



Nutritional Guidelines for Symptom Management

DIARRHEA

DEFINITION: There does not appear to be an accepted uniform definition of diarrhea. Diarrhea is generally characterized by frequent watery bowel movements, which may be accompanied by gas and cramping.

POSSIBLE CAUSES

Medications:

- Any liquid medication - Liquid medications often contain sorbitol. Obtain a list of ingredients) wherever possible. Unfortunately, sorbitol is not always listed because it is not an active ingredient.
- Magnesium containing antacids.
- Cholinergic drugs - stimulate parasympathetic system and induce peristalsis.
- Prokinetic agents - stimulate peristalsis primarily in upper gastrointestinal tract.
- Laxatives and stool softeners.
- Cytotec - a gastric antisecretory agent used for the treatment of NSAID-induced gastroduodenal ulcers. Diarrhea can be minimized by adjusting dose, administering after food and avoiding co-administration with magnesium containing antacids.
- Lactulose - poorly absorbed disaccharide, which reaches the colon intact. In the colon it is converted to lactic acid (bacterial action) and the resulting increase in osmotic pressure results in diarrhea.
- Antibiotics - can result in altered microflora and overgrowth of certain bacteria such as *clostridium difficile*. May also cause reduction in short chain fatty acid production.
- Hypoalbuminemia - decrease in oncotic pressure may result in intestinal edema and either secretory or malabsorptive state.
- Intestinal atrophy - delayed feeding (as little as 10 days NPO) can result in decreased villous height and reduction in brush border enzymes.

Cancer Treatment:

Surgery:

- Bowel resections - any bowel resection may temporarily decrease intestinal transit time. Resections, which lead to short bowel syndrome, or the removal of all or parts of the ileum, can lead to long term problems with diarrhea.

- Gastric surgery - gastric surgeries which involve removal of the stomach or result in decreased transit time from stomach to the small bowel (e.g. Billroth I, Billroth II) may result in dumping syndrome.
- Pancreatic surgery - partial or complete removal of the pancreas can lead to enzyme deficiency.
- Radiation therapy - radiation to parts of or to the whole abdomen can result in radiation enteritis (refer to radiation enteritis guidelines)
- Chemotherapy - may decrease gastrointestinal mucosal cell replication rate, or may cause rapid destruction of these cells, resulting in malabsorption.

Infection:

- Parasitic - may require drug therapy.
- Viral - may require use of antidiarrheal agents.
- Bacterial - may require antibiotic therapy.

Impaction:

- Not truly diarrhea. Impaction or obstipation may result in liquid stool oozing around impaction site. The condition produces constant low volume leakage of stool.

Lactose intolerance:

- This results from lactase enzyme deficiency. Lactose remains unaltered in the gut and produces an increased osmotic load and subsequently diarrhea. There are three different forms:
- Primary lactase deficiency.
- Secondary lactase deficiency - may be associated with malabsorption syndromes such as gluten sensitive enteropathy.
- Temporary lactase deficiency - which may occur secondary to gastrointestinal infection, malnutrition.

Nutrition support:

- Mode of delivery - bolus feeding of hyperosmolar formula (primarily post pylorically) may lead to diarrhea
- Feeding site - rapid infusion of hyperosmolar formula post pylorically may lead to diarrhea.

Tumor:

- Site of tumor - e.g. obstruction of common bile duct.
- Etiology - e.g. carcinoid syndrome

NUTRITION GOALS

1. Maintain hydration status through symptom control.
2. Maintain nutrition status through symptom control.

STRATEGIES FOR MANAGEMENT

General Strategies:

- Whenever possible determine the underlying cause of diarrhea.
- Treat underlying cause.
- When appropriate, encourage use of antidiarrheal agents as prescribed by physician (i.e absence of *clostridium difficile*). Consult other health care professionals when necessary.

Nutritional Strategies:

- Obtain diet history to assess adequacy of food\fluid intake and patterns of food avoidance\aversion.
- Ensure adequate hydration. General guideline is 1.5 - 2.0 litre of fluid intake depending on output. Energy dense foods\fluids should be encouraged if weight loss is an issue.
- If diarrhea is uncontrolled despite use of antidiarrheal agents, trial of diet modifications should be initiated (keep in mind definition of diarrhea used here). Modifications should be trialled one at a time to determine effectiveness of modification and to prevent unnecessary restrictions. Weekly follow up is recommended. The following diet modifications may be helpful:
 - fiber restriction
 - lactose restriction
 - fat restriction
 - limit gas producing foods, straws use and chewing gum
 - limit caffeine containing foods
 - limit any food or fluid which exacerbates symptoms e.g. spices etc
 - smaller, more frequent meals

PATIENT EDUCATION RESOURCES

- Food Ideas to Help with Diarrhea during Chemotherapy (BCCA)
- Coping with Diarrhea (BCCA)
- Low Lactose Guidelines (BCCA)

REFERENCES

1. Nutritional Management of the Cancer Patient. Abby Bloch. 1990
2. BCDNA Manual of Nutrition Care. Fourth Edition. 1992.
3. Nutrition Support Dietetics Core Curriculum. Second Edition. 1993
4. Compendium of Pharmaceuticals and Specialties. Fortieth Edition. 2005
5. Nutritional Care Manual. Ontario Dietetic Association. Sixth Edition. 1989
6. Manual of Clinical Dietetics. Sixth Edition. 2000

Copyright© by BC Cancer Agency, Oncology Nutrition May 1998
Revised August 2005

This information is not meant to replace the medical counsel of your doctor or individual consultation with a registered dietitian. This information may only be used in its entirety.