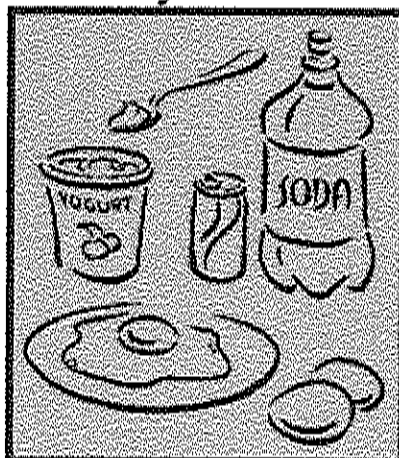


## Gastroparesis Diet for Delayed Stomach Emptying



### **Purpose**

Gastroparesis is the medical term for delayed stomach emptying. During the process of digestion, the stomach must contract to empty itself of food and liquid. Normally, it contracts about three times a minute. This empties the stomach within 90-120 minutes after eating. If contractions are sluggish or less frequent, stomach emptying is delayed. This results in bothersome and sometimes serious symptoms, as well as malnutrition, because food is not being digested properly.

Gastroparesis may be caused by various conditions such as diabetes mellitus, certain disorders of the nervous system, or certain drugs. Often however, no cause can be found. Usually, the physician prescribes medication to stimulate the stomach to contract. The purpose of the gastroparesis diet is to reduce symptoms and maintain adequate fluids and nutrition. There are three steps to the diet.

**STEP 1 DIET** consists of liquids, which usually leave the stomach quickly by gravity alone. Liquids prevent dehydration and keep the body supplied with vital salts and minerals.

**STEP 2 DIET** provides additional calories by adding a small amount of dietary fat -- less than 40 gm each day. For patients with gastroparesis, fatty foods and oils should be restricted, because they delay stomach emptying. However, patients at the Step 2 level are usually able to tolerate this amount.

**STEP 3 DIET** is designed for long-term maintenance. Fat is limited to 50 gm per day, and fibrous foods are restricted, because many plant fibers cannot be digested.

### **Nutrition Facts**

The STEP 1 Gastroparesis Diet is inadequate in all nutrients except sodium and potassium. It should not be continued for more than three days without additional

nutritional support. STEP 2 and STEP 3 Gastroparesis Diets may be inadequate in Vitamins A and C, and the mineral iron. A multi-vitamin supplement is usually prescribed.

### Special Considerations

1. Diets must be tailored to the individual patient. This is because the degree of gastroparesis may range from severe and long-standing to mild and easily corrected. Patients may also have various medical conditions to be considered. For example, diabetes patients with gastroparesis are allowed sugar-containing liquids on the Step 1 diet, because that is their only source of carbohydrate. On the Step 2 and Step 3 diets, these patients should avoid concentrated sweets. These are noted with an asterisk (\*) on the food lists.
2. On all of the diets, liquids and food should be eaten in small, frequent meals. This helps to maintain nutrition.

### Step 1 Food Groups

Group	Recommend	Avoid
Milk & milk products	none	all
Vegetables	none	all
Fruits	none	all
Breads & grains	plain saltine crackers	all others
Meats & meat substitutes	none	all
Fats & oils	none	all
Beverages	Gatorade and soft drinks (sipped slowly throughout the day)	all others
Soups	fat-free consommé and bouillon	all others

### Sample Menu Step 1

Breakfast	Lunch	Dinner
<ul style="list-style-type: none"> <li>• Gatorade 1/2 cup</li> <li>• ginger ale 1/2 cup</li> <li>• bouillon 3/4 cup</li> <li>• saltine crackers 6</li> </ul>	<ul style="list-style-type: none"> <li>• Gatorade 1/2 cup</li> <li>• Coke 1/2 cup</li> <li>• bouillon 3/4 cup</li> <li>• saltine crackers 6</li> </ul>	<ul style="list-style-type: none"> <li>• Gatorade 1/2 cup</li> <li>• Sprite 1/2 cup</li> <li>• bouillon 3/4 cup</li> <li>• saltine crackers 6</li> </ul>

<b>This Sample Diet Provides the Following</b>			
Calories	790	Fat	9 gm
Protein	11 gm	Sodium	3531 mg
Carbohydrates	156 gm	Potassium	244 mg
<b>Step 2 Food Groups</b>			
<b>Group</b>	<b>Recommend</b>	<b>Avoid</b>	
<b>Milk &amp; milk products</b>	skim milk, products made with skim milk, low-fat yogurt, low-fat cheeses	whole milk products, creams (sour, light, heavy, whipping), half & half	
<b>Soups</b>	fat-free consommé & bouillon, soups made from skim milk, & fat-free broths containing pasta or noodles and allowed vegetables	soups made with cream, whole milk, or broths containing fat	
<b>Bread &amp; grains</b>	bread & cereals, cream of wheat, pasta, white rice, egg noodles, low-fat crackers	oatmeal; whole grain rice, cereal, bread	
<b>Meat &amp; meat substitutes</b>	eggs, peanut butter (maximum 2 Tbsp/day)	beef; poultry; fish; pork products; dried beans, pea, & lentils	
<b>Vegetables</b>	vegetable juice (tomato, V-8); well-cooked vegetables without skins (acorn squash, beets, carrots, mushrooms, potatoes, spinach, summer squash, strained tomato sauce, yams)	all raw vegetables; cooked vegetables with skins; beans (green, wax, lima), broccoli, Brussels sprouts, cabbage, cauliflower, celery, corn, eggplant, onions, peas, peppers, pea pods, sauerkraut, turnips, water chestnuts, zucchini	
<b>Fruits</b>	apple juice, cranberry juice, grape juice, pineapple, prune juice, canned fruits without skins (applesauce, peaches, pears)	citrus juices, all fresh and dried fruits, canned fruits with skins (apricots, cherries, blueberries, fruit cocktail, oranges, grapefruit, pineapple, plums, persimmons)	
<b>Fats &amp; oils</b>	any type of fat, but only in small amounts	none	
<b>Sweets &amp; desserts*</b>	hard candies, caramels, puddings & custards made from skim milk, frozen yogurt, fruit ice, gelatin, ice milk, jelly, honey, syrups	high-fat desserts (cakes, pies, cookies, pastries, ice cream), fruit preserves	
<b>Beverages</b>	Gatorade*, soft drinks*	all others, except allowed juices	

		(sipped slowly throughout the day)		
*Concentrated sweets				
<b>Sample Menu Step 2</b>				
<b>Breakfast</b>		<b>Lunch</b>		<b>Dinner</b>
<ul style="list-style-type: none"> <li>skim milk 1/2 cup</li> <li>poached egg 1</li> <li>white toast <i>slice</i></li> <li>apple juice 1/2 cup</li> </ul>		<ul style="list-style-type: none"> <li>mozzarella cheese 2 oz</li> <li>saltine crackers 6</li> <li>chicken noodle soup 3/4 cup</li> <li>Gatorade 1/2 cup</li> </ul>		<ul style="list-style-type: none"> <li>peanut butter 1 Tbsp</li> <li>saltine crackers 6</li> <li>vanilla pudding 1/2 cup</li> <li>grape juice 1/2 cup</li> </ul>
<b>Morning Snack</b>		<b>Afternoon Snack</b>		<b>Evening Snack</b>
<ul style="list-style-type: none"> <li>ginger ale 1/2 cup</li> <li>canned pears 1/2 cup</li> </ul>		<ul style="list-style-type: none"> <li>skim milk 1/2 cup</li> <li>cornflakes 1/2 cup</li> <li>sugar 2 tsp</li> </ul>		<ul style="list-style-type: none"> <li>frozen yogurt 1/2 cup</li> <li>saltine crackers 6</li> </ul>
<b>This Sample Diet Provides the Following</b>				
Calories	1343	Fat	35 gm	
Protein	52 gm	Sodium	2639 mg	
Carbohydrates	206 gm	Potassium	1411 mg	
<b>Step 3 Food Groups</b>				
<b>Group</b>	<b>Recommend</b>	<b>Avoid</b>		
<b>Milk &amp; milk products</b>	skim milk, products made with skim milk, low-fat yogurt, low-fat cheeses	whole milk products, creams (sour, light, heavy, whipping), half & half		
<b>Soups</b>	fat-free consommé & bouillon, soups made from skim milk, & fat-free broths containing pasta or noodles and allowed vegetables	soups made with cream, whole milk, or broths containing fat		
<b>Fruits</b>	fruit juices, canned fruits without skins (applesauce, peaches, pears)	all fresh & dried fruits, canned fruits with skins (apricots, cherries, plums, blueberries, fruit cocktail, oranges, grapefruit, pineapple, persimmons)		

<b>Meat &amp; meat substitutes</b>	eggs, peanut butter (2 Tbsp/day), poultry, fish, lean ground beef	fibrous meats (steaks, roasts, chops), dried beans, peas, lentils
<b>Fats &amp; oils</b>	any type of fat, but only in small amounts	none
<b>Breads &amp; grains</b>	breads & cereals, cream of wheat, pasta, white rice, egg noodles, low-fat crackers	oatmeal; whole grain rice, cereal, bread
<b>Vegetables</b>	vegetable juices (tomato V-8), well-cooked vegetables without skins (acorn squash, beets, carrots, mushrooms, potatoes, spinach, summers quash, strained tomato sauce, yams)	all raw vegetables; cooked vegetables with skins: beans (green, wax, lima), broccoli, Brussels sprouts, cabbage, cauliflower, celery, corn, eggplant, onions, peas, peppers, pea pods, sauerkraut, turnips, water chestnuts, zucchini
<b>Sweets &amp; desserts*</b>	hard candies, caramels, puddings & custards made from skim milk, frozen yogurt, fruit ice, gelatin, ice milk, jelly, honey, syrups	high-fat desserts (cakes, pies, cookies, pastries, ice cream), fruit preserves
<b>Beverages</b>	Gatorade*, soft drinks* (sipped slowly throughout the day), coffee, tea, water (note: non-caloric beverages should be limited if patient cannot maintain adequate caloric intake)	all others, except allowed juices

\*Concentrated sweets

### Sample Menu Step 3

<b>Breakfast</b>	<b>Lunch</b>	<b>Dinner</b>
<ul style="list-style-type: none"> <li>• skim milk <i>1/2 cup</i></li> <li>• cream of wheat <i>1/2 cup</i></li> <li>• sugar <i>2 tsp</i></li> <li>• orange juice <i>1/2 cup</i></li> <li>• white toast <i>1 slice</i></li> <li>• margarine <i>1 tsp</i></li> </ul>	<ul style="list-style-type: none"> <li>• tuna fish <i>2 oz</i></li> <li>• low-fat mayonnaise <i>2 Tbsp</i></li> <li>• white bread <i>2 slices</i></li> <li>• canned peaches <i>1/2 cup</i></li> <li>• Gatorade <i>1.2 cup</i></li> </ul>	<ul style="list-style-type: none"> <li>• baked chicken <i>2 oz</i></li> <li>• white rice <i>1/2 cup</i></li> <li>• cooked beets <i>1/2 cup</i></li> <li>• dinner roll <i>1</i></li> <li>• skim milk <i>1/2 cup</i></li> <li>• margarine <i>2 tsp</i></li> </ul>

• jelly <i>1 Tbsp</i>			
<b>Morning Snack</b>	<b>Afternoon Snack</b>	<b>Evening Snack</b>	
<ul style="list-style-type: none"> <li>• low-fat yogurt <i>1/2 cup</i></li> <li>• Sprite <i>1/2 cup</i></li> </ul>	<ul style="list-style-type: none"> <li>• chocolate pudding <i>1/2 cup</i></li> <li>• gingerale <i>1/2 cup</i></li> </ul>	<ul style="list-style-type: none"> <li>• ice milk <i>1/2 cup</i></li> <li>• pretzels 2</li> </ul>	
<b>This Sample Diet Provides the Following</b>			
Calories	1822	Fat	42 gm
Protein	75 gm	Sodium	2234 mg
Carbohydrates	286 gm	Potassium	2467 mg

Reference: [www.gicare.com](http://www.gicare.com)

### Medications associated with impaired gastric emptying

#### Tricyclic Antidepressants:

- Amitriptyline
- Amoxapine
- Desipramine (Norpramin)
- Doxepin (Sinequan)
- Imipramine (Tofranil, Tofranil-PM)
- Nortriptyline (Pamelor)
- Protriptyline (Vivactil)
- Trimipramine (Surmontil)

#### Calcium Channel Blockers:

- Amlodipine (Norvasc)
- Diltiazem (Cardizem LA, Dilacor XR, Tiazac)
- Felodipine (Plendil)

## Valley Gastroenterology

- Isradipine (DynaCirc CR)
- Nicardipine (Cardene, Cardene SR)
- Nifedipine (Procardia, Procardia XL, Adalat CC)
- Nisoldipine (Sular)
- Verapamil (Calan Verelan, Covera-HS)

### Dopamine Agonists:

- Parlodel (bromocriptine)
- Dostinex (cabergoline)
- Mirapex (pramipexole)
- Requip (ropinirole)
- Apokyn (apomorphine)
- Neupro (rotigotine)

### Narcotics

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### Clonidine

### Lithium

### Nicotine

### Progesterone