



LAPAROSCOPIC DUODENAL SWITCH POST-SURGERY DIET GUIDELINES

Laparoscopic Duodenal Switch reduces the size of the stomach to approximately 25% of its original size. The procedure is both restrictive and highly malabsorptive, meaning it will limit the amount of food that you can eat as well as causing fewer nutrients and calories to be absorbed. Life-long vitamin/mineral supplementation as well as protein supplementation are necessary due to decreased intake of food as well as limited absorption of nutrients. As with any weight loss procedure, lifestyle changes are what determine long-term success. It is important that you learn how to incorporate healthy eating habits and physical activity into your daily life.

There are four stages to the post-surgery diet. The diet will transition from liquids to purees to solids. Upon reaching the final stage, your diet will consist of small, low-fat, low-sugar meals to be eaten over a 30-minute time period. Fluids will be important for hydration throughout each stage of the diet progression, therefore a goal of 48-64 oz. fluids daily is recommended.

POST-SURGERY DIET PROGRESSION

POST-SURGERY DAYS	STAGE	GUIDELINES
DAYS 1 & 2	CLEAR LIQUID DIET	48 - 64 oz fluids daily
DAYS 3 - 14	FULL LIQUID DIET	48 - 64 oz fluids daily 45 - 60 grams protein daily Bariatric Multi-vitamin w/ ADEK (chewable) 1800-2400 mg Calcium Citrate (chewable) 18-36 mg Iron (chewable) B-Complex (take 1 daily)
DAYS 15 - 30	PUREED DIET (food is applesauce or baby food consistency)	48 - 64 oz fluids daily 90 grams protein daily Continue supplementation
DAY 30 (slowly progress to regular diet)	SOFT DIET [LOW FAT, LOW CARBOHYDRATE] (food should be chewed to applesauce or baby food consistency)	48 - 64 oz fluids daily 90 grams protein daily Continue supplementation



Duodenal Switch Stage One: Day 1 & Day 2

STAGE I: CLEAR LIQUID STAGE

- **GOAL: 48-64 oz. fluids daily**
- Sugar Free Clear Liquids
- Consume 1 ounce (3 Tablespoons/30 cc) clear liquid **every 15 minutes** in order to maintain hydration (medicine cups measure 1 oz. and are helpful here)
- Acceptable Fluids:
 - Water/Propel Fitness Water/G2/ Powerade Zero
 - Clear broth
 - Decaffeinated coffee/tea
 - Crystal Light/diet Snapple/Fruit-2-O/Mio
 - Diet gelatin/"no sugar added", sugar-free (Do not use regular Italian ices or fruit bars)
 - Flat diet soda
 - Sugar Free noncarbonated beverages

Reminders:

- Timers are helpful to accurately track 15 min liquid consumption, and avoid dehydration.
- Avoid caffeine and alcohol for this may cause stomach irritation and loss of fluids.
- No straws. This will cause you to drink too much volume as well as draw in air.
- Please remember to take small sips - no gulps.
- Avoid chewing gum (may swallow and cause an obstruction). Breath freshening alternatives are breath strips or liquid breath freshener drops.

Dehydration:

Dehydration will occur if you do not drink enough fluids. Symptoms include fatigue, dark- colored urine, dizziness, fainting, lethargy, nausea, and low back pain (a constant dull ache across the back). In some cases you will need to be admitted to the hospital so that fluids can be given through your veins.

If your urine is dark and your mouth is dry, then you are not drinking enough.

This is what you can do in order to prevent dehydration:

- Buy a sports bottle and take it with you everywhere so you can sip water all day
- Drink at least 48 to 64 ounces of fluids per day. Increase this amount if you are sweating.
- Follow the Dietary Guidelines



Duodenal Switch Stage Two: DAYS 3 - 14

STAGE 2: FULL LIQUID DIET

- **GOAL: 48-64 ounces of fluids; 45-60 grams protein daily**
- Sip slowly - no more than 8 ounces of any fluid per hour
- Avoid fruit juices or sugar-sweetened beverages
- Sample Protein Supplements
 - Atkins Advantage, Glucerna Shake
 - Isopure Protein Powder, Resource Optisource
 - EAS Myoplex Light, GNC Lean Shake 25
 - Bariatric Advantage Meal Replacement (or other bariatric meal replacement)
 - No Sugar/No Carb Carnation Instant Breakfast mixed with 8 ounces of skim milk
- Other Acceptable Fluids
 - Any clear liquid listed in Stage 1
 - Tomato or V-8 juice (vegetable juice only-no fruit juice)
 - No sugar added/sugar-free, fat free fudgicles
 - Skim or Lactaid Milk
 - Strained cream soups made with skim milk (1/2 cup)
 - Yogurt-no sugar added (1/2 cup)
 - Sugar free pudding made with skim milk (1/2 cup)
- Protein powder may be added to foods or beverages to increase protein content during consumption.
- Sample Meal Plan for **Stage 2:**
 - 8:00 am 4 oz protein supplement
 - 9:00 am 4-8 oz sugar free liquid
 - 10:00 am 4-8 oz protein supplement
 - 11:00 am 4-8 oz Tomato juice
 - Noon 4 oz protein supplement
 - 1:00 pm-8:00 pm Repeat the above pattern
- Vitamin Supplements are to be taken daily in evenly divided doses throughout the day.
 - Supplement recommendations
 - Bariatric Multi-vitamin w/ ADEK
 - Chewable Calcium Citrate (1800-2400 mg/day)
 - 18 -- 36 mg chewable Iron (may be included in multi-vitamin)
 - B-Complex vitamin (take 1 daily)



Duodenal Switch Stage Three: DAYS 15 - 30

STAGE 3: PUREED FOODS STAGE

- **GOAL: 48-64 fluid ounces and at least 90 grams of protein**
- Foods in this stage are the consistency of applesauce. Place food in a blender or food processor until it is the texture of applesauce/baby food. You may use baby food.
- Take 30 minutes to eat meals.
- No fluid with meals or for 30 minutes after; combining liquids with solids may cause an early or delayed feeling of fullness, nausea and/or vomiting
- EAT PROTEIN FIRST - start with 1 ounce and increase gradually to 2 ounces
- Avoid very hot or cold foods (temperature extremes may not be tolerated).
- Do not skip meals.
- No straws or carbonated beverages
- DO NOT CHEW GUM - if swallowed, it could cause an obstruction
- High Protein Foods:
 - Lean beef/pork/fish/chicken (blenderized or pureed)
 - Low fat cheese (those that contain less than 5 grams fat per ounce/serving)
 - Lite yogurt, plain yogurt or non-fat Greek yogurt
 - Eggs, egg whites or egg substitute
 - Fat-free refried beans (may add chicken broth to moisten if needed)
 - Low-fat or Fat-free cottage cheese
- Sample Menu for **Stage 3:**
 - 8:00 am 6 oz lite yogurt
 - 9:00 am 4 oz protein supplement
 - 10:00 am 8 oz fluids
 - Noon 1 oz pureed beef (gradually increase to 2 oz) and 1/4 cup pureed vegetable
 - 1:00 pm 4 oz protein supplement
 - 2:00 pm 1 oz low fat cheese and 1/4 cup applesauce (unsweetened)
 - 3:00 pm-8:00 pm Vary foods and fluids as outline above
- Protein powder may be added to pureed fruits and vegetables to help increase protein in diet if needed.



Duodenal Switch Stage Four: DAY 31, advance as tolerated (Maintenance Diet)

STAGE 4: SOFT SOLIDS PROGRESSING TO REGULAR DIET

- **GOAL: 3 meals and 2-3 small snacks daily (48-64 oz. fluids; 90 grams of protein daily)**
- Foods should be chewed to applesauce consistency.
- Protein (Meat/Meat Substitute): 2-3 oz./meal; 1-2 oz./snack
- Starches: 2-3 serving daily (1/4 cup, 2-3 crackers, 1/2 slice bread = 1 serving)
- Fruits: 2-3 servings daily (1/4 cup, 1/2 piece = 1 serving)
- Continue to limit fats. Try fat free or low fat products.
- **EAT SLOW AND CHEW WELL**
- Avoid liquids with meals.
- Avoid liquid calories (juices, sugary drinks, alcohol, etc.)
- No grazing (over-snacking)
- Eat protein first at all meals.
- Introduce fresh fruits/vegetables and salads slowly (start with canned fruits and well cooked vegetables).

We recommend that you introduce new foods one at a time while beginning Stages 3 and 4 of the diet to ensure that you are able to tolerate that food item. If you develop food intolerance, discontinue that food for a week or two and then reintroduce it again. Keep in mind that for some patients certain food intolerances may be permanent.

REMEMBER: It is still possible to over stretch your pouch, so watch your portion sizes. Also continue to limit fats, sweets, and sugar intake to maximize your weight loss and maintenance.

SAMPLE MENU FOR SOFT DIET

Breakfast	1/4 cup mandarin oranges	Snack	4 oz. Protein shake
	1/2 slice whole wheat toast		
	1 hard boiled egg		
Lunch	1/4 cup tuna 1 tsp low fat mayo	Snack	4 oz. Protein shake
	3 saltines		
	1/2 banana		
Dinner	2 ounces baked chicken (no skin)	Snack	1/4 cup cottage cheese 1/4 cup applesauce
	1/4 cup rice or cooked pasta		
	1/4 cup carrots		
	1 tsp margarine		



Post Surgery Frequently Asked Question, Tips, and Guidelines:

Medications after Surgery

- Pain medication (usually Tylenol w/Codeine elixir) to use as needed (prescription given at discharge)
- Chewable bariatric multivitamin w/ ADEK (Bariatric Advantage or Celebrate)
- Chewable calcium citrate
- Chewable iron (if not included in multi-vitamin/mineral supplement)
- B-Complex
- You are to resume all pre-operative medication unless instructed differently by your surgeon upon discharge. Any medication you were taking that is larger than an M&M must be crushed, cut, or changed to liquid form during the first 8 weeks after surgery. Before altering (crushing) medications you must check with your physician first.

Recovery Instructions

When you get home, plan on taking things easy for a while. Your body is still recovering from the stresses of major surgery and weight loss occurring during the recovery period. Your activity will be restricted to no strenuous activity for 3 to 6 weeks after the operation. You may walk and perform light household duties as tolerated upon your return home. You may climb stairs. It is important to remember that you are still at risk for the development of blood clots after you are discharged from the hospital. You should not go home and sit for prolonged periods of time. Walk around for 5 minutes at a time every hour that you are awake.

Changes in Digestion

After the Duodenal Switch, you may experience frequent soft bowel movements - up to 4-6 per day. You may also experience frequent passing of foul-smelling gas, gas pains or bloating, or intolerance of certain foods. Diet intake has a major impact on these intestinal side effects. Reducing fat intake will usually have a beneficial effect on issues relating to diarrhea or loose stools. Sugar alcohols such as sorbitol, xylitol and maltitol (to name a few) can also contribute to intestinal discomfort and it is usually wise to avoid them. Diarrhea, gas and bloating may also be the result of lactose intolerance, therefore, it is best to avoid milk products as a first method of treating those side effects.

Many patients benefit from the addition of probiotics to assist in replenishing the intestine with healthy bacteria. Probiotics are available at www.tlcsurgery.com. Click on e-store, then Bariatric Advantage.



Hair Loss/Skin Changes

Hair thinning or loss is expected after rapid weight loss. This is typically the result of having undergone surgery in general. However, during the phase of rapid weight loss, calorie intake is much less than the body needs, and protein intake is marginal. The body is in a state of panic, like what would happen during a period of starvation. In some patients, hair thinning or hair loss may occur. This is temporary and usually resolves when nutrition and weight stabilize. The hair loss usually occurs anywhere from 3 to 9 months after surgery. The same reason for the hair loss can also cause changes in your skin texture and appearance. It is not uncommon for patients to develop acne or dry skin after surgery. Protein, vitamins and water intake are also important for healthy skin. You can minimize the loss of hair by taking your multivitamin daily and making sure that you consume at least 60 grams of protein per day. We advise patients to avoid hair treatments. If after about 9 months you start to lose hair, this can be a sign of protein malnutrition. Always make sure you're getting enough protein in your diet.

Sex/Pregnancy

You may resume sexual activity when you feel physically and emotionally stable. Sexually active women of childbearing age will need to use birth control, as fertility may be increased with weight loss. **Oral contraceptives may not be fully absorbed.** Discuss alternative forms of birth control with your gynecologist.

Many severely obese women are also infertile because the fatty tissue soaks up the normal hormones and makes some of its own as well. However, as weight loss occurs, this situation may change quickly. You may start planning a pregnancy after 18 months, when it is safe for you to conceive. It is imperative not to become pregnant before this time, since we want both you and the baby to be healthy and safe. Should you become pregnant, we ask that you arrange for your OB/GYN to contact your surgeon's office.

If, at any time, you feel as though your diet is not progressing as expected or that you may be experiencing something abnormal, please do not hesitate to call the office at 713.493.7700.

Please utilize the patient tools available through the Texas Laparoscopic Consultants website at www.tlcsurgery.com.