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Medical Nutrition Therapy For Gastroparesis

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Gastroparesis

Definition

- Gastroparesis is the medical term for delayed stomach (gastric) emptying.
- It is a digestive disorder in which the normal movement of the stomach is abnormal or absent.
- This means that food stays in the stomach longer than usual. Sometimes this may lead to undigested food hardening into solid masses called bezoars.
- Bezoars are dangerous because they can block passages into the intestines and cause obstructions, extreme nausea and vomiting.

Causes

- There are many known causes of delayed stomach emptying and in some cases, the cause may be unknown (idiopathic).
- The most common cause of gastroparesis is diabetes mellitus.
- Other causes include infections, endocrine disorders such as hypothyroidism, autoimmune disorders, neuromuscular disorders, cancer, surgery on the gastrointestinal system, eating disorders such as bulimia and anorexia nervosa, chemotherapy, and use of certain medications such as narcotics, antidepressants, calcium channel blockers, lithium, nicotine, clonidine, progesterone and dopamine agonists.

Symptoms

- Symptoms may range and vary according to each patient and to the degree and severity of the condition.
- Some symptoms are bloating, nausea, early fullness, difficulty eating and swallowing, heartburn, vomiting of undigested food, high and low blood sugar, reflux, stomach spasms, stomach pain, decreased appetite, weight loss or failure to maintain a healthy weight.

Diagnosis

- Only your Medical Doctor is qualified to diagnose you with this condition.
- Your doctor will perform a physical exam, labwork and other diagnostic tests which may include an endoscopy, ultrasound, barium X-ray.
- A diagnosis of gastroparesis may be confirmed by one or a combination of the following tests: a gastric emptying study, scintigraphic gastric accommodation, gastroduodenal manometry, breath test or SmartPill device, a wireless GI monitoring system.

Treatment

- Treatment for this condition can range from prescribing medications to surgical intervention or a combination of both.
- Nutrition intervention, however, is necessary for the management of symptoms and to ensure appropriate nutritional intake.

Nutrition: Special Considerations

- Dietary phases as outlined in this handout should be used as a guideline; however, since each patient may experience varying severity of the condition, you should consult with a Registered Dietitian (RD) to tailor this diet to address your own needs.
- If you had bariatric surgery and have been diagnosed with gastroparesis, remember to apply concepts of the bariatric diet to this guideline.
- Bariatric patients should focus on 60-80 grams of protein per day and consume no more than 5 grams of sugar per serving of food/beverage.

Nutrition: General Guidelines for both Bariatric and Non-Bariatric Patients

- Never consume large meals all at once; smaller, more frequent meals is recommended
- Limit fiber intake to no more than 10 grams per day
 - Avoid taking fiber supplements unless directed by your doctor
 - Avoid tough, fibrous, raw fruits and vegetables such as the stalks of broccoli, asparagus, celery, and peels and skins of fruit
 - Avoid gas-producing vegetables such as cabbage, cauliflower, Brussels sprouts, onions, garlic, legumes
 - Avoid whole grains such as popcorn
 - Avoid nuts and coconut
 - Avoid acidic fruits such as citrus (orange, grapefruit, lemons, limes, tangerines)
- Consume low fat foods
 - Avoid fried foods
 - If you drink protein shakes, choose a shake that has less than 10 grams of total fat per serving
 - Limit foods with high fat content such as full fat dairy and cheese, butter, fatty cuts of meat such as bacon and ribs
- Consume at least 60 grams of proteins per day
 - Proteins should be soft, mechanically altered, pureed, chopped, blenderized and moist
 - Progress to solid foods as directed
 - Avoid red meat and tough cuts of meat
- Take your vitamins and minerals everyday as recommended by your doctor and dietitian
 - Vitamins and minerals should be chewable or liquid; with gastroparesis, these are better tolerated
- Do not eat and drink together
 - Wait at least 30 minutes before and after eating to drink fluids
 - Avoid caffeinated beverages
 - Avoid carbonated beverages
 - Avoid alcohol

- Avoid all forms of sugar if following a bariatric diet
- Do not gulp; slowly sip fluids; do not use a straw

- If you have diabetes, keep your blood sugar in control; call your doctor if you have fluctuations
- Chew your food properly
 - Eat slowly and swallow food that is chewed to a pureed consistency
- Avoid spices that can irritate the stomach, such as mint, oregano, cayenne pepper, black pepper, horseradish, chili
- Do not lie down for at least 1 hour after eating and eat food sitting upright
- Create a consistent pattern of eating and eat meals around the same time everyday
 - Keep a food diary to record food tolerances/intolerances
 - Avoid strong food odors that may trigger nausea
- Liquid or semi-liquid diet may be better tolerated, especially when symptoms are worse
- Consume nutritious foods first and avoid empty calories
- If you are underweight, consult with a Registered Dietitian (RD) to help you to increase calories; monitor your weight each week
- Never advance your nutrition until you can tolerate the phase currently recommended
- It is not recommended that you advance to the next phase of nutrition unless directed by your doctor (MD) and/or registered dietitian (RD).

Phase I
Sugar-Free, Clear Liquids
Duration of Phase I: As Recommended by MD/RD

Important Considerations

- A clear liquid is defined as non-dairy fluids that cause a minimal amount of residue in the digestive tract
- Clear “solids” that become liquid at body temperature are also appropriate such as diet Jello® and sugar free popsicles
- No carbonated beverages
- Drink decaffeinated clear liquids
- No milk or dairy
- Sugar substitutes can be used
- Sugared beverages can be consumed if you **have not** had bariatric surgery

Nutritional Considerations

- Consume at least 64 ounces of sugar-free, decaffeinated clear liquids per day
- Check tolerance level
- Stop drinking when you feel full

Examples of Clear Liquids

Water

Crystal Light®

Wyler's Light®

Tropical®

Diet Snapple®

Diet Iced tea®

Propel®

Veryfine fruit20 O Plus®



Glaceau Smart water®
Walgreens natural Flavor H2O Plus®
Welch's low calorie juice (Splenda) ®

Arizona Diet ice tea® (Splenda)
Country Time Sugar Free Pink Lemonade Mix®
Sugar Free Kool Aid Mix®
Champion Lyte Sugar Free Refresher® (Splenda)
Diet Citrus Bay (Splenda®)
PJ's Loganberry Diet®
Ket O.J. ®
Keto Kooler®
Caffeine free coffee and tea
Sugar free Jello®
Sugar free popsicles with no added fruit pieces, like Eddy's No Added Sugar
Fruit Pops® or Blue Bunny Frozen Popsicles®
Clear liquid protein supplements such as Isopure®, New Whey®, Nectar®,
Enlive® (non-bariatric), Resource® (non-bariatric)
Clear consommé or broth (chicken, beef, ham, vegetable)

*If you **have not had bariatric surgery**, and you have gastroparesis, low acid, clear juices and sugar containing beverages may be acceptable; ask your dietitian if you are unsure.

*Never advance to the next phase of nutrition unless directed by your doctor (MD) and/or registered dietitian (RD).

Phase II
Sugar-Free, Full Liquids
Duration of Phase II: As Recommended by MD/RD

Important Considerations

- A full liquid is defined as any clear liquid and dairy containing fluids
- Clear “solids” that become liquid at body temperature are also appropriate such as diet Jello® and sugar free popsicles
- No carbonated beverages
- Drink decaffeinated clear liquids
- Flavored or Unflavored milk and dairy should be non fat (skim) and lactose free
- Low sugar soymilk, rice milk and nut milks may be included
- Sugar substitutes can be used
- Vegetable juices
- Strained soups
- Smooth yogurt with no visible fruit pieces
- Milk or Soy based protein shakes/supplements
- Yogurt smoothies
- Custards/puddings
- Hot, low fiber cereal such as Cream of Wheat/Rice®, Farina®, or grits

*If you **have not had bariatric surgery**, and you have gastroparesis, low acid, clear juices and sugar containing beverages may be acceptable; ask your dietitian if you are unsure

*If you **have had bariatric surgery** and you have gastroparesis, avoid all forms of sugar and sugar containing beverages, sugar containing yogurt and full liquids with sugar; Avoid cereals and soups unless otherwise directed.

*Never advance to the next phase of nutrition unless directed by your doctor (MD) and/or registered dietitian (RD).

Phase III
Soft Pureed/Blenderized Foods
Duration of Phase III: As Recommended by MD/RD

Important Considerations

- A pureed, blenderized food is defined as a food that is “baby-food consistency”
- Use broth, water, milk, or dressings such as sugar free dressings or lowfat mayonnaise to moisten food as you blend it
- Food should be smooth with no visible pieces
- Non-bariatric patients with gastroparesis may consume proteins, vegetables, fruits, starches as tolerated; all foods must be pureed/blenderized; progress to soft solid food only after you tolerate pureed foods
- Bariatric patients with gastroparesis should use this phase to maximize protein intake by **consuming pureed proteins only; bariatric patients may add vegetables back into their diet after 2 months (Phase IV) and the vegetables must be pureed; it is not recommended that bariatric patients begin consuming carbohydrates until 75% of the excess weight loss (EWL) is achieved or until recommended by your doctor and dietitian**
- Some good protein suggestions are:
 - Seafood
 - Tuna, tilapia, grouper, soft flaky fish such as cod, haddock, sea bass
 - Canned or fresh
 - Shellfish
 - Scallops, lobster, shrimp, crab
 - Canned or fresh
 - Dairy
 - Low fat, sugar free or carb-controlled yogurt without visible fruit pieces

- Low fat cottage cheese, ricotta cheese, farmer cheese or other soft cheeses

- Eggs
 - Eggbeaters®, egg whites or whole eggs (no more than 1 egg yolk per day): boiled, scrambled, baked, poached (avoid fried or undercooked eggs)
- Poultry
 - Turkey, chicken, game hen, duck breast
 - Deli such as roast turkey breast or chicken breast, canned or fresh
- Tofu
 - Tofu, Boca-burgers® (without the bun), Morningstar brand® soy products
- Meat
 - Ham, *red meat and pork may be difficult to digest; always check your tolerance level
 - Low sodium, rind-less, no sugar added cold-cuts and deli meats, canned or fresh

*Never advance to the next phase of nutrition unless directed by your doctor (MD) and/or registered dietitian (RD).

Phase IV
Progression to Soft Foods
Duration of Phase IV: As Recommended by MD/RD

Important Considerations

- Soft foods are defined as foods that are easy to chew, swallow and digest
- Avoid high fiber
- Avoid raw fruits and vegetable and skins
- Progress to soft foods only after you tolerate pureed foods
- You may continue to mechanically alter foods by chopping into small pieces for easier eating
- Consult with your doctor and dietitian to suggest foods to include into your nutrition plan

Examples of Low Fat or Fat Free Protein Sources

Product	Serving Size	Protein (g)
Egg Beaters	¼ cup	6
Whole Egg	1	7
Fat Free Milk	8 oz	8
Non Fat Evaporated Milk	4 oz	9
Non Fat Plain Yogurt	8 oz	12
Non Fat Cheese	1 oz	8
Non Fat Cottage Cheese	½ cup	13
Chicken Breast	3 oz	26
Chicken Thigh	3 oz	22
Fish, Tilapia	3 oz	20
Pork Loin	3 oz	24
Zoic®	1 can	21
Slim Fast Carb Control®	1 can	20
EAS Myoplex Lite®	1 can	25
Pure protein Shake®	1 can	35
Muscle Milk Lite®	1 can	20
Isopure drink	20 ounces	40
Extreme Pure Protein Drink	20 ounces	42
Protein Twist	20 ounces	40

Examples of Protein Nutraceuticals

Product	Serving Size	Protein (g)
Beneprotein®	1 scoop	6
Prostat 101®	2 Tablespoons	15
Proteinex 18®	2 Tablespoons	18

Food Groups

Food Group	Recommended	Avoid
Milk and Dairy	Skim milk and products made with skim milk such as yogurt, cottage cheese and cheese	Whole milk products, cream, half and half
Soups	Fat free consommé and bouillon, soups made with skim milk	Soups made with cream, whole milk or full fat broths
Bread and Grains	Enriched white bread and crackers, white rice, egg noodles, low grain cereals, cream of wheat, cream of rice or grits	Whole grain breads, brown rice, oatmeal, high fiber cereals
Meats and Substitutes	Eggs, egg whites, tender cuts of meat/poultry/fish that can be chopped or pureed	Tough, dried out meats, red meat, nuts
Vegetables	Carrots, potato, squash, zucchini, yams, sweet potato, yucca; soft cooked vegetables	All raw vegetables and vegetable skins; avoid gas producing vegetables such as cauliflower, cabbage, corn, Brussels sprouts, broccoli and legumes
Fruits	Avoid all juice if you had bariatric surgery	Citrus fruits/juices, dried fruits, fruits with skins and tough, fibrous fruit such as pineapple
Fats and Oils	Limit amounts of any kind of fats	Avoid saturated fats such as butter, lard and fried foods
Sweets and Desserts	Limit intake	Avoid all desserts made with sugar if you had bariatric surgery
Beverages	See appropriate beverages listed under "Clear Liquids"	Avoid all beverages with sugar if you had bariatric surgery; Avoid alcohol, carbonation and caffeine



References

American College of Gastroenterology

www.acg.gi.org

American Society for Metabolic and Bariatric Surgery

www.asmb.org

International Foundation for Functional Gastrointestinal Disorders

www.iffgd.org

National Institute of Diabetes, Digestive and Kidney Disease

www.niddk.nih.gov

American Dietetic Association

www.eatright.org

American Diabetes Association

www.diabetes.org