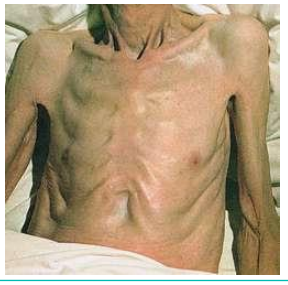
Management of Anorexia/Cachexia

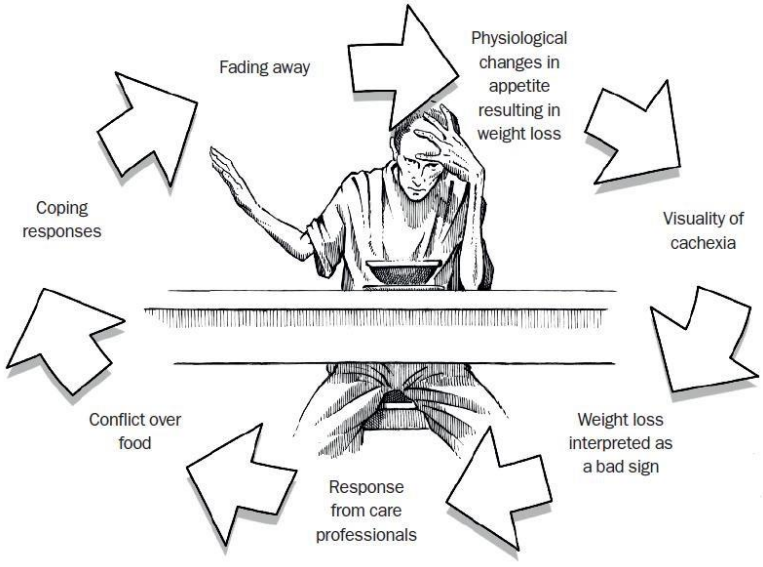


Disclosure Statements

- None of the presenters have any conflicts to disclose

Approach

1. Assess, manage co-morbid conditions
2. Educate, support
3. Nutritional support
4. Treatment options



The Experience of Cancer Cachexia: A Qualitative Study of Advanced Cancer Patients and their Family Members. Int J Nurs Stud (2008)

Assess/Manage Co-morbid Conditions

- Dysphagia
- Odynophagia
- Medication side effects
- Bowel edema
- Thrush
- Constipation
- Anxiety/depression

Educate and Support

"starvation" vs. cachexia

Cultural sensitivity and societal beliefs. The word "companionship" signifies the sharing of bread (pan), and points out the importance of food in human relations.[1]

supporting family members relieves stress and burden upon patient

1 Genes and Nutrition. 2013 July;8(4):357-363

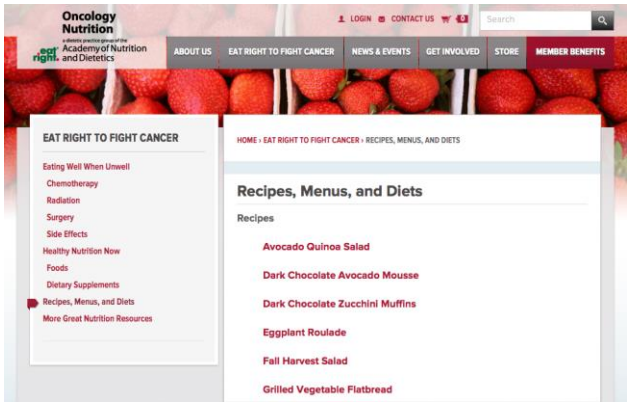
Nutritional Support

- The average caloric deficit in weight-losing patients with cancer cachexia is approximately 250-400 kcals/day. [1]
- Cachectic patients should be supplemented with 1000-1500 calories/day (20-25 kcal/kg per day for bedridden and 25-30kcal/kg per day for ambulatory patients) in form of balanced essential amino-acid mixture, given between meals. [2]
- Treatment for improved nutritional health should be individualized and should allow for patient flexibility in type, quantity, and timing of meals.[1]

[1] J Gastroenterol. 2013 May; 48(5): 574-594
[2] Morley JE. Calories and Cachexia. Curr Opin Clin Nutr Metab Care. 2009;12:607-610

Nutrition Resources

1. www.cancernutritionconsortium.org
2. www.oncologynutrition.org



Norwalk Hospital Nutrition Center

Nutrition Center

- Group Counseling and Classes
- Individualized Counseling
- Nutrition Center Services
- WCHN Dietetic Internship

Contact and Brochures

Nutrition Center Services

Norwalk Hospital's Nutrition Center offers medical nutrition therapy in a group setting or as one-on-one counseling. We also offer programs on healthy eating for children and for adults, along with group weight loss programs.

Our registered dietitians help patients with special diets prescribed for a variety of medical conditions, including:

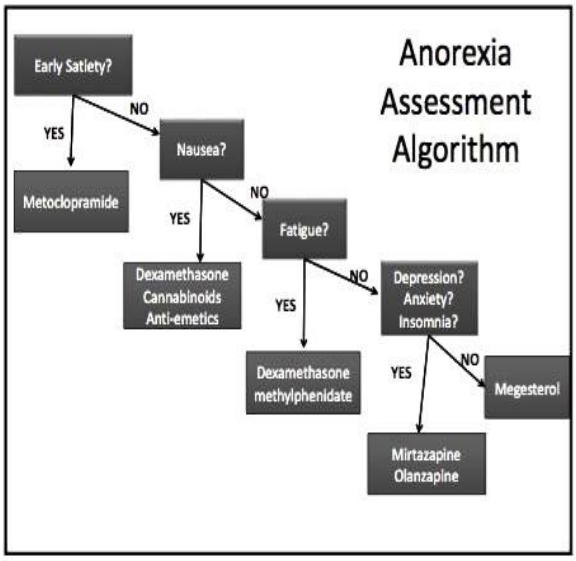
- Cancer treatment, including radiation and chemotherapy
- Cardiac conditions (cholesterol, hypertension, etc.)
- Celiac disease
- Diabetes
- Food allergies and intolerances
- Gastrointestinal disorders
- Kidney disease
- Pediatric nutrition
- Weight control

Our experts are also available for group education sessions or speaking engagements to the community or businesses. For more information, contact Nutrition Services at (203) 855-3548.

< Nutrition Center

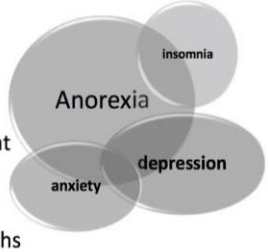
Treatment Options

Choices based on symptom clusters.



Mary K. Buss, MD. "A Comprehensive Palliative Approach to the Assessment and Management of Anorexia". 2016 AAHPM & HPNA Annual Assembly

Rx: Anorexia



- **Mirtapazine** 7.5mg-45mg at bed time
- **Olanzapine 2.5mg – 5mg** qhs
- **Methylphenidrate** 5-10mg bid

Mary K. Buss, MD. "A Comprehensive Palliative Approach to the Assessment and Management of Anorexia". 2016 AAHPM & HPNA Annual Assembly

Summary – Management of Anorexia and Cachexia

1. Assess and manage co-morbid conditions.
2. Educate, support with sensitivity to cultural/societal issues re: food.
3. Liberate diet, small more frequent meals/snacks may work better.
4. Base medication choice on symptom clusters.

Case Study
Anorexia/Cachexia

A.M. is a 68 yo female with long-standing severe Rheumatoid Arthritis and PMH of HTN, remote history of Gastric CA s/p partial gastrectomy, DVT. She presents to the hospital with failure to thrive, anorexia/cachexia syndrome. Pt. has been losing weight over the past year, but progressively more so over the past 4-6 months with a documented 40 pound weight loss. Pt presents with profound weakness, hyponatremia due to volume depletion and weighs 70lbs.

More History

What are associated symptoms?

Patient states that her pain from her arthritis is diffuse and severe – 9/10 on average and this affects her appetite because she can't think of doing anything when she is in severe pain.

She experiences overwhelming fatigue that has been worsening. She finds the act of eating exhausting. Lately, patient has felt like food has been sticking in her throat requiring multiple swallows for it to pass. Additionally pt feels a sharp discomfort in her throat when she eats.

Patient feels depressed by her medical condition, her constant pain. In addition pt. has been grieving over the lose of her son 8 months ago.

She worries about being a burden to her husband. Her husband worries about her weight loss and sometimes his encouragement to eat makes her feel anxious and pressured. She feels that she is letting him down. He feels helpless.

What aspects of this patient's history have an important impact upon her symptoms and therefore factor into your considerations for treatment?

More History

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Patient feels depressed by her medical condition, her constant pain. In addition pt. has been grieving over the lose of her son 8 months ago.

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Medications

- Fentanyl TD 75mcg/hr (dose increased from 50mcg/hr one month ago with no improvement in pain)
- Methylprednisolone 8mg QAM, 4mg QPM
- Sertraline 50mg QD
- Metoprolol 25mg BID
- OxyIR 30 mg 3-4 times a day as needed for pain
- Protonix 40mg PO QD

Physical Exam

T 97.8 HR 55 BP 108/70 RR 18 O2 sat 96%RA BMI 13

General – episodically tearful, weak, pleasant female

HEENT – oral thrush

Lungs – CTA

Cor – RRR

Abd – scaphoid, no masses palpable

Ext – no edema, skin tear over right tibia

Labs – normal metabolic profile except for a Na of 128, mild leukocytosis, normal LFTs

Which of the following are options for treatment?

A. Adding scheduled Oxycontin to pain regimen.

B. Increasing Methyprednisolone to 8mg BID.

C. Beginning Methylphenidate 2.5mg BID.

D. Choice A and C.

E. All of the above.

Key Points

- Secondary conditions due to compromised immune system (cachexia and chronic disease/treatment)
  - Oral/esophageal thrush
  - dysphagia due to muscle weakness / esophageal thrush
- Psychological and societal issues surrounding food
- Symptom clusters
  - Pain
  - Fatigue
  - Depression
- Treatment guided by symptom clusters

Management of Intractable Nausea and Vomiting

Incidence of Nausea/Vomiting in Palliative Care

- **Nausea and Vomiting is reported in 16-68% of patients with life-limiting disease.[1]**
- **Occurs most commonly in patients with AIDS (43% of patients), followed by ESRD (30%), CHF (17%), and cancer (at least 6%).[1]**
- **N/V is more common as death approaches, and is a predictor of a shortened survival.**
- **It has been reported as *frequently* under treated.**
- **N/V tends to cluster with other symptoms such as fatigue, anorexia, dyspnea, pain, depression. Treatments directed at symptom clusters rather than individual symptoms may provide greater therapeutic benefit.**

Clinical Interventions In Aging 2011:6

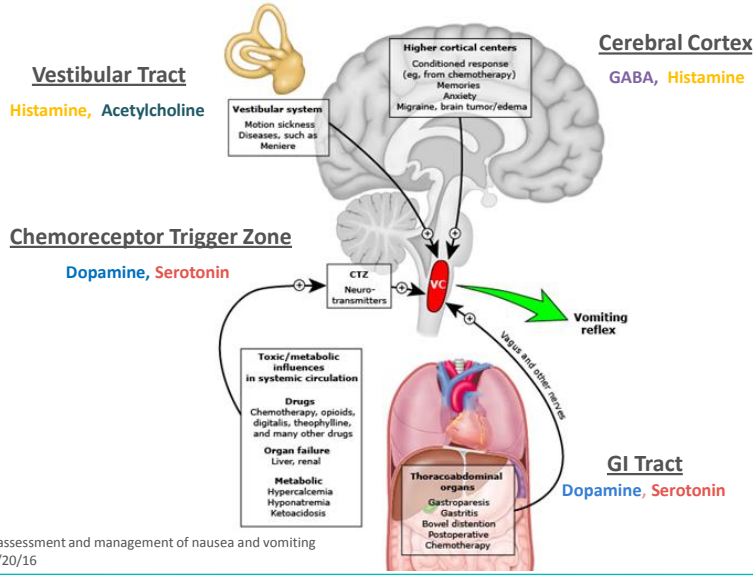
Assessment of Nausea and Vomiting

History
Quality: nausea, vomiting, retching, regurgitation
Duration
Persistent or intermittent
Intensity
Associated pain, altered bowel habit
Aggravating factors: smells, worse after eating, movement
Temporal factors: worse in morning
Relieving factors eg. vomiting
Drug history; opioids, NSAIDs, antibiotics
Anticancer treatment

Physical exam
Abdomen: organomegaly, masses, bowel sounds, distension
Other: metabolic abnormalities (liver failure, renal failure, hypercalcemia, neurologic signs)

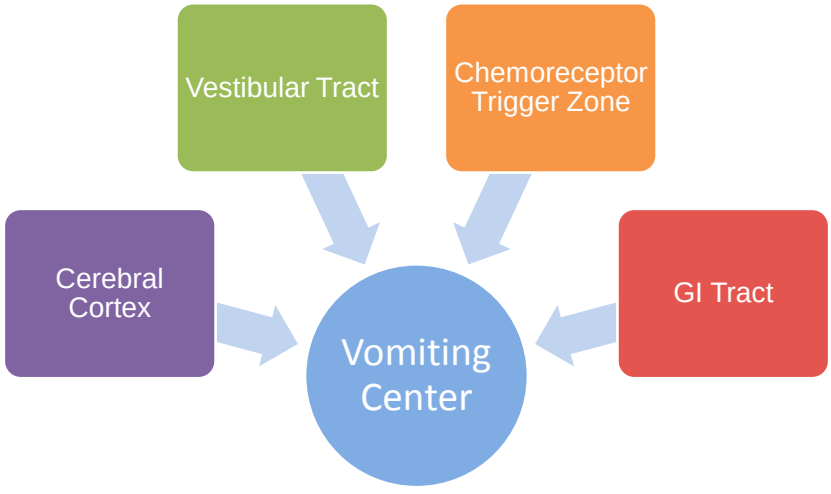
adapted from P. Glare, J. Miller, et al. Treating Nausea and Vomiting in Palliative Care: a review. Clin. Interv. in Aging 2011:6 243-259

Mechanism – The Emetic Pathway



UptoDate assessment and management of nausea and vomiting updated 7/20/16

The Emetic Pathway



L.M. is a 49 y.o. female who begins to vomit when she gets into the car to go for her 3rd cycle of chemotherapy.

Which arm of the emetic pathway is involved?

A. Cerebral Cortex
B. Vestibular
C. Chemoreceptor trigger zone
D. GI tract

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Antiemetic Medications Target Neuromediators

Which neuromediator is involved in this pathway?

T. K. has prostate cancer with metastases to the spine. He is on Oxycontin 60mg BID and OxIR 10mg Q4hours PRN for pain. He has not moved his bowels in 5 days and has developed nausea.

Which arm of the emetic pathway is involved?

A. Cerebral Cortex
B. Vestibular
C. Chemoreceptor trigger zone
D. GI tract

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Antiemetic Medications Target Neuromediators

Which neuromediator is involved in this pathway?

S. R. is 78 y.o. male with end stage renal disease. He has decided against pursuing dialysis and is suffering from intractable nausea.

Which arm of the emetic pathway is involved?

A. Cerebral Cortex
B. Vestibular
C. Chemoreceptor trigger zone
D. GI tract

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Antiemetic Medications Target Neuromediators

Which neuromediator is involved in this pathway?

Approach to Treatment

Drug selection is based on combination of two approaches:

1. Mechanistic
1. Empirical

Mechanistic approach is based on clinical science and understanding of which drugs block the receptors where the cause of nausea and vomiting is acting on, but it is limited as the etiology is often unidentifiable or multifactorial. Additionally other factors such as increasing age, altered metabolism and side effects must be accounted for in drug selection. Empirical approach utilizes clinician preference based upon these factors.

Management of Nausea/Vomiting

- Dopamine antagonists
- Antihistamines
- Anticholinergics
- Serotonin antagonists
- Prokinetic agents
- Antacids
- Cytoprotective agents

Receptor Site Affinities of Commonly Used Antiemetics

Drug	Dopamine Antagonist	Histamine Antagonist	Acetylcholine Antagonist	Serotonin Type 2 Antagonist	Serotonin Type 3 Antagonist	Serotonin Type 4 Antagonist
Promethazine (Phenergan)	X	XXX	XX			
Chlorpromazine (Thorazine)	XX	XX	X			
Haloperidol (Haldol)	XXX					
Hyoscine (Scopolamine)			XXX			
Olanzapine (Zyprexa)	XX	XXX	XX	XXX		
Metoclopramide (Reglan)	XX				X	XX
Ondansetron (Zofran)					XXX	
Prochlorperazine (Compazine)	XX	X				

Low Affinity = X

Moderate Affinity = XX

High Affinity = XXX

Pro's and Con's of Commonly Used Antiemetics

Drug	Mode of Delivery	Favorable Actions	Common Side Effects	Metabolism
Promethazine (Phenergan)	PO/IM/PR	motion sickness, allergic reactions	*, sedation/dizziness/dry mouth/hypotension/ confusion/ QTc prolongation	Liver
Chlorpromazine (Thorazine)	PO/IM/PR	intractable hiccups	*	Liver
Haloperidol (Haldol)	PO/IM/IV	delirium	*, *	Liver
Hyoscine (Scopolamine)	TD	decrease GI motility (for bowel obstruction), motion sickness, decrease respiratory secretions	anticholinergic, sedation, hallucination	Liver
Olanzapine (Zyprexa)	PO/SL	delirium, chemo-related N/V, stimulate appetite	*, *, hyperglycemia	Liver
Metoclopramide (Reglan)	PO/IV	gastroparesis	movement d/o, can prolong QTc (but less than others), black box for TD with higher dose, longer use	Liver Dose reduce for CrCl < 40
$5HT_3$ Receptor Antagonists Ondansetron/Granisetron (Zofran/Kytril)	PO/SL/IV/TD	gold standard for chemo-related N/V	headache, QTc prolongation, constipation/diarrhea	Liver
Prochlorperazine (Compazine)	PO/IM/PR	migraine/motion sickness	*	Liver

* = EPS, NMS, QTc prolong., sedation

* = high caution/Black box warning in elderly

Other Treatments for Nausea/Vomiting

1. Steroids - metastatic disease (cerebral, meningeal, intraabdominal/peritoneal), chemotherapy.
2. Benzodiazepine (Lorazepam) - anticipatory nausea, vestibular, anxiety.
3. Tetrahydrocannabinol (Cannabinoid) - anorexia, anxiety
4. Surgical - venting g-tube, stent
5. Complementary - ginger, acupressure point
6. Octreotide - malignant bowel obstruction with high output vomiting

Summary – Treatment of Nausea and Vomiting

- Treatment involves both a mechanistic and empirical approach.
- Detailed history and exam can provide information on etiology, but many treatments can affect multiple receptors in the emetic pathway.
- Choice of medications must take into account age, metabolism, mode of delivery, and side effects (both favorable and adverse).

Case Study
Nausea/Vomiting

- Jim is a 60yo previously healthy individual. He was diagnosed with stage 4 colon cancer 2 months ago and had been initiated on chemotherapy. Despite his diagnosis, he has been able to continue his favorite past-time (golf), and he looks forward to his daughter's wedding in 3 months. He presents with abdominal pain, intractable nausea and vomiting and is found on CT imaging to have progression of disease with mesenteric lymphadenopathy and intrabdominal fluid concerning for peritoneal carcinomatosis. He has a increase in size of RLQ mass with small bowel obstruction.

What would be the best consideration for treatment?

a. Diverting ileostomy and TPN for nutritional support

b. Initiate Hospice and Morphine drip

c. IV Reglan 10mg Q6hrs

d. Octreotide IV and Decadron IV

Case Study
Nausea/Vomiting

- Patient is seen as an outpatient two weeks later, and has come off of TPN due to impact on quality of life – he does not like being attached "to tubes". He continues to suffer from anorexia and intermittent nausea and vomiting. KUB is negative for obstruction. He hopes to resume chemotherapy but currently is not a candidate due to his recent surgery, his decreased functional status and poor nutritional status. He suffers from increasing anxiety poor sleep.

What are your options for treatment?

a. Zyprexa
b. Ativan
c. Marinol
d. Zofran
e. Reglan
f. all of above

Case Study
Nausea/Vomiting

- Patient is admitted 3 weeks later with increase N/V/and increased output from his ileostomy. Again, KUB is negative for obstruction. He has significant electrolyte derangement and acute renal failure due to dehydration. His EKG reveals prolongation of QTc interval of 510ms. He is restarted on TPN.

In addition to correcting electrolytes what would be your choice of treatment?

a. Phenergan/Compazine

b. Reglan

c. Decadron and Ativan

d. Zofran

Case Study
Intractable Nausea/Vomiting

- 4 days into hospitalization patient complains of increased epigastric pain with large volume emesis. CT Scan reveals progression of disease now with distention of stomach and partial small bowel obstruction with transitional point at proximal. Extensive conversation is had with patient and family and patient makes the decision to focus on end of life care, symptom management only. Jim's greatest hope is to see his daughter married in 2 weeks. He also complains of mouth and throat discomfort from dryness.

Which of the following is the best option for treatment?

a. Venting g-tube

b. Octreotide SQ/IV

c. IV Haldol and Decadron

d. All of above