

Nutrition and Recovery After Duodenal Surgery Quick Reference Guide

This **quick reference guide** summarizes the recommendations for eating, drinking, and taking vitamin and mineral supplements and medicines after duodenal switch surgery. To help your body heal and learn how to plan for your new lifestyle, follow these recommendations and refer to the helpful resources listed below.

HELPFUL RESOURCES

- 1 Humber River Health’s Resource Book for Patients Having Duodenal Switch Surgery:** For the full list of recommendations, access the book by scanning this QR code with your tablet or smartphone or visiting www.hrh.ca/patient-education/005203_Duodenal%20Switch_Resource%20Book.pdf.



QUICK REFERENCE

Eating Guidelines: Learn the diet stages in detail, with food options and recommended cooking methodspp. 66 to 96

Protein Shakes: Learn how to select protein shakes and make your own protein shakes with recipes pp. 98 to 101

Vitamins, Minerals, and Supplements: Develop lifelong strategies to use supplements and create a supplementation routine to prevent nutritional deficiencies.....pp. 103 to 111; 164 to 165

Common Nutritional Problems: Prevent and manage diarrhea, constipation, gas, bloating, lactose intolerance, lack of appetite, nausea, vomiting, hypoglycemia, hair loss, and dehydrationpp. 112 to 125

Food Sources of Protein, Fibre, and Iron: Know the protein, fibre and iron content of common foods to help you plan meals that will meet your nutritional needspp. 152 to 159

- 2 Videos:** Provides details on bariatric surgery, living a healthy lifestyle, eating guidelines, vitamins and minerals, and mindfulness. access the videos by scanning this QR code with your tablet or smartphone or visiting: <https://www.hrh.ca/programs/surgery/?tab=6>



- 3 Follow-up Appointments:** We strongly recommend attending all of your scheduled follow-up appointments with the dietitian, nurse, and social worker at Humber River Health’s Bariatric Clinic. These visits are the perfect times to bring forward any questions or concerns about your new lifestyle! For more information, contact the **Bariatric Clinic at (416) 242-1000, ext. 23316.**

DIET STAGES AFTER DUODENAL SWITCH SURGERY

Days 1 and 2: Clear Fluids

Duration: For 1 to 2 days, starting right after surgery.

Amount to Eat: Sip about 15 ml (1 tbsp) of clear fluids every 15 minutes.



FOODS ALLOWED

- Sugar-free/diet Jell-O
- Sugar-free popsicles
- Beef, vegetable, or chicken broth
- Water or water with zero-calorie artificial sweeteners



FOODS TO AVOID

- Carbonated drinks
- Caffeinated drinks
- Alcohol
- Energy drinks
- Regular sports drinks

Weeks 1 and 2: Full Fluids

Duration: For 2 weeks, starting after Clear Fluids.

Amount to Eat: Sip about 30 ml (2 tbsp) of full fluids every 15 minutes. At first, you should be able to drink 125 to 175 ml (½ to ¾ cup) of fluids per meal. Slowly increase the amount, until you can drink about 175 to 250 ml (¾ to 1 cup) of fluids per meal.



FOODS ALLOWED

- Choose from Clear Fluids Allowed, PLUS:**
- Milk (skim, 1%, 2%)
 - Lactose-reduced milk (1% or skim)
 - Low-fat smooth yogurt
 - Low-fat smooth cottage cheese
 - Cream of mushroom/carrot/broccoli soup, made with milk (not cream), blended and strained
 - Vegetable juice
 - Tomato juice
 - Unsweetened fruit purées
 - Cream of Wheat
 - Protein drinks (with 20 to 40 g of protein and less than 5 g of carbohydrates per serving)
 - No added sugar pudding
 - Crystal Light, sugar-free Kool-Aid, Gatorade G2



FOODS TO AVOID

- Avoid all other foods, including:**
- Caffeine
 - Homogenized milk
 - Chocolate milk
 - Yogurt with pieces of fruit, nuts, or seeds
 - Soy milk (with 10 g or more of sugar per serving)
 - Cream
 - Protein drinks (with more than 5 g of carbohydrates per serving)
 - Protein bars

For the full list of full fluids allowed/to avoid on weeks 1 and 2, go to p. 70 to 71 in the resource book.

TIPS FOR DIET STAGES



- For the **FLUIDS** stages (Clear Fluids and Full Fluids), take very small sips.
- For the **SOLIDS** stages (Soft Solid Foods and Diet for Life):
 - Take very small, pea-sized bites of food. Chew every bite 20 to 25 times.
 - Eat slowly. Take 30 to 40 minutes to eat each meal.
 - Do not drink fluids just before or during meal times.

Week 3: Soft Solid Foods

Duration: For 1 week, starting after Week 2.

Amount to Eat: Start with 60 ml (¼ cup) of soft solids per meal, then slowly increase to 125 to 250 ml (½ to 1 cup) of soft solids per meal.



FOODS ALLOWED

Choose from Foods Allowed from weeks 1 and 2, PLUS:

- Cottage cheese (4% or less of milk fat)
- Soft cheese (cheese strings, Babybel, Laughing Cow)
- Chicken, turkey, other poultry
- Fish
- Lean deli meat
- Eggs
- Smooth peanut butter
- Soft tofu
- Soft cooked legumes
- Hummus
- Cereals: Cooked cereals such as cream of wheat/oatmeal with less than 10 g of sugar per serving
- Fats and Oils: Small amounts of butter, non-hydrogenated margarine, healthy oils (olive oil, canola), mayonnaise, avocados
- Desserts and Sweets: No sugar added or artificially sweetened jam, jelly, or pudding, sugar-free Jell-O, sugar-free popsicles







FOODS TO AVOID




Avoid all other foods, including:

- Hard cheese
- Fried or BBQ meat
- Fried eggs
- Skin of chicken, turkey, other poultry
- Bacon, sausages, weiners
- Fish with bones
- Nuts and seeds, chunky peanut butter
- Bread, bagels, toast
- Rice, pasta, noodles
- Potatoes, French fries
- All other cereals NOT in the Foods Allowed list
- All other fats and oils NOT in the Foods Allowed list, including hydrogenated margarine, lard, shortening, coconut oil, palm oil
- All other desserts and sweets NOT in the Foods Allowed list, including agave, honey, molasses, regular jam or jelly, ice cream, popcorn, rice or tapioca pudding, baked goods (muffins, pastries, cakes, cookies), chips, candies
- Caffeine

For the full list of soft solid foods allowed/to avoid on week 3, go to p. 76 to 77 in the resource book.

Week 4: Soft Solid Foods		Duration: For 1 week, starting after Week 3.
Amount to Eat: Continue to eat about 125 to 250 ml (1/2 to 1 cup) of soft solids per meal.		
 FOODS ALLOWED	 FOODS TO AVOID	
<p>Choose from Foods Allowed from weeks 1, 2, and 3, PLUS:</p> <ul style="list-style-type: none"> • Fruit (fresh, soft) • Fruit canned in water • Vegetables (soft and well-cooked) • Mashed or baked potatoes (no skin) • Couscous • Quinoa 	<p>Avoid all other foods, including:</p> <ul style="list-style-type: none"> • Fruit with seeds or tough skin (such as cherries, oranges, watermelon, berries) • Fruit canned in juice or syrup • Raw or stringy vegetables (such as celery, snow peas, asparagus) • Caffeine 	
<i>For the full list of soft solid foods allowed/to avoid on week 4, go to p. 78 in the resource book.</i>		

Week 5: Soft Solid Foods		Duration: For 1 week, starting after Week 4.
Amount to Eat: Continue to eat about 125 to 250 ml (1/2 to 1 cup) of soft solids per meal.		
 FOODS ALLOWED	 FOODS TO AVOID	
<p>Choose from Foods Allowed from weeks 1, 2, 3, and 4, PLUS:</p> <ul style="list-style-type: none"> • Toasted whole wheat bread • Whole wheat pita bread • Whole wheat tortilla wraps, • Other whole grain crackers • Oven-roasted potatoes or sweet potatoes 	<p>Avoid all other foods, including:</p> <ul style="list-style-type: none"> • untoasted breads • Caffeine 	
<i>For the full list of soft solid foods allowed/to avoid on week 5, go to p. 79 in the resource book.</i>		

Week 6: Diet for Life		Duration: Lifelong, starting after Week 5.
Amount to Eat: Continue to eat about 125 to 250 ml (1/2 to 1 cup) of soft solids per meal.		
 FOODS ALLOWED	 PROCEED WITH CAUTION	 FOODS TO AVOID
<p>Choose from Foods Allowed from weeks 1, 2, 3, 4, and 5, PLUS:</p> <p>Continue to introduce a variety of acceptable foods, including:</p> <ul style="list-style-type: none"> • Protein bars (with at least 20 g of protein and less than 10 g of sugar per serving) 	<p>You may not be able to tolerate these foods until several months after surgery:</p> <ul style="list-style-type: none"> • Red meat, such as steak, roast beef, pork, lamb • Plain or lightly salted nuts • Raw vegetables • Fruits and vegetables with tough skins (celery, corn, apples) • Mushrooms • Lettuce • Fruit juice • Bread, rolls, or whole grained bread not toasted • Rice, pasta • Sweetened beverages (Vitamin water, hot drinks, iced drinks) • Highly seasoned or spicy foods • Sugar alcohols • Popcorn • Caffeine - do not consume until 3 months after surgery. 	<p>Choose the following foods LESS OFTEN:</p> <ul style="list-style-type: none"> • Cream • Chocolate Milk • Yogurt (with 10 g or more of sugar per serving) • Liquid yogurt drinks • Breaded or fried meats, fish, or poultry • Meat with visible fat • Bacon, sausages, wieners • Nuts with coating or heavy seasoning • Fruit canned with sugar • Fried vegetables • Dried fruit (high in sugar) • Bagels, croissants, muffins, scones • High sugar cereals • High fat cream soups • High fat salad dressing • Honey, jam jelly, syrup • Pies, pastries, donuts • Ice cream • Puddings/custards, sweetened with sugar • Candy • High fat or high calorie baked goods • Fried snacks (chips, cheesies, corn chips) • Carbonated drinks • Alcohol
<p><i>For the full list of foods allowed/to introduce slowly/to avoid lifelong, go to p. 84 to 86 in the resource book.</i></p>		

VITAMIN AND MINERAL SUPPLEMENTS

Please bring your vitamin and mineral supplements with you to each appointment with your registered dietitian and nurse.



Disclaimer: Follow the blood work schedule provided to you. The dose you take may be slightly different from the ones listed here and we can adjust your dosing based on your blood work results.

After surgery, you are absorbing less nutrition from the foods you eat. To meet your nutritional needs, you must take the following vitamin and mineral supplements, **every day, for the rest of your life**. We may prescribe other vitamins and minerals based on your blood work results.

SUPPLEMENT	RECOMMENDED DOSE	ADDITIONAL NOTES
1. Multivitamin with minerals	Depends on the multivitamin/mineral you choose to take: <input type="checkbox"/> Multivitamin (such as Kirkland®, Equate®, Centrum®, Jamieson®): Take 1 tablet, 2 times a day, OR <input type="checkbox"/> Opurity® Bypass Optimized multivitamin: Take 1 tablet a day	<ul style="list-style-type: none"> Choose a complete multivitamin and mineral supplement that contains iron, zinc, copper, selenium, and folic acid. DO NOT take children's, 'gummy', 'extended release', 'time release', or men's multivitamins. These are NOT recommended.
2. Vitamin A	Take 10,000 IU, once a day	
3. Vitamin E	Take 400 IU, once a day	
4. Vitamin K	Take 300 mcg, once a day	
5. Vitamin D	Take 1,000 IU, 2 times a day (For a total dose of 2,000 IU a day)	<ul style="list-style-type: none"> Take Vitamin D with the Calcium Citrate supplement. The calcium citrate supplement will give you an additional 400 to 800 IU of vitamin D a day, depending on the pill or liquid you buy.
6. Calcium Citrate with Vitamin D	Take 600 mg, 3 to 4 times a day (For a total dose of 1,800 to 2,400 mg a day)	<ul style="list-style-type: none"> Always take the calcium citrate supplement 2 hours before or 2 hours after you take the iron supplement. Iron and calcium compete for absorption in the body. To make sure your body absorbs both fully, do not take these supplements at the same time.
7. Vitamin C	Take 500 mg, once a day	<ul style="list-style-type: none"> Take Vitamin C with the iron supplement.

SUPPLEMENT	RECOMMENDED DOSE	ADDITIONAL NOTES
8. Iron	<p>The dose depends on the iron supplement you choose to take:</p> <p><input type="checkbox"/> Take 300 mg ferrous sulfate, once a day</p> <p style="text-align: center;">OR</p> <p><input type="checkbox"/> Take 1 capsule Feramax® 150, once a day</p> <p style="text-align: center;">OR</p> <p><input type="checkbox"/> Take 1 capsule Triferexx® 150, once a day</p>	<ul style="list-style-type: none"> Your multivitamin/mineral supplement contains some iron; however, you will still need to take an additional iron supplement every day. Take the iron supplement with the Vitamin C supplement. Vitamin C helps your body absorb the iron. DO NOT take iron at the same time as the calcium supplement or products containing calcium (such as milk, milk products, calcium, caffeine products, or antacids). Always take the iron supplement 2 hours before or after taking any calcium supplement or products.
9. Vitamin B12	<p>The dose depends on the B12 supplement you choose to take:</p> <p><input type="checkbox"/> Take a 1,000 mcg oral pill, once a day</p> <p style="text-align: center;">OR</p> <p><input type="checkbox"/> Take a 1,000 mcg sublingual tablet dissolved under your tongue, once a day</p> <p style="text-align: center;">OR</p> <p><input type="checkbox"/> Take a 1,000 mcg injection from your family doctor, <i>once a month</i></p>	

For more information on vitamins and mineral supplements, go to p. 103 to 111 in the resource book.

To help you know when it is time to take each supplement, your healthcare team will create a **supplement schedule** based on your blood tests and overall needs after surgery. Here is a **sample supplement schedule**:

TIME	SUPPLEMENTS TO TAKE
Breakfast	Multivitamin + Vitamin B12 (1000 mcg)
Morning Snack	Calcium citrate (600 mg) + Vitamin D (1000 IU) + Vitamin A (10,000 IU)
Lunch	Calcium citrate + Vitamin D (1000 IU) + Vitamin E (400 IU)
Afternoon Snack	Multivitamin
Dinner	Calcium citrate (600 mg) + Vitamin K (300 mcg)
Bedtime	Iron + Vitamin C (500 mg)

MEDICINES

Your doctor has prescribed the following medicines for you to take after surgery. Please note that these medicines are not covered by OHIP (Ontario Health Insurance Plan).

MEDICINE	USES	ADDITIONAL NOTES
Tinzaparin	<ul style="list-style-type: none">To prevent blood clots	<ul style="list-style-type: none">Take by injection for 6 to 10 days after surgery.
Prevacid	<ul style="list-style-type: none">To prevent acid reflux, ulcers, and strictures	<ul style="list-style-type: none">Take every day for 6 months after surgery.Take as soon as you wake up in the morning. WAIT 30 minutes after taking Prevacid before eating your first meal.Available in fast tab or capsule form.

Acknowledgements: Portions of Humber River Health's **A Resource Book for Patients Having Duodenal Switch Surgery** were adapted with permission from **St. Joseph's Healthcare Hamilton**. *Bariatric Surgery Biliopancreatic Diversion with Duodenal Switch: Helping you on your path to healthy living* © 2016)

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