

Gastric Peroral Endoscopic Myotomy (GPOEM) Nutrition Plan

The GPOEM procedure is a treatment for problems with the muscle action of the stomach, such as gastroparesis. It is used when other treatments have not provided relief for patients with this problem. The procedure results in a permanent opening of the pylorus sphincter, which is the muscle at the end of the stomach that allows food in the stomach to move to the intestine. After your GPOEM procedure, this nutrition plan will help your stomach empty better and provide relief of symptoms of gastroparesis.

GPOEM nutrition plan schedule

Day of procedure

- Nothing to eat by mouth (NPO)

Day 1 to Day 2 after procedure

- Clear liquid diet
Sip on broth, water, unsweetened tea (except peppermint), sugar-free gelatin, 100% unsweetened apple juice, or ice pops without milk, fruit pulp or seeds.

Day 3 to Day 4 after procedure

- Full liquid diet
Sip on water, clear liquids and full liquids (such as nonfat milk and liquid protein supplements).

Day 5 to 6 weeks after procedure

- Soft/modified texture diet
Start soft foods that can be “cut with a fork” (such as cooked vegetables, soft cheese, pasta, fish, eggs and ripe fruits including bananas, pears and melons).

After 6 weeks

- GPOEM general diet
Slowly progress to a general, healthy diet, adding 1 food at a time. Monitor your symptoms. Aim for a moderate-fat, high-protein diet with whole grains, as tolerated. Avoid simple sugars and refined grains.

Clear liquid diet

Starting the day after your procedure and continuing through Day 2, you will drink only liquids that you can see through. Liquids will be clear, caffeine-free, non-carbonated, and low-sugar or sugar-free.

Clear liquid diet includes:

- Water
- Sugar-free gelatin (avoid red- or purple-colored gelatin)
- Clear broth (chicken, vegetable and beef)
- Unsweetened tea (avoid peppermint)
- 100% unsweetened apple juice, cranberry juice and grape juice
- Sugar-free sports drinks
- Hydration formulas (such as Drip-Drop® and Pedialyte®)
- Clear protein supplements

Follow these instructions on the clear liquid diet:

- Try to drink at least 6 cups of fluid to avoid dehydration.
- Sip slowly on liquids, as tolerated, and **stop sipping when you feel full.**
- Use small cups to help you control your portions for the first few days.
- If you have difficulty drinking liquids:
 - Try room temperature water instead of cold water.
 - Try adding sugar-free flavor drops or zero-calorie sports drinks to your water pitcher.

Full liquid diet

On Day 3, you will move to a full liquid diet. You will continue on full liquids for 2 days, as tolerated. *Always consult with your physician if symptoms arise, such as vomiting, diarrhea or abdominal pain.*

Full liquid diet includes:

- Water
- All clear liquids
- Milk
- Strained, creamy soups
- Low-sugar puddings
- Low-sugar shakes
- Clear liquid and full liquid protein supplements

Follow these instructions on the full liquid diet:

- Try to drink at least 6 cups of fluid to avoid dehydration.
- Sip slowly on liquids, as tolerated, and **stop sipping when you feel full.**
- Use small cups to help you control your portions for the first few days.
- If you have difficulty drinking liquids:
 - Try room temperature water instead of cold water.
 - Try adding sugar-free flavor drops or zero-calorie sports drinks to your water pitcher.

Soft/modified texture diet

On Day 5, you will move to a diet of soft foods and foods with a modified texture. You will continue this for 6 weeks, as tolerated. If you feel full after eating, try eating smaller meals more frequently and limiting the amount of fluid that you are taking with your meals. As you start this diet, try eating smaller portions, 3 to 4 ounces at a time, and slowly increase your portions, as tolerated. *Always consult with your physician if symptoms arise, such as vomiting, diarrhea or abdominal pain.*

Soft foods are those that are easily cut with a fork. The focus is to eat higher protein, lower fat and lower fiber foods that are easy to chew, swallow and digest.

- **Protein:** Most women need 60 to 80 grams of protein and men need 80 to 100 grams of protein per day. If you have questions about your specific need, talk to your dietitian.
- **Fat:** Avoid foods that are very high in fat, such as fried foods.
- **Fluid:** Stay hydrated. Try to drink 64 fluid ounces of water or a zero-calorie, caffeine-free beverage.

Soft foods

- Eat foods that are “fork tender.” You can try cooking methods that will make your foods moister, such as poaching, boiling, steaming and simmering. You can also use thin sauces, gravies and light dressings to moisten your foods.
- **Always eat protein first** and try to include at least 2 to 3 ounces of a soft, high protein food during your meals.
- Chew each bite completely before swallowing.

Protein supplements

- In the first weeks after your procedure, you might need a protein supplement to help you get enough protein per day.
- The amount of protein supplement that you might need will depend on how much protein you are getting from food, but 20 to 40 grams of protein from supplements is usually enough for many people.
- You can choose a variety of protein supplements, such as whey, soy or pea.
- Aim for a protein supplement that has the following amounts per serving:
 - More than 15 grams of protein
 - Less than 5 grams of sugar
 - Less than 5 grams of fat

Soft/modified texture food choices

Protein supplements	High-protein foods	Fruits	Vegetables	Starches	Hydration
Whey protein powder	Fish (all types), tuna, lox, sardines	Baby food fruit	Soft-cooked vegetables (meaning no crunch with bite and no structure maintained)	White, toasted bread	Water
Soy protein powder	Shellfish (shrimp, crab, scallops, lobster, clams)	Unsweetened applesauce	V-8® juice, tomato juice	Crackers	Sugar-free flavor drops for water
Albumin (egg) protein powder	Ground, lean chicken, turkey	Soft, cooked fruits	<i>Avoid all raw, uncooked vegetables.</i>	Cooked cereal (no sugar added)	Zero-calorie sports drinks
Plant-based protein powder (pea, hemp)	Deli-shaved chicken, turkey, lean ham	<i>Avoid fruit juices and raw or uncooked fruit.</i>		White potato, sweet potato (no skin)	Diet, non-carbonated drinks
Pea-based protein powder	Eggs, egg whites, egg substitutes				Coffee, tea (unsweetened or sweetened with sugar substitute)
Pre-made protein shakes	Low-fat cottage cheese, ricotta and other cheeses				Broth, bouillon
Pre-made clear protein beverages	Ultrafiltered milk (Fairlife® milk)				Sugar-free Jell-O®
	Dry, nonfat milk powder				Sugar-free popsicles
	Skim or 1% milk				
	Nonfat or low-fat soy milk (7 grams of sugar or less per serving)				
	Nonfat Greek or Icelandic yogurt (less than 8 grams of sugar per serving)				
	Beans, lentils, bean soup, lentil soup				
	Tofu, tempeh, seitan				
	Soy products (veggie burgers, tofu veggie crumbles)				

Soft/modified texture diet sample menu

Meal plan
Breakfast Protein shake or 1 scrambled egg, 1 ounce shredded cheddar cheese and 1 slice white bread
Morning snack 2 ounces canned peaches in water 2 to 4 ounces low-fat cottage cheese
Lunch 2 to 4 ounces creamy tomato soup 2 to 4 ounces canned, flaked tuna
Afternoon snack 1/3 ripe banana 1 tablespoon creamy peanut butter
Dinner 2 to 4 ounces ground turkey meatballs 2 to 4 ounces spaghetti squash with marinara sauce
Evening snack, if needed 2 ounces unsweetened applesauce or banana pudding

See Appendix A for a soft/modified texture diet grocery list.

GPOEM general diet

After 6 weeks on a soft/modified texture diet, you will move to a general, healthy diet. Because the GPOEM procedure will relieve some of the symptoms of your gastroparesis, the way you eat after the procedure may be slightly different than the way you ate before. Depending on symptoms, you may not have to restrict whole grains and healthy fats; you should continue to drink fluids between meals.

General diet focus:

- Gradually reintroduce higher fiber foods, such as oats, whole wheat, bran, beans, raw vegetables and fruits. After your procedure, you may start to notice that you feel better with added fiber, whereas before your procedure you may have avoided fiber (whole grains, beans, lentils, fleshy fruits). Try switching out your white bread for 100% whole wheat bread.
- Meals and snacks should be a balance of lean proteins, whole grains, fruits and vegetables. Fruits and vegetables will begin to make up the majority of your plate.
- You may now eat healthy fats in moderation. For better health, choose healthier fats such as olive oil, nuts, nut butters, seeds, seed butters and fatty fish.
- Avoid simple sugars and refined carbohydrates, such as pastries, soda, fruit juice, candy, white rice and white bread.
- Eat slowly and chew all foods well.
- Stay hydrated and drink fluids between meals.

Dumping syndrome

Dumping syndrome is caused by food leaving the stomach and moving into the intestines too fast. This can cause symptoms such as sweating, lightheadedness, dizziness, nausea, vomiting and diarrhea. Dumping syndrome may happen to some people after the GPOEM procedure. Dumping syndrome can be treated by making the following changes:

- Eat small meals throughout the day and chew foods well.
- Balance your meals by including a protein with carbohydrates.
- Limit the amount of fluids you drink with meals. It might be helpful to wait 10 minutes after eating before drinking large amounts of liquids. You may still sip small amounts with your meals.
- Limit sugary foods such as sweetened beverages, sodas, pies, cakes and desserts.
- Healthy, sugary drinks such as 100% fruit juices or smoothies should be limited to 1/2 cup to 1 cup. Drinking these as you eat your protein will help to balance the impact of the sugar.

GPOEM general diet sample menu

- Aim for 3 meals and 2 snacks spread throughout the day.
- Aim for 60 grams or more of protein daily. Your dietitian will tell you if you need more protein.
- Drink fluids between meals, about 15 to 30 minutes before or 15 minutes after a meal or snack.
- Portions reflect a 1,600 to 2,000 calorie diet. Your dietitian can help decide if you need more calories.

Meal plan
Breakfast 1/2 to 1 cup oats cooked with water, 1 to 2 tablespoons peanut butter, 1 cup raspberries, sprinkle of cinnamon 1 cup of milk
Morning snack 1 individual-sized peach cup 4 ounces low-fat cottage cheese
Lunch 1 cup cooked baby spinach, 4 to 5 ounces salmon, 1/2 to 1 cup quinoa topped with a squeeze of lemon, black pepper and dash of salt 1 to 2 cups cantaloupe or other ripe fruit
Afternoon snack 1 medium apple 1 tablespoon creamy peanut butter
Dinner 4 to 5 ounces skinless chicken breast shredded, 2 whole wheat or corn tortillas, 1 cup cooked carrots or squash, 1/2 to 1 cup brown rice, 2 tablespoons salsa
Evening snack, if needed 4 ounces low-fat pudding or yogurt 1/2 to 1 cup berries

See Appendix B for a GPOEM general diet grocery list.

More information

If you have any questions or concerns, please contact your physician or dietitian.

Appendix A: Soft/modified texture diet grocery list

<p>Dairy</p> <ul style="list-style-type: none"> <input type="checkbox"/> 1% milk <input type="checkbox"/> Low-fat or fat-free cottage cheese <input type="checkbox"/> Low-fat or fat-free ricotta cheese <input type="checkbox"/> Low-fat cheese <input type="checkbox"/> Nonfat Greek or Icelandic yogurt (no sugar added) <input type="checkbox"/> Eggs or egg substitutes (Eggbeaters®) 	<p>Meat proteins</p> <ul style="list-style-type: none"> <input type="checkbox"/> Fish (salmon, lox) <input type="checkbox"/> Canned tuna packed in water <input type="checkbox"/> Shellfish <input type="checkbox"/> Ground turkey or chicken <input type="checkbox"/> Deli-shaved turkey, chicken or lean ham <input type="checkbox"/> Beans, lentils <input type="checkbox"/> Bean soup, lentil soup
<p>Protein supplements</p> <ul style="list-style-type: none"> <input type="checkbox"/> Nonfat dry milk <input type="checkbox"/> Whey protein powder/shake <input type="checkbox"/> Soy protein powder/shake <input type="checkbox"/> Albumin (egg) protein supplement <input type="checkbox"/> Plant-based protein supplement (pea, hemp) <input type="checkbox"/> Protein supplement of choice that meets guidelines per serving: <ul style="list-style-type: none"> • More than 15 grams of protein • Less than 5 grams of fat • Less than 5 grams of sugar 	<p>Soy proteins</p> <ul style="list-style-type: none"> <input type="checkbox"/> Tofu, tempeh, seitan <input type="checkbox"/> Low-fat soy milk (less than 7 grams of sugar) <input type="checkbox"/> Soy cheese <input type="checkbox"/> Soy yogurt <input type="checkbox"/> Other soy products (veggie burger, veggie crumbles)
<p>Starches, fruits and vegetables</p> <ul style="list-style-type: none"> <input type="checkbox"/> Fruit cup (unsweetened, packed in water) <input type="checkbox"/> Baby food fruit <input type="checkbox"/> Apples (to bake or cook to soften) <input type="checkbox"/> Applesauce, unsweetened <input type="checkbox"/> Fresh, frozen, or canned vegetables (to cook until soft) <input type="checkbox"/> White or sweet potatoes <input type="checkbox"/> Cooked cereals (grits, oatmeal) <input type="checkbox"/> White crackers <input type="checkbox"/> White bread 	<p>Other</p> <ul style="list-style-type: none"> <input type="checkbox"/> Water <input type="checkbox"/> Sugar-free flavor drops or powders for water (Mio®) <input type="checkbox"/> Sugar-free, non-carbonated beverages <input type="checkbox"/> Sugar-free Jell-O® <input type="checkbox"/> Broth or bouillon <input type="checkbox"/> Lemon or lime juice <input type="checkbox"/> Sugar-free puddings <input type="checkbox"/> Sugar-free popsicles <input type="checkbox"/> Sugar substitutes <input type="checkbox"/> Soluble fiber supplement, such as Benefiber®

Appendix B: GPOEM general diet grocery list

Proteins		
Fish		Dairy proteins
<input type="checkbox"/> Canned tuna/salmon		<input type="checkbox"/> Cheese (low-fat)
<input type="checkbox"/> Shellfish (crab, shrimp, scallops, lobster)		<input type="checkbox"/> Cottage or ricotta cheese (low-fat)
<input type="checkbox"/> Lox		<input type="checkbox"/> Eggs
<input type="checkbox"/> Sardines (water-packed)		<input type="checkbox"/> 1% milk
		<input type="checkbox"/> Buttermilk
Poultry		<input type="checkbox"/> Ultrafiltered, low-fat or low-lactose milk
<input type="checkbox"/> Chicken		<input type="checkbox"/> Yogurt or Greek yogurt (low-fat, no added sugar)
<input type="checkbox"/> Turkey		
<input type="checkbox"/> Ground lean poultry		Soy proteins
<input type="checkbox"/> Canned chicken		<input type="checkbox"/> Soy "meats" (burgers, nuggets, crumbles)
		<input type="checkbox"/> Tofu, tempeh, seitan
Dark meat		<input type="checkbox"/> Edamame
<input type="checkbox"/> Ham (low-fat)		<input type="checkbox"/> Soy milk (low-fat, no added sugar)
<input type="checkbox"/> Pork loin		
<input type="checkbox"/> Lean ground		Bean/lentil proteins
<input type="checkbox"/> Sirloin or round		<input type="checkbox"/> Beans (red, black, kidney, white, garbanzo)
<input type="checkbox"/> Lean lamb		<input type="checkbox"/> Lentils
<input type="checkbox"/> Lean veal		<input type="checkbox"/> Vegetarian refried beans
<input type="checkbox"/> Turkey, beef or soy jerky (low-fat)		
Vegetables (fresh, canned or frozen)		
<input type="checkbox"/> Artichoke	<input type="checkbox"/> Mushrooms	Starchy vegetables
<input type="checkbox"/> Asparagus	<input type="checkbox"/> Mustard green	<input type="checkbox"/> Potato
<input type="checkbox"/> Bamboo shoots	<input type="checkbox"/> Okra	<input type="checkbox"/> Sweet potato
<input type="checkbox"/> Beets	<input type="checkbox"/> Onions	<input type="checkbox"/> Corn
<input type="checkbox"/> Brussels sprouts	<input type="checkbox"/> Parsnips	<input type="checkbox"/> Peas
<input type="checkbox"/> Cabbage	<input type="checkbox"/> Pea pods	<input type="checkbox"/> Winter squash
<input type="checkbox"/> Carrots	<input type="checkbox"/> Peppers (all types)	
<input type="checkbox"/> Cauliflower	<input type="checkbox"/> Radishes	
<input type="checkbox"/> Celery	<input type="checkbox"/> Rhubarb	
<input type="checkbox"/> Collard greens	<input type="checkbox"/> Scallions	
<input type="checkbox"/> Cucumber	<input type="checkbox"/> Spinach	
<input type="checkbox"/> Eggplant	<input type="checkbox"/> Sprouts	
<input type="checkbox"/> Green beans	<input type="checkbox"/> String beans	
<input type="checkbox"/> Green onions	<input type="checkbox"/> Swiss chard	
<input type="checkbox"/> Greens	<input type="checkbox"/> Squash (all types)	
<input type="checkbox"/> Hearts of palm	<input type="checkbox"/> Tomatoes	
<input type="checkbox"/> Jicama	<input type="checkbox"/> Turnips	
<input type="checkbox"/> Kale	<input type="checkbox"/> Water chestnut	
<input type="checkbox"/> Kohlrabi	<input type="checkbox"/> Watercress	
<input type="checkbox"/> Leeks	<input type="checkbox"/> Zucchini	
<input type="checkbox"/> Lettuce (all types)		

Fruits (fresh, canned or frozen)

- | | | | |
|--|--------------------------------------|---------------------------------------|---|
| <input type="checkbox"/> Apples | <input type="checkbox"/> Clementines | <input type="checkbox"/> Oranges | <input type="checkbox"/> Tangerines |
| <input type="checkbox"/> Applesauce
(unsweetened) | <input type="checkbox"/> Grapefruit | <input type="checkbox"/> Papayas | <input type="checkbox"/> Watermelon |
| <input type="checkbox"/> Apricots | <input type="checkbox"/> Grapes | <input type="checkbox"/> Peaches | <input type="checkbox"/> Individual fruit cups
(water pack or in own
juice) |
| <input type="checkbox"/> Bananas | <input type="checkbox"/> Honeydew | <input type="checkbox"/> Pears | <input type="checkbox"/> Canned fruit
(packed in water) |
| <input type="checkbox"/> Blackberries | <input type="checkbox"/> Kiwis | <input type="checkbox"/> Pineapple | |
| <input type="checkbox"/> Blueberries | <input type="checkbox"/> Lemons | <input type="checkbox"/> Plums | |
| <input type="checkbox"/> Cantaloupe | <input type="checkbox"/> Limes | <input type="checkbox"/> Prunes | |
| <input type="checkbox"/> Cherries | <input type="checkbox"/> Mangos | <input type="checkbox"/> Raspberries | |
| | <input type="checkbox"/> Nectarines | <input type="checkbox"/> Strawberries | |

Note: Limit fruit juice

Whole grains/starches

Breads

- Whole grain bread
- Whole wheat pita
- Whole grain English muffin
- Whole grain tortilla
- Whole grain bagels
- Whole wheat matzo
- Whole grain bun

Grains

- Whole wheat pasta
- Barley
- Rye
- Oats
- Brown rice
- Couscous
- Bulgur wheat
- Quinoa, farro
- Polenta

Cereals

- Fiber One™
- All Bran™
- Kashi Go Lean™
- Shredded Wheat™

Cooked cereals

- Oatmeal, steel cut and rolled
- Grits, farina

Whole grain crackers

- Ry Krisp™
- Wasa Crispbread™
- Melba Toast™
- Special K Multi-Grain Crackers™
- Nut Thins™
- Triscuits™

Whole grains/starches

Beverages

- Crystal Light™
- Unsweetened tea
- Coffee, decaf
- Tea, herbal, decaf

Sugar substitutes

- Splenda™
- Equal™
- Sweet 'N Low™
- Sugar Twin™
- Sweet Leaf Stevia™
- Truvia™

Other

- Broth, stock
- Cooking spray
- Herbs and spices
- Garlic
- Lemon or lime juice
- Olive oil, butter
- Mustard
- Marinara sauce
- Vinegars (all types)
- Jell-O® (sugar-free)
- Pudding (low-fat)
- Nut butter
- Salsa

- Protein bars
Snack: less than 200 calories
Meal: 300 to 500 calories

Note: Limit sweet pickles, candies, pastries, white grains, sugar sweetened beverages