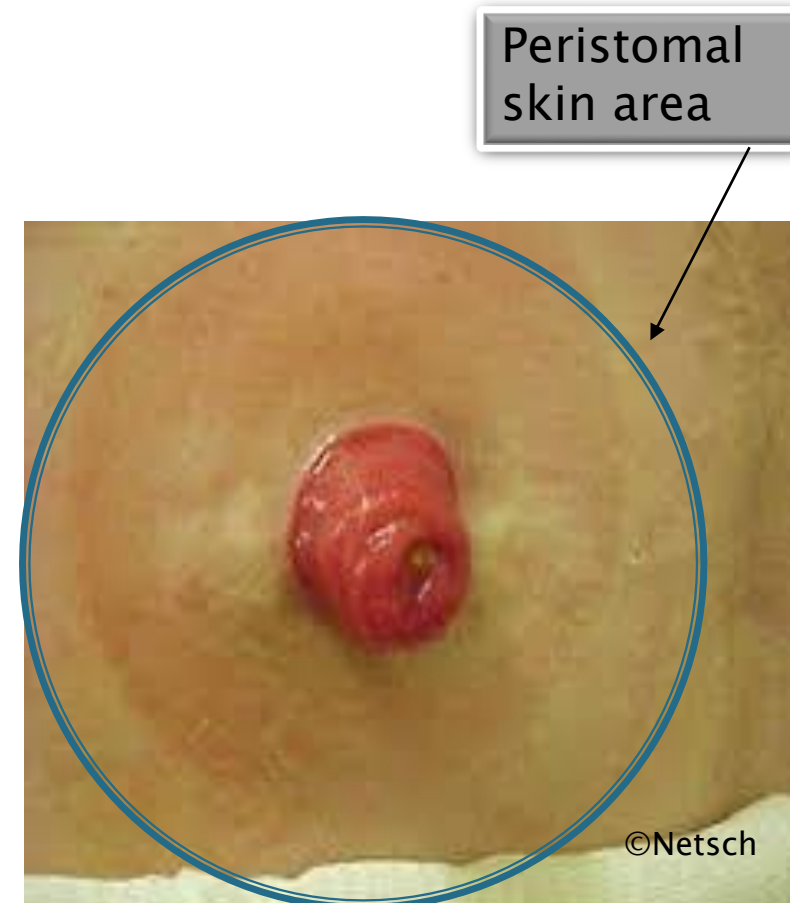


- ▶ Stoma placement
- ▶ Stoma characteristics
- ▶ Ostomy effluent
- ▶ Mucocutaneous junction
- ▶ Peristomal skin assessment



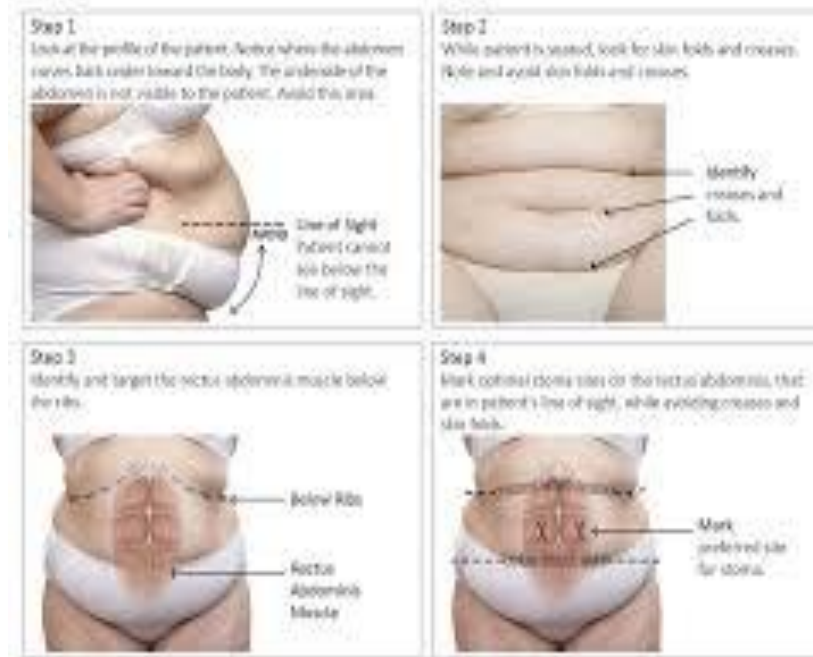
# Anatomy of the peristomal skin

- ▶ Area involved:  
4 inches or less around stoma
- ▶ Ideal:  
Intact & free from any skin injury  
Free of creases and folds



# Abdominal Topography

- ▶ Creases
- ▶ Folds
- ▶ Morbid Obesity
- ▶ Protrusions



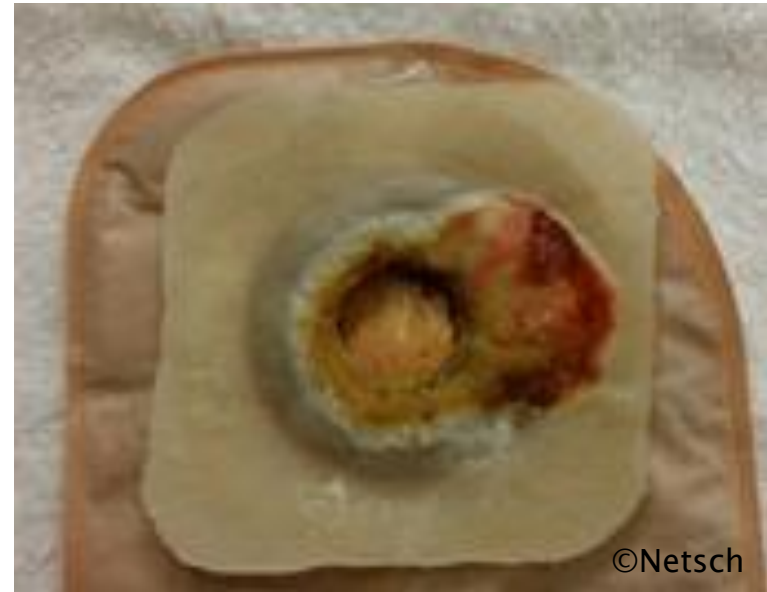
# Peristomal skin complications

- ▶ Moisture Associated Skin Damage (pMASD)
- ▶ Pseudoverrucous Lesions
- ▶ Medical Adhesive Related Skin Injury (pMARSI)
- ▶ Pressure Ulcers/Injuries
- ▶ Allergic Contact Dermatitis
- ▶ Fungal/Candidiasis
- ▶ Folliculitis



# Removed pouch assessment

- ▶ Tells where leakage or drainage are occurring
- ▶ Essentially provides the key to where the problem is located





# Moisture Associated Skin Damage



# pMASD: (Contact Dermatitis)

## Definition:

- ▶ Erythemic area which may be intact, weepy or with shallow ulcerations localized to the area exposed to the irritant effluent or chemical.

## Causes:

- ▶ Leakage of pouching system
- ▶ Opening too large



# pMASD: (Contact Dermatitis Irritant)

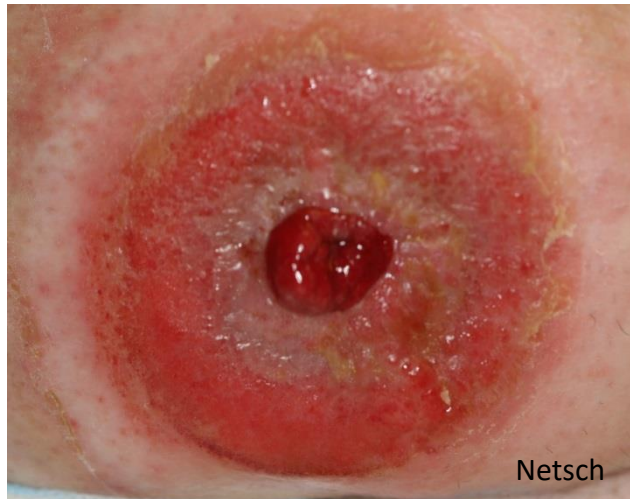
## Treatment:

- ▶ Eliminate cause of effluent exposure.
  - Correct size
  - Convexity
  - Skin Barrier Ring
  - Add Belt
- ▶ Absorb moisture:
  - Powder if denuded.





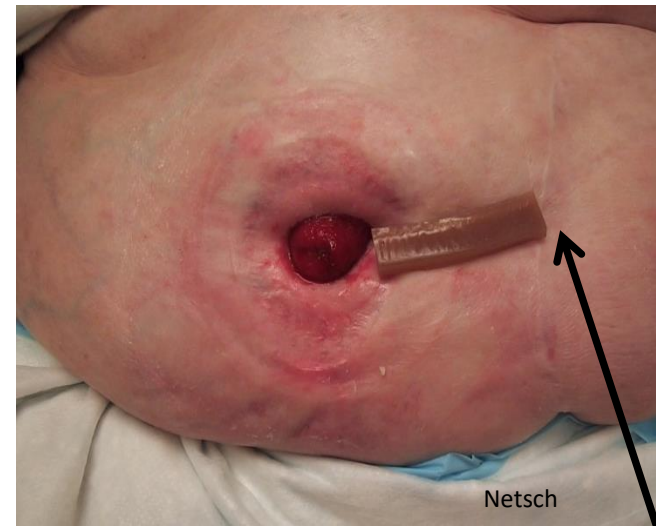
# Maceration (pMASD)



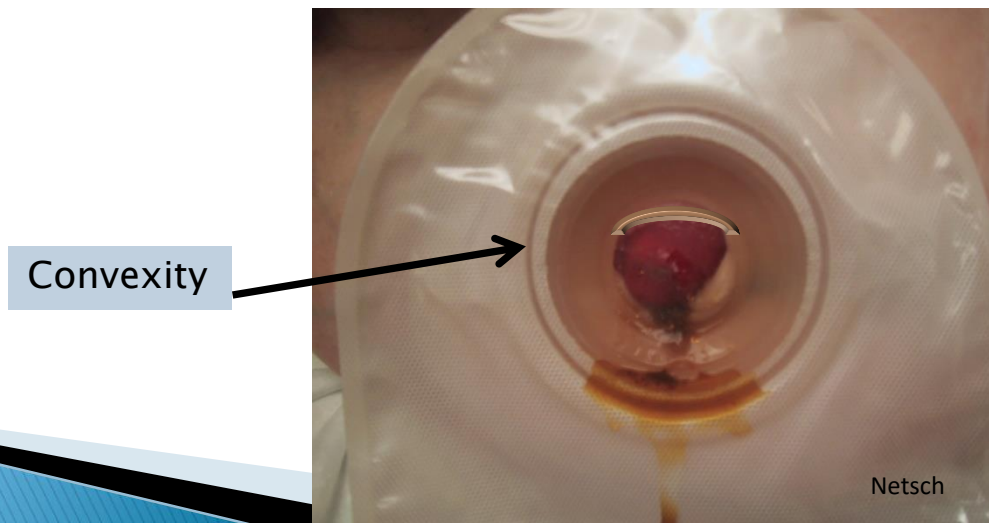
May require crusting



# Crease Management



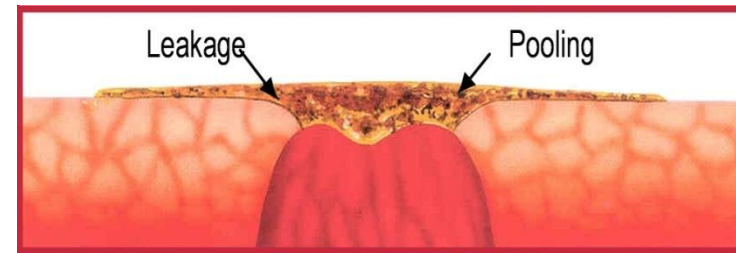
Barrier strip



Convexity

# Theory Convexity

- ▶ Mirror topography plane
- ▶ Direct effluent into pouch



# pMASD: (Contact dermatitis: chemical)

- ▶ Chemical exposure:  
antimicrobial soap
- ▶ Treatment:
  - Use only water to cleanse
  - Absorb moisture:
    - Ostomy powder
    - Crusting if needed
  - Change pouching system  
more often till resolved





# Denudement/erosion (pMASD)



May require Crusting



# Pseudoverrucous Lesions

# Pseudoverrucous lesion

## Definition:

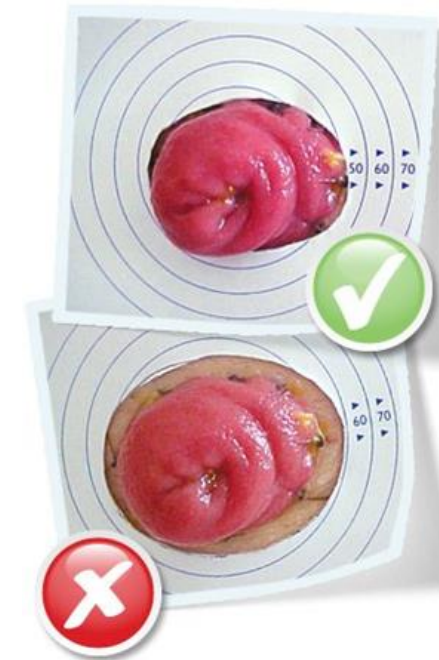
- ▶ Epidermis of the peristomal skin is thickened with discoloration being silvery gray, brown, or red. Wartlike papules or nodules are present.
- ▶ Alias names: hyperplasia, chronic papillomatous dermatitis, & pseudoepitheliomatous hyperplasia.





# Pseudoverrucous Lesions

- ▶ Epidermis of the peristomal skin is thickened with discoloration being silvery gray, brown, or red. Wartlike papules or nodules are present.
- ▶ Causation: Exposure to effluent
- ▶ Management:
  - Correct pouching system
  - Silver nitrate
  - Surgical debridement



# Medical Adhesive Related Skin Injury (pMARSI)

Mechanical damage

# pMARSI: (Mechanical skin damage)

## Definition:

Medical adhesive related skin injury (MARSI) with skin injury or stripping

## Causes:

Aggressive adhesive, frequent changes or improper removal.



# pMARSI: (Mechanical skin damage)

## Treatment:

Teach appropriate removal

Application of liquid skin barrier  
unless not recommended

Change to less aggressive adhesive

Reduce pouching system changes





# Pressure ulcer/injury

# Pressure from Rigid Faceplate

## Definition:

An ulceration which occurs with the use of rigid face plate with a firm abdomen.



©Netsch

# Pressure from Rigid Faceplate

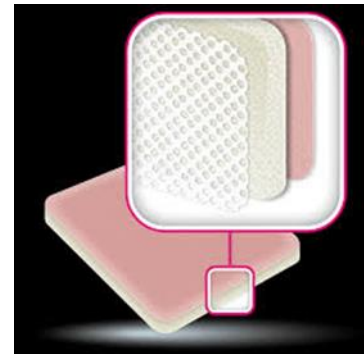
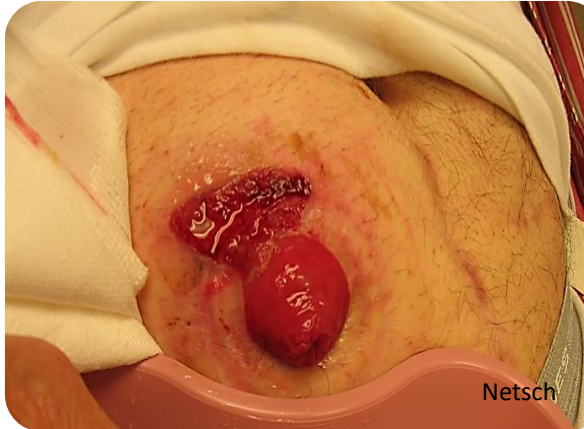
## Treatment:

- ▶ Remove source of pressure
- ▶ Decrease tightness of belt if belt worn
- ▶ Change pouching system to more flexible system
- ▶ Shallow Ulcer: Powder/Paste
- ▶ Deep Ulcer: Alginate covered with film or hydrocolloid dsg





# Ulceration

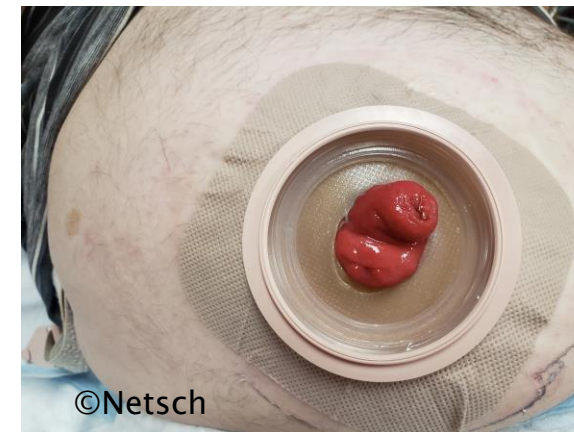
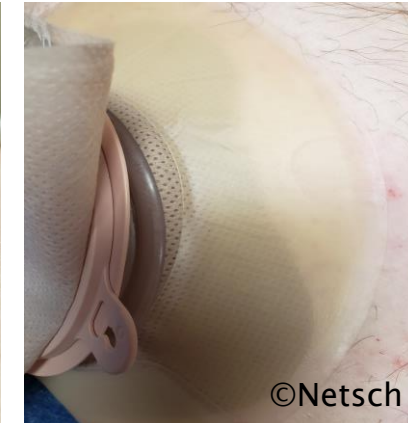


# Pouching system

## Principle

Soft abdomen → Firm pouching system  
Firm abdomen → Flexible/Soft pouching system

REFER to Ostomy Care Nurse

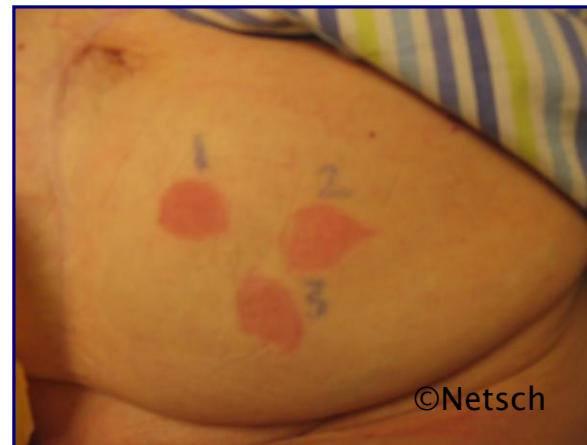


# Allergic Contact

# Contact Dermatitis: Allergic

## Definition:

- ▶ An inflammatory response with erythema, erosion or bullae of the peristomal skin localized only to the area in contact with the allergen.

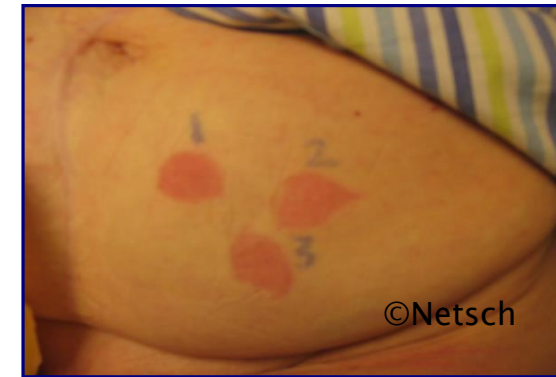




# Contact Dermatitis: Allergic

## Treatment:

- ▶ Remove the allergen
- ▶ Treat with topical steroids
- ▶ If significant reaction, treat with systemic antihistamines and/or steroids
- ▶ Skin patch test future products





# Fungal / Candidiasis

# Candidiasis

## Definition:

- ▶ A peristomal confluent rash with satellite lesions.  
Frequently begins as a pustule progressing to a plaque



# Candidiasis

## Diagnostic Tx/Testing:

- ▶ KOH
- ▶ Empiric treatment



## Treatment:

- ▶ Antifungal pwd/cream
- ▶ Systemic antifungal treatment



# Folliculitis

# Folliculitis

## Definition:

- ▶ Inflammation of the hair follicles caused by a bacterial infection. Typically from peristomal pustules progressing to a crusted area.





# Folliculitis

## Diagnostic Tx/Tests:

- ▶ Culture
- ▶ r/o Candidiasis
- ▶ Empiric Treatment

## Treatment:

- ▶ Atraumatic Hair Removal
- ▶ Silver Powder
- ▶ Antimicrobial Soap
- ▶ If severe: Systemic antibiotic for Staph



# Summary



- Assess peristomal skin, stoma & abdominal plane topography in multiple positions.
- Assess barrier backing for clues.
- Assess patient's technique.
- Level the pouching surface.
- Mirror or contour the area underlying pouching system.
- Refit Pouching System.

**Goal:** Reliable pouching system without leakage.

# Questions



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