



THE UNIVERSITY OF KANSAS HEALTH SYSTEM

*A SLP's Guide to Medication  
Therapy and Management*

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# Objectives

- Identify the appropriate route of administration for medications and proper formulations for use
- Understand the medications affecting motor function, GI motility, xerostomia, mucositis, and thrush
- Determine what the phrase “comfort measures” means and understand the mechanism of action behind the medications that are given in this situation

# Proper Routes of Administration

- Oral
- Buccal
- Sublingual
- Nasal
- Rectal
- IV/SubQ/IM
- Topical
- Many more!

# Medication Formulations

- Many medications are available in multiple dosage forms
  - Aspirin: chewable, tablets, suppository
  - Potassium: IV, tablets, oral solution
  - Fentanyl: IV, patch, SL spray, buccal film & lozenge, nasal



# Crushable Medications

- In general, do not crush:
  - Extended release tablet
  - Contents of a capsule
  - Tablets with protective coating
  - Hazardous products
- <http://www.ismp.org/tools/donotcrush.pdf>

# Medication Induced Dysphagia

- Medications affecting:
  - Motor function
  - Gastrointestinal motility
  - Lubrication

# Medications Affecting Motor Function

- Botulinum toxin (Botox) injection
  - For achalasia
  - Injected into lower esophageal sphincter
  - Relaxes muscle
- Proton Pump Inhibitors
  - Decrease gastric acid
  - Available as an IV formulation

**PROTONIX**<sup>®</sup>  
(pantoprazole sodium)



# Medications Affecting Motor Function (continued)

- CNS depressants
  - Antidepressants
  - Anticonvulsants
  - Antipsychotics
  - Anxiolytics



# Medications Affecting Motor Function (continued)

- May cause dysphagia by:
  - Decreased level of arousal
  - Depression of brainstem swallow function
  - Induced movement disorders
  - Induced neuromuscular blockade
  - Induce myopathy
  - **Impaired oropharyngeal sensation**
  - Decreased voluntary muscle control
  - Disturbance of salivation

# Medications Affecting Gastrointestinal Motility

- Antipsychotics
- Antidepressants
- Antihistamines
  
- May cause or worsen dysphagia

# Medications Affecting Gastrointestinal Motility (continued)

- Narcotics
- Impact receptors in GI tract
- Decrease GI motility (N/V, constipation)
- May effect appetite and oral intake

# Medications Affecting Gastrointestinal Motility (continued)

- CNS depressants
  - Antihistamines
  - Calcium channel blockers
  - Nicotine
  - Estrogen replacement
- 
- May decrease tone of UES and contribute to reflux

# Medications Affecting Gastrointestinal Motility (continued)

- NSAIDs
  - Tetracyclines
  - Antiretroviral agents
  - Chemotherapy
- 
- May cause damage to the mucosa of the GI tract

# Medications Affecting Gastrointestinal Motility (continued)

- Gastrointestinal prokinetic agent
  - Erythromycin
    - Give 30 minutes before meals
    - Use caution in:
      - Elderly
      - Arrhythmias
      - Hepatic impairment

# Medications Affecting Gastrointestinal Motility (continued)

- Gastrointestinal prokinetic agent
  - Metoclopramide (Reglan)
    - Give 30 minutes prior to meals and at bedtime
    - Use caution in:
      - Elderly
      - Parkinson's Disease
      - Movement disorders



# Medications Affecting Lubrication

- **Anticholinergics**
- Antihistamines
- Antipsychotics
- Antidepressants



# Medications Affecting Lubrication (continued)

- Decreased lubrication to parts of the gastrointestinal tract
- May alter levels of histamine and/or acetylcholine release
- Could result in xerostomia (from decreased saliva production)

# Medications Affecting Esophageal Motility

- Bisphosphonates
  - Associated with pill lodging

# Medications Affecting Taste and Smell

- Antimicrobials
- Nasal sprays
  
- Alteration of taste/smell may cause a decrease in appetite and oral intake

# Xerostomia

- Reduction in saliva
- **Symptom, not a disease**
- Role of saliva:
  - Enzymes aid in digestion at various swallow stages
  - Helps neutralize stomach acids
- Main causes
  - **Medication side effects**
  - Medical conditions
  - Radiation (head/neck)

# Xerostomia

- Over-the-counter products
  - Saliva substitutes:
    - Biotin
    - Mouthkote



# Xerostomia

- Pilocarpine (Salagen)
  - Cholinergic agonist
  - 5 mg PO four times/day
  - Use caution in:
    - Hepatic impairment
    - Respiratory disorders

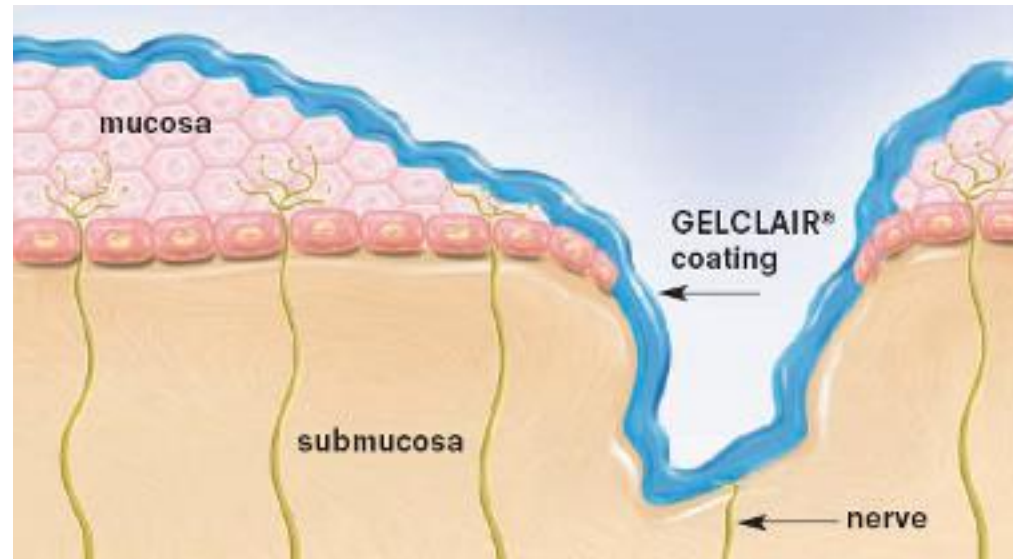


# Xerostomia

- Cevimeline (Evoxac)
  - Cholinergic agonist
  - 30 mg PO three times/day
  - Use caution in:
    - Severe CV disease
    - Respiratory disease
  - Possible adverse effects:
    - Visual/depth perception changes
    - Parasympathetic effects (excessive sweating)

# Mucositis

- Inflammation and ulceration of the mucous membranes lining the digestive tract
- Mucosal coating agents
  - MuGard
  - Mucotrol
  - Gelclair
  - Epilsil





# Mucositis

- Anesthetics
  - Lidocaine
  - Benzocaine
  - Diphenhydramine
- Antimicrobials
  - Chlorhexidine gluconate
  - Clotrimazole
  - Nystatin

# Mucositis

- Palifermin (Kepivance)
  - Stimulates growth of epithelial mucosal cells
  - Only for mucositis associated with certain chemo regimens
  - Given IV, prior to and after chemo x6 doses total
  - Prevention and treatment
  - Adverse reactions: rash, edema, fever

# Mucositis

- Amifostine (Ethyol)
  - Binds to toxic metabolites of chemo or radiation
  - Only for mucositis associated with certain chemo or radiation regimens
  - Given IV, 30 minutes prior to treatment
  - Adverse reactions: hypotension, N/V, severe skin reaction



# Thrush

- Yeast infection, which usually accumulates in the mouth or throat
- Antifungals
  - Nystatin
    - Oral suspension
    - Swish & swallow *or* swish & spit *or* swa
    - Four times a day
  - Clotrimazole
    - Troche
    - Dissolve in mouth
    - Five times a day



# Thrush

- Fluconazole (Diflucan)
  - Antifungal
  - Available IV and PO
  - Use caution in:
    - Arrhythmias
    - Hepatic impairment
    - Renal impairment
  - Lots of drug interactions



# Comfort Measures

- Medical treatment of a person who is dying, both physically and psychologically
- Assuring maximum comfort is given
  - Pain reduction
  - Decrease agitation/anxiety
  - Reduce air hunger needs
  - Secretion management

# Comfort Measures: Medications

- Pain management
  - Oxycodone, morphine, hydromorphone
- Anxiety management
  - Lorazepam
- Delirium management
  - Haloperidol, risperidone
- **Secretion management**
  - Scopolamine patch, glycopyrrolate
  - Dry mouth: synthetic saliva spray
- Nausea management
  - Ondansetron, prochlorperazine, metoclopramide, diphenhydramine
- Given as needed or scheduled
  - **Oral (tablets, liquid), IV, topical**

# Questions?

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