Restrictive Vertical Gastroplasty/Gastrectomy Postoperative Weight Loss Manual

Surgical Weight Reduction Program

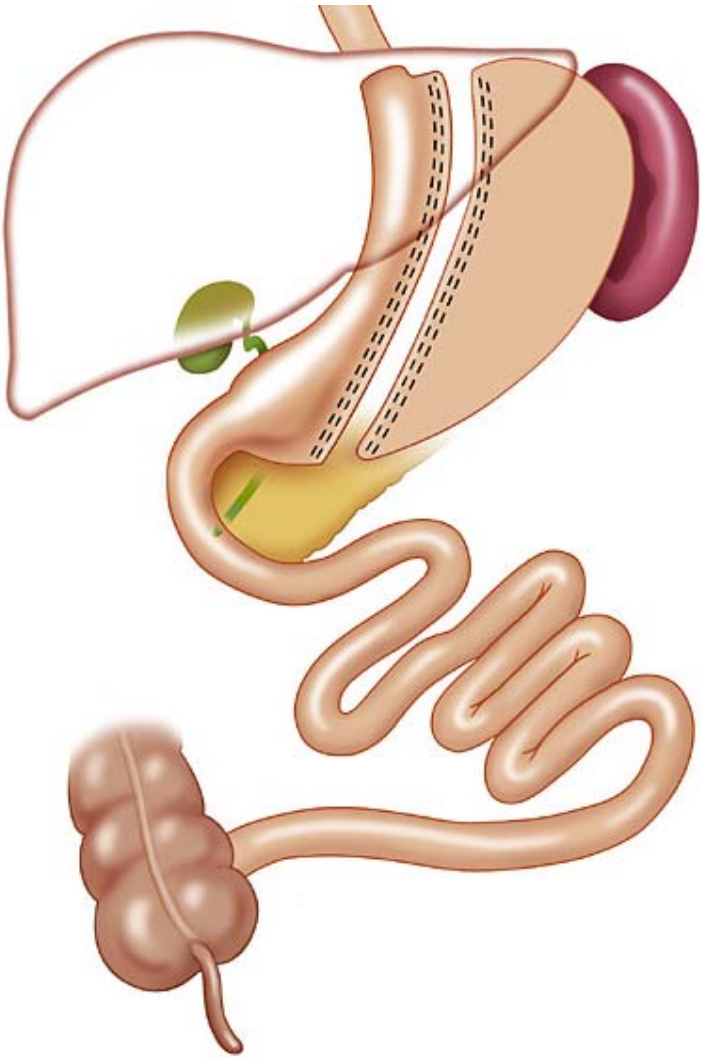

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Table of Contents

How to Contact Us

Business hours: Monday through Friday (non-holidays) 9 am to 5:00 pm

Telephone (415) 561-1310
Fax (415) 561-1713
Email WeightLoss@LapSF.com
Website http://www.LapSF.com

Appointments and Non-Urgent Matters: Call our office during business hours to speak to one of our staff. During *non*-business hours, leave a voice mail message for all non-urgent matters.

Nutrition Questions: Contact Khristi Autajay, RD

Telephone: (415) 561-1310

Email: RD@lapsf.com

Insurance/Billing Questions: Call (800) 704-0028 or (415)331-8390 ext. 13 or 14.

Emergencies: Call 911 immediately. Always bring your wallet card with you. It will help the emergency room physicians take care of you.

Urgent medical problems: Page the On-Call Surgeon at (415) 208-0260. You should then enter your phone number followed by the "#" key after the tone. Please allow us up to 1 hour to call you back. If your problem is too urgent to wait an hour, or you have not received a call back, please go to an emergency room or call 911. You can ask the emergency room physician to page us or contact us on the "on-call" cell phone (see below.) Our emergency contact information is also stated on our office voice mail message. Please note, in addition to the pager, the on-call surgeon also carries a cell phone after hours (after 6PM during weeknights and on weekends) and can be reached at (415) 516-0247. Please, ONLY call this number if you do not get a response after calling the pager.

When to Call

Please call us immediately anytime after surgery if you experience the following problems:

- Fevers of higher than 100.5
- Chills
- Sweats
- Flu-like symptoms
- Increasing abdominal pain
- Reddening wounds
- Increasingly painful wounds
- Persistent nausea and vomiting
- Shortness of breath
- Chest pain
- Difficulty breathing
- Cramping leg pain
- Drainage from wounds
- Inability to tolerate liquids

Many of the above symptoms may lead to life-threatening problems if not diagnosed and treated early. Only your surgeon is knowledgeable enough to determine whether you are having a serious problem related to your surgery. Please contact us if you experience any symptoms that seem out of the ordinary or appear on the above list. It is usually "better to be safe than sorry" if you have any question about a problem that you are experiencing, call us first. The list above is in no way a complete one, and therefore please do not hesitate to contact us regarding any problems or any of the content in this manual.

Overview of Important Issues

Introduction

Congratulations, and welcome to a healthier life. You have undergone the Restrictive Vertical Gastroplasty/Gastrectomy procedure. This postoperative manual will help guide you through the months ahead. Please read through everything carefully, several times, since many of your questions will be answered here in this manual. You can then look back to this manual as a reference if you have questions in the future. Also, read it frequently as repetition is the best method to commit information to memory.

Since we are committed to helping our patients achieve their weight loss and health goals, we have developed many resources to help you achieve these goals. MDPostOp™ is an online service that allows you to track and monitor your post operative progress on a daily basis. It gives us immediate access to all your information so we can provide you with optimal post-operative care. We encourage all patients to use it daily. For access to the MDPostOp™ website online at http://lapsf.remedymd.com, please use the login and password information provided to you by email. Record them here:

MDPostOp™ LOGIN_____ PASSWORD_____

Attending support groups is another excellent way to network with other patients and to get tips on healthy eating habits and exercise. Serious concerns or problems should always be brought to our attention. Please don't hesitate to call us.

Important Tips to Remember for Successful Weight Loss

The greatest weight loss will occur within the first six months. It will start to slow after that, but can continue for a total of 12-18 months. You may intermittently have plateaus in your weight loss for up to a month. This is usually an indication that you are eating too many carbohydrates or calories and/or not exercising enough. Take this as a sign to re-examine your eating and exercise habits. Most patients' weight will plateau after 8-12 months. After this time, additional weight loss may be difficult. Weight regain may also occur if too many calories are consumed, exercise is discontinued or old habits, such as grazing, snacking, or poor eating habits return.

1. Consumption of an adequate amount of liquid, preferably water, is crucial.
    - Patients should consume a minimum of 2- 2½ quarts (64-80 fluid ounces) of liquids per day. This should be done slowly and throughout the day. The easiest way to keep track of this is to purchase a 32-ounce water bottle and finish at least 2 bottles of liquids a day.
    - This amount should be increased by 10-20% when the weather is very hot and humid to prevent dehydration.
    - In the first 30-45 days after surgery, avoid drinking more than 3-4 ounces of liquids (1/3 of a cup) in a 10 minute period to avoid vomiting. Avoid gulping any more than 1 ounce (shot glass size) at a time. Eventually, you may be able to drink more at a time.

2. Solid foods should only be eaten 3 times per day. (This should correspond to mealtimes.)
    - Snacking between meals or "grazing" on small amounts of food throughout the day will sabotage your attempts at successful weight loss.
    - If you "graze," you will not lose an adequate amount of weight because you may consume too many calories.

3. The primary source of nutrition should be protein.
    - 70%-75% of all calories consumed should be protein based (eggs, fish, lean meats, etc.; bacon is not a lean meat).
    - Carbohydrates (bread, rice, pasta, potatoes, beans, etc.) should be only about 10%-20%, and fats (butter, cheese, etc.) only 5%-15% of the calories that you eat.
    - A diet consisting of 600-800 calories and about 70 grams of protein should be your goal for at least the first 6-8 months. Caloric intake can increase as your stomach stretches.
    - Swollen ankles, fatigue, hair loss, cracked nails, and defective healing and immunity are just some of the side effects of inadequate protein consumption (not to mention difficulty losing weight). Hair loss may also be due to hormonal changes but protein levels can be checked to be sure you are not developing a protein deficiency.

4. Never drink liquids when eating solid foods.
    - Liquids should be avoided for a period of 10-15 minutes before and 45-60 minutes after eating solid food or meals.

5. Avoid foods that contain sugar, especially simple sugars, such as in most sodas, fruit juice drinks and candy bars.
   - You must focus on eating enough protein to prevent malnutrition and hair loss. If you eat protein rich foods ***first*** at each meal, you will have little room left in your stomach for simple sugars.
   - Sugar and other carbohydrates may slow your weight loss because they are so easily digested and absorbed. Vertical Gastroplasty/Gastrectomy patients who have early plateaus are most always consuming too many carbohydrates. Because the negative biofeedback of Dumping syndrome is not present with this operation, it is all too easy to start eating too much sugar and other carbohydrates. Eating protein first and when hungry will help to minimize the chance of consuming too many carbohydrates.
   - Sugar, sugar alcohols and artificial sweeteners cause gas, bloating and diarrhea. VG patients usually do not get dumping; however they may if they eat significant amounts of fat or sugar. If too much sugar is consumed, it may enter the intestines rapidly and travel through quickly. This may lead to gas, bloating and a mad dash for the bathroom.
   - Avoid starchy foods such as rice, pasta, cereals, and mashed potatoes.

6. Stop eating/drinking when you ***begin*** to feel full. Do not "stuff" yourself. This may cause your stomach pouch to stretch.

7. You must begin an exercise program. You will accelerate your weight loss and have a better chance of reaching your goal weight by establishing a good aerobic exercise program and making healthy dietary choices. In addition and more importantly, aerobic exercise strengthens the heart and makes you feel better. It can also help to suppress hunger.

8. As mentioned above, patients whose weight loss has hit a plateau are usually eating too many carbohydrates. Lack of exercise may also limit the amount of weight loss. Occasionally, patients who exercise a great deal can experience a weight plateau due to increased muscle and lean body mass (like body-builders). Remember – muscle is denser than fat and thus weighs more. These patients often notice that they are losing inches and clothing sizes and should keep up the good work! Weight loss through exercise is the healthiest way to lose!

Tips for eating

The most difficult (and most important) time after surgery is the first 3-6 months. This is also the most important time because the habits that you develop in this period will be the ones that you will probably adopt for the rest of your life. In the first months after surgery, you are relearning how much you can eat (portion size as well as "bite" size), how well you have to chew, and what you can eat without developing problems. Although everyone is different, usually by the sixth month patients are eating most regular (healthy) foods - but in much smaller portions than they did before surgery. There will definitely be foods that you will never want to eat again because they will cause some type of "intestinal distress." As a reminder, the following tips should be useful:

- Always eat protein or protein rich foods ***first*** during your meals. Good sources of protein include fish, shrimp, eggs, soy, skim milk, and lean meats. Beans, rice, and cereals are NOT good sources of protein.
- Avoid simple carbohydrates, such as the sugar that is in most sodas, juices, sweetened beverages, candy bars, and "dessert" foods.
- Avoid carbohydrates such as bread, crackers, rice, pasta, and potatoes. Avoid the "orange vegetables" like carrots and sweet potatoes, as they are high in sugar.
- It is recommended that you DO NOT drink carbonated beverages.

THE 10 WEIGHT LOSS COMMANDMENTS

- Thou shall exercise 5 times per week for 40-45 minutes.
- Thou shall not covet the carbohydrate.
- Thou shall not eat more than 3 meals per day and shall not have unhealthy snacks between meals.
- Thou shall drink at least 8 glasses of water each day.
- Thou shall eat a minimum of 70 grams of protein each day.
- Thou shall honor thy commitment to good health and healthy choices.
- Thou shall keep follow-up appointments with thy doctor.
- Thou shall always take thy vitamins.
- Thou shall not weigh thyself more than once-a-week.
- Thou shall always keep the memory of the past and the hope of the future as a clear image in thy mind.

Postoperative Medications

At the time of your preoperative visit with us or after surgery, you will be given prescriptions for several medications that you will need for your recovery after surgery. Some of the medications you will need for just a few days to weeks after surgery, and some you may need to take for a longer period of time.

1. Narcotic pain medication.
    a. Lortab® is our preferred narcotic. It is similar to Vicodin®. It contains Hydrocodone. It comes as a liquid (elixir) or tablets. This will help control your pain after surgery. Most patients use it for less than one week and some don't even use it after leaving the hospital. A substitute such as Darvocet N-100® or Ultram® can be prescribed if you have problems with Vicodin-type medication.
    b. Most patients take pain medicine for 2-7 days after surgery. Occasionally, you can get shoulder pain from the gas used for laparoscopic surgery and you may need the pain medicine to relieve that pain.
    c. Worsening pain that lasts longer than 2 weeks is unusual probably needs to be discussed with your doctor. Call our office to speak to one of the surgeons.

2. Reglan® for nausea.
    a. Some patients may need Reglan® (metoclopromide) infrequently for occasional bouts of nausea early on after surgery. You should not need this on a daily basis. It will also help with heartburn/reflux.
    b. If you do have very frequent nausea, or nausea that occurs several weeks after surgery, you may be developing a serious problem. Please call our office to speak to one of our doctors.

3. Antacid for healing and ulcer prevention.
    a. Prevacid®, Nexium®, Aciphex®, Protonix®, or Prilosec-OTC® are powerful antacids and are prescribed to be taken once-a-day for at least one month after surgery.
    b. These medications allow you stomach to heal better and reduce the nausea that may develop from too much acid in your pouch. They also address the potential problems that may occur due to reflux which may be a side effect of the vertical gastrectomy.
    c. If the prescription brands are not covered by your insurance, then just buy Prilosec OTC® over the counter and take one tablet per day. Do not pay hundreds of dollars just to get the prescription filled because of insurance limitations.

4. Actigall® (Ursodiol) for gallstone prevention (if you still have a gallbladder.)
    a. Actigall® is prescribed at 300mg twice-a-day for as long as you are losing at least 8 pounds per month. This usually corresponds to 6-9 months after surgery, longer if you have much more weight to lose.
    b. Research shows that as many as 30% of all weight loss surgery patients will form gallstones and require surgery to remove the gallbladder if this medication is not taken. This risk is reduced to about 2-3% with at least 6 months of Actigall®.

Vitamins and Supplements

By having undergone the Restrictive Vertical Gastroplasty/Gastrectomy procedure, you have committed yourself to a lifetime of vitamins and calcium. You are required to take one adult dose of multivitamins twice daily and 500 mg of calcium 3 times a day. Bariatric Advantage® vitamins are chewable vitamin and mineral supplements specifically formulated for our patients' needs. These vitamins have been specifically designed to meet ALL of the supplement requirements.

1. Multivitamins (with folate and iron): 1 adult dose twice daily. **Mandatory!**
   a. Comprehensive Multivitamin (chewable or liquid if you choose)
   b. You may also try Centrum® which comes in chewable or liquid form, Flintstones®, Rainbow® vitamins, Vista® Vitamins, Costco® vitamins, etc. All of these are over-the-counter and do not require a prescription.
   c. The important thing is that you take twice the recommended dose for ADULTS each day.
   d. Menstruating women or patients with anemia should take a multivitamin with supplemental iron.
   e. Your multivitamin MUST contain folate or folic acid. A dose of 1 mg a day is essential!

2. Calcium: 500mg three times daily. **Mandatory!**
   a. More than 1500 mg will not be beneficial and will probably precipitate kidney stones.
   b. Start with Tums® (calcium carbonate) in the first 3 weeks after surgery then switch to Citracal® or Cal Apatite® (over-the-counter) which are calcium citrates.
   c. Try Viactiv® chewables (calcium carbonate) - They have a chocolate or caramel flavor. They do have more carbohydrates than the other choices, so you should remember this when calculating your carbohydrate intake for the day.
   d. In general, the most important consideration when choosing a calcium supplement is finding one that you like – otherwise you will be less likely to take it on a daily basis.
   e. If you have suffered from kidney stones in the past, please let us know so that we can discuss this with you further.

3. Vitamin B_{12}: 500 micrograms daily.
   a. Sublingual use of vitamin B_{12} (over-the-counter) will prevent the need to administer injections in virtually all patients. Weekly nasal or monthly intramuscular injections can also be used.
   b. Vitamin B_{12} deficiency can cause anemia as well as serious neurological problems.
   c. B_{12} Deficiency is rare with a Vertical Gastrectomy operation. Supplemental B_{12} only needs to be taken if recommended by us. If you wish to take this, you may.

4. Iron Supplement **Optional!**
   a. If you are anemic or have heavy menstrual cycles, you may require extra iron supplements.
   b. Iron sulfate : 325 mg three times a day.
   c. Chromagen Forte®: 1 dose twice a day. Each tablet contains ferrous fumarate USP 460 mg (151 mg elemental iron), ascorbic acid USP 60 mg, folic acid USP 1 mg, cyanocobalamin USP 10 mcg.
   d. Bariatric Advantage® also has a chewable iron that can be ordered through our office. It is very tasty and easy to take.

Note: If possible, it is best to separate the times when you take your multivitamin, calcium and iron supplements by a 1-2 hour interval to maximize absorption of each of these micronutrients. Vitamins are better absorbed when taken with food, especially protein.

General Guidelines: Liquids and Solids

Liquids

Only liquids should be consumed the first 2 weeks after surgery. These are liquids that can easily pass through a straw. These should always go down easily and be tolerated without problems. If you can't tolerate liquids and are vomiting them, we need to know. Call us immediately. Some patients have pain with cold water so try warm or room temperature water or decaffeinated tea. We are aware that many surgeons let their patients advance to solid foods more rapidly. We are strongly opposed to this because solid foods in the first two weeks may lead to forceful vomiting or retching. This vomiting can cause a disruption in the sutures or staples and lead to an emergency re-operation, long hospital stay (longer than one month) and possibly even death.

Recommendations

1. Avoid carbonated beverages because they can expand your stomach and cause severe pain.

2. Avoid caffeinated beverages until you are at least 2-3 weeks post op – they can cause dehydration. A good rule of thumb is as follows: if you are consistently able to drink 2 quarts of liquid each day, it is OK to drink caffeinated beverages.

3. Drink lots of water using a sport bottle to avoid swallowing air. Early on you will probably need to drink small amounts frequently since your stomach will not accept larger amounts. There is no magic number but 8 glasses of water per day should suffice. If the weather is hot and/or humid, you may require 1 or 2 more glasses each day. You can drink a shot glass of water or protein drink every 5-10 minutes as a way to control the volume you put into your stomach. You will notice if you are dehydrated because your mouth will be dry, your lips will be dry, and your urine will be dark and of less volume. These should be reminders to drink more. If you can't, let us know because we may readmit you for a day of intravenous fluids and vitamins.

4. Sugar-free drinks are best. Never think that <u>any</u> juice drink is healthy. If it is a juice drink, it most likely is loaded with sugar. For example, apple juice is very high in sugar. "Natural" juice contains natural sugar and many juice drinks contain additional added sugars. Sugar free Tang, Crystal Light and Diet Snapple are popular with many of our patients and are fine to drink after surgery.

5. Sugar-free Popsicles and sugar-free Jell-O® are fine to consume. They help break-up the monotony of this diet phase.

6. Do not consume liquids and solids at the same time. If you do, you may vomit. Sip fluids slowly 45 minutes after a meal. Stop drinking liquids 15-30 minutes before the next meal.

7. Green tea (decaffeinated) works well for nausea.

8. Milk: Some adults cannot digest lactose in milk, and some obesity surgery patients become intolerant of milk after surgery. Your small intestine needs the enzyme lactase to break down the lactose in milk so it can be absorbed. If you do not have enough enzymes for the amount of milk consumed, you may not be able to breakdown all of the lactose, and this could lead to bloating, flatulence, crampy abdominal pain and even diarrhea. You will probably be able to tolerate up to a cup of milk after surgery, but be cautious and watch for side effects. Try lactose-free milk or lactase tablets, such as Lactaid® or Dairy Ease®. Milk and dairy products should always be skim and fat-free.

9. Remember- you must always consume 70 grams of protein each day. In the liquid dietary phase, you will need a supplement!

<u>Solids</u>

Work up to these gradually. Solid food should not be eaten for the first 5-6 weeks following surgery. Soft foods, such as eggs, tofu, non-fat sugar-free yogurt, etc., may be introduced at the 3-4 week point, and should go down easily before solid food is attempted. Be cautious and don't eat too much or too fast, since you may disrupt your staple lines and end up back in the hospital for an extended period. We have seen this in patients who chose to eat regular food in the first 3 weeks after surgery, so please follow our dietary instructions carefully. Bite size should be half of what you are used to, and you should chew the food twice as long until it is well pulverized. In the first month on solid foods, you should feel satisfied or full with a very small portion of food (e.g., one to two ounces of tuna, or one egg). Meals like this should take 30 minutes to consume. Eating any faster may cause vomiting. If you are having difficulty or have a significant number of dietary intolerances, please call us.

Recommendations

1. Always set out small size meals. Do not start with a large meal and think that you will just eat a smaller amount. You will always eat more than you should. Place food on a small plate or saucer and use small utensils such as baby spoons or a seafood fork.

   Portion Tips: 3 ounces = the size of a deck of cards or a woman's palm
   ¼ cup = one layer on your hand or the size of a golf ball
   2 tablespoons = the size of a golf ball
   1 ounce = the size of 4 dice or 1 inch ice cube
   ½ cup = the size of a small wallet or compact case

2. While some fruits are OK to eat (raspberries, blueberries, watermelon and blackberries), please avoid fruit juices or processed fruit products as they are high in sugar content.

3. Eggs are OK in just about any form.

4. Baked fish products, especially fish fillets are quick and easy to make and a good source of protein.

5. Peanut butter and peanuts are high in calories and high in fat. They should be avoided. Soy nuts are a much better choice.

6. Tofu is a good source of protein.

7. You may want to use a blender for anything that seems too solid to go down easily and stay down.

8. Most soups are OK, but they may need to be pureed. Cream soup is high in fat and should be avoided. Do not eat soups with noodles.

9. Pork tenderloin, steak, turkey, ostrich and chicken are all good sources of protein.

10. Canned fish products (tuna, crab, salmon) are a good protein source. You may wish to prepare them in low-fat ways with olive oil or mustard. Avoid mayonnaise.

11. Turkey and beef jerky are good sources of protein and may serve as good protein-rich snacks. Make sure to chew well.

12. Lean deli meats (sliced thinly) are high in protein and are well tolerated by most patients.

13. Protein bars and drinks. The protein sources for these include everything from whey protein and milk-protein isolate to soy protein. These bars are dense, and they may cause gas, bloating, and diarrhea. If you have trouble with a particular bar, try one with another type of protein. GNC and other health food stores have many different kinds. The following bars typically contain 30 grams of protein, are low in carbohydrates, and are available in different flavors: Lean Body®, Pure Protein®, MET-Rx Protein Plus®, Designer Whey®, Extreme Body®, and Pure Pro Zero Sugar®. A more detailed list can be found below in the section "The Good, The Bad and The Calorie."

Post Operative Phases of Diet Progression

The size of your stomach has been reduced from about 60 ounces to 3-4 ounces. In order to prevent discomfort and stretching, and to protect the integrity of the pouch, you should follow these recommendations as closely as possible.

The dietary plan following a Restrictive Vertical Gastroplasty/Gastrectomy is broken down into three phases: liquids (Phase 1), soft foods (Phase 2), and solid or regular foods (Phase 3). You must remain on liquids for ***at least*** 2 weeks after surgery. Diet progression after two weeks varies from patient to patient. This minimizes the chance of severe vomiting and disruption of staples or stitches. After 3 weeks, healing is complete enough to progress to soft foods.

You may progress to the next phase only after waiting the minimum amount of time and after feeling completely comfortable with the previous phase (no vomiting or nausea). **If, after advancing to the next phase, you develop problems, go back to liquids and advance only after you have tolerated liquids without any problems for 48 hours.**

Phase 1: Liquids (first 2 weeks) – NO SOLID FOOD!

During your first two weeks post-surgery, your diet will consist of thin liquids. It will be mainly protein drinks and flavored drinks. It is important to note whether your protein drink is soy or whey protein. Some patients may not tolerate one and may want to switch to the other. Remember your goal is to take in 70 grams of protein per day and 64 oz of liquids. In drinking the protein drinks, you are on your way to fulfilling both goals. Remember: Any Sugar-free Jell-O, Sugar-free Popsicles, and Sugar-free Crystal Light also go towards your liquid intake. Be prepared to spend about $100-$150 on protein supplements for the first 3 weeks after surgery.

1. Thin liquids are items that you can easily drink through a straw, such as sugar-free drinks like Crystal Light®, chicken broth, beef broth, skim milk, soy beverages and water. Sugar-free Jell-O® can also be eaten during this phase.

2. Drink a high quality, liquid protein supplement such as Isopure®, Healthwise®, Z-Pro®, or Nectar® in order to achieve 70 grams of protein each day. Look for supplements that have more than 15 grams of protein, less than 5 grams of carbohydrates per serving and less than 130 calories. Men should probably consume more protein than women - 80-90 grams of protein per day. Be aware that this is very difficult in the first month and will become easier after that.
3.
4. Avoid all sugar, caffeine, or carbonated beverages. These will cause unpleasant side effects and may also cause complications.

5. Drink a minimum of 2 quarts of liquids throughout the day to prevent dehydration.

6. NEVER drink more than 4 ounces in a 15 minute period, for the 1st month.

7. Always sip – never gulp or drink quickly.

8. Keep track of your daily intake to be certain you get enough liquids and protein. If it's hot or humid outside and you are sweating, you will need to increase this amount by 10-20%.

9. If you urine is dark or your mouth is dry or if you feel dizzy, you are not drinking enough.

Examples of Liquids	Product Name	Serving Size	Calories	Carbs	Protein
	Chicken Broth, Campbell's	½ cup	20	1	1
	Chicken Broth, Swanson 100% fat free	1 cup	15	1	3
	Beef Broth, Swanson	1 cup	10	0	2
	Sugar-free Jello	1 snack	10	0	1
	Sugar-Free Fudgecicle	1	45	9	2
	Sugar-free "Popsicle" Brand	1	15	3	0
	Non-Fat Milk	1 Cup	85	12	8
	Evaporated Milk, Skim	1 Cup	99	14	10
	Silk – Soy Milk (not flavored)	1 Cup	80	4	7
	Sugar-free Crystal Light, Lemonade	1 serving	5	0	0
	Sugar-Free Tang	1/6 tub makes 8 fl oz.	5	0	0

Liquid Protein Supplements for the first few weeks after surgery:

Product Name	Where to Buy	Type of Protein	Serving Size	Cal	Carbs	Protein
R-kane Crem-o-lite 15 Cream of Tomato Soup Mix	LapSF $19/box, 7pks/box	Calcium Caseinate	1 packet 6 fl. oz.	70	2	15

R-kane Lite-soup 15 Chicken flavor	LapSF $19/box (7packets/Box)	Calcium Caseinate	1 packet 6 fl. oz.	70	1	15
HealthWise Shake (Chocolate)	LapSF $2.00/bottle	Whey	1 bottle	80	3	15
HealthWise Tea (Peach, raspberry)	LapSF $19.00/box 7 packets/box	Whey Protein	1 packet 8 oz.	65	<1	15
HealthWise Fruit Drink (Lemonade, Orangeade, Pineapple, Grape, Strawberry-kiwi, Peach Mango, Wild Berry, Pineapple Orange, Grapefruit)	LapSF $7.00/box	Whey	1 packet 8 oz.	70	2	15
Z-pro powder (chocolate and vanilla	LapSF $48/box 24packets/box	Whey and Calcium Caseinate	1 packet	142	7	25
PRO-CAL 100, powder, (Vanilla, Chocolate, Strawberry, Orange, Cappuccino	LapSF $15 box 12packets/ box	Whey	1 packet	100	7	15
Revival Powder (Chocolate, Vanilla, Strawberry, Strawberry/Banana, Blueberry, peach)	www.revivalsoy.com	Soy	1 packet	130	7	20
Instantized 100% whey	GNC $20.00 Small 32 servings $44.00 large 80 servings	Whey	1 scoop	110	3	23
MetRX Powder (Berry, Vanilla, Chocolate) Can – RJD 40 (Chocolate, Vanilla, Banana, Cafe Latte) * Not Recommended	GNC $80.00 39 servings $35.00 12/case	Blended Whey + Calcium caseinate	1 Packet 1 Can	250 250	19 15	37 40
Soy Protein – GNC Brand (Vanilla, Natural, Chocolate)	GNC $13.00 Small 13 servings $40.00 Large 55 servings	Soy	1 Scoop	120	16	13
Spiru-Tein	GNC $35.00 32 servings	Soy	1 Scoop	96	10	14
Isopure, powder, vanilla and strawberry	GNC $50.00 22 servings	Whey	2 scoops	200	0	50
Zero Carb Isopure	GNC $4.00/bottle $45.00/case *also available online for a discounted price by case	Whey	1glass bottle	160	0	40
Isopure, powder, chocolate	GNC $50.00 21 servings	Whey	2 scoops	200	1	50
Unjury, powder (unflavored, chocolate, vanilla, strawberry sorbet)	www.unjury.com $18.95 -16 serv	Whey	1 scoop	80	0	20

	(choc/van/straw) $16.95 (unflav) 15 servings					
PROFECT Protein drink	www.protica.com $10.17- 4 servings	Actinase	1 Vial- 2.7oz	100	0	25
Lifetime Wellness, powder (vanilla, chocolate); recipes available on website	www.lifetimewellness.com $32.50 30 scoops	Whey	1 scoop	125	3	24
VHT Extreme Smoothies (choc, straw, vanilla, praline, cappuccino)	Nutri-Sport, Vitamin Adventure (SF area); www.bariatriceating.com $26.95 12 cans	Calcium caseinate	1 can	170	6	35

Phase 2: Soft foods (after 3-6 weeks)

Always remember that with any new food that you try, eat a small amount at first and see how your stomach handles it. Proceed to eat slowly throughout your entire meal. You are aiming for:
LOW CARB - LOW FAT- LOW SUGAR!

1. You may stay in this phase for as little as 1-2 weeks or as long as several months.

2. You should always stick to the rules regarding the composition of your food as stated earlier: 70 grams protein and minimal amounts of carbohydrates and fat.

3. Always read labels to determine how many calories each food contains and how those calories are broken down (percentage from fats, carbohydrates, and protein). A general rule is that less than 5% is low and greater than 20% is high. Remember to use MDPostOp™ online to track your daily intake of calories, protein, fat and carbohydrates.

4. For the purpose of eating in "meals," these are the first foods that count as a meal, and thus should be eaten 3 times a day. Remember, you should not "graze." Three meals per day- no more. No snacks. Anytime you eat anything blenderized, soft, or solid, it counts as one of your meals. Once you feel yourself getting full, you should stop eating and not resume eating anything other than a liquid until the next mealtime.

5. Choose soft –textured and moist foods, which are easy to chew. For example: eggs (soft boiled or scrambled), tofu, light/no fat yogurt (no chunks of fruit/seeds), and small curd cottage cheese.

6. Add non-fat powdered milk or unflavored protein powder to foods (eggs, soups, and yogurt) for extra protein.

7. Never eat more than 4 ounces at one time. Take very small bites and eat slowly. Chew carefully until mushy. You should not eat any foods that are hard to chew or swallow. You may wish to blend foods that are too hard to eat.

8. Do not eat and drink at the same time. Sip fluids slowly 45-60 minutes after a meal. Stop drinking liquids 10-20 minutes before the next meal.

9. Between meals, you may drink any thin liquid or liquid protein supplement that you like, provided it doesn't contain sugar, carbonation or fat.

10. Continue to eat between 600-800 calories per day. Weigh yourself weekly to be sure you do not regain or lose too much weight.

11. Introduce one new food each day. Some foods may not go down well and regurgitation may occur. By selecting one new food each day, you will be able to identify which food may have caused problems. The most common food intolerances are red

meat, chicken, and turkey; meats are better tolerated if moistened with broth. If you are regularly having problems with vomiting or regurgitation – call us.

12. NO rice, mashed potatoes, pasta, bread, or popcorn. Avoid breakfast cereals including cream of wheat, oatmeal, and other soft prepared cereals.

13. Once you have tolerated Phase 2 for 1-2 weeks without difficulty, then you may progress to Phase 3.

Examples of Soft Foods	Product Name	Serving Size	Calories	Carbs	Protein
	Soups in a blender**				
	HealthChoice Chicken with Rice	1 Cup	90	12	6
	Pureed Tuna	2 oz	75	0	15
	Pureed Canned Chicken Breast with broth	1/4 cup	100	0	14
	Egg Beaters	¼ cup	30	1	6
	Egg, scrambled	1 egg	65	5	7
	Dannon Carb Control Yogurt	1 Snack	60	3	5
	Cottage cheese, Nonfat	1 cup	160	14	26
	Stallone™ High Protein Pudding (found @ GNC & online)	1 container	100	2	20
	Snack & Slim™ High Protein Pudding (found online)	1 container	100	1	20
	Tofu, silken, soft	3 oz	70	1	6

** Soups that you find in grocery stores are not always a good option because they may be high in fat, calories, and sodium. A better idea is to make your own soups. For example, try blending chicken breast with chicken broth.

Phase 3: Regular solid food (after 4-5 weeks)

1. We recommend 3 meals per day. However, there may be times when you need a snack in between meals, especially if you are very active. This snack must be a low calorie, preferably protein food. Examples of healthy snacks include: a low fat cheese stick, yogurt with berries, turkey jerky, hard boiled egg, etc…. Do not eat anything solid, blenderized, or soft again until your next meal time.

2. Eat until you ***begin*** to feel full and then stop. Do not force yourself to finish the food on your plate. Eat until you are comfortable. Do not "stuff" foods down. This may cause your stomach to stretch and you may not lose as much weight in the long run. Never place more food on your plate than you are permitted to eat.

3. NEVER start eating solid foods sooner than 1 month after surgery.

4. The best protein sources to eat are fish, skinless/boneless poultry, eggs and tofu. These have high protein and low carbohydrate and fat content.

5. Increase the variety of foods you are eating. Start with one teaspoon of a new food every two days. Beef may not be tolerated well for several months.

6. Never eat more than 4 ounces (volume) at a time. Measure your food (two tablespoons is equal to one ounce, 4 oz= ½ cup). Use small plates as a visual cue to assist you with portion control. Avoid rice, pasta, potatoes, bread and popcorn. Continue to focus on consuming protein and stay away from carbohydrates and fats.

7. Avoid foods high in fat (fried, creamy or buttery foods) as well as mayonnaise or butter! You may eat any other condiment that you choose but check the labels for hidden carbohydrates and sugar. For instance, a tablespoon of ketchup has 4 grams of carbohydrates.

8. Do not eat and drink at the same time. Don't drink until 45-60 minutes after a meal. Stop drinking liquids 10-20 minutes before the next meal. You will probably have some vomiting if you mix solids and liquids.
9. You must continue to drink 2 quarts of liquids per day, but only between meals. Again, eat 600-800 total calories per day.

10. Avoid eating within 3 hours of going to bed.
11. Choose flavorful foods, since there is no need for picking just bland foods.
12. Be cautious with seeds, skins, or spicy foods, these may be harder to digest.
13. Your daily intake of carbohydrates should still be less than 40 grams and fats less than 30 grams.
14. Avoid popcorn, nuts and taffy; as they can cause a blockage of your stomach or intestines.

One week Sample Menu for Phase 4

The total values listed may vary depending on brand. Please continue to check labels on products.

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Breakfast	1 soft boiled egg	1 Morning Star Farms breakfast sausage	2 slices Canadian bacon	1 sunnyside up egg 1/4 pepper slices	2 slices of turkey bacon 1 egg scrambled	1 scrambled egg 4" pork link	1 serving egg beaters 1 turkey sausage slice
Mid-morning Snack	¼ cup blueberries	3 piece of lean chicken deli meat	½ cup cottage cheese, low fat	1 Carb Control yogurt	1 string cheese	½ cup cubed watermelon	4 cucumber slices
Lunch	3 slices of lean deli meat	protein shake – Pro-Cal 100	2-3 oz skinless boneless chicken breast	1 oz tuna, water packed	protein shake - Pro-cal 100, pudding consistency	1 small 3 oz. can of salmon	2 oz turkey burger (no bun)
Mid-afternoon Snack	1 piece of low-fat Swiss cheese	1 string cheese	1 snack Sugar-free Jello®	¼ cup of raspberries	¼ cup of strawberries	1 snack Sugar-free Jello®	½ cup cubed cantaloupe
Dinner	3 oz Trader Joe's Meatless Meatballs 2 pieces broccoli	½ fillet of baked Salmon	2-3 oz of shrimp	3 oz. lean pork tenderloin 2-3 radishes	1 slice lean meatloaf - slice should be size of deck of cards	½ fillet baked halibut 4 cucumber slices	½ Fillet baked sole
Daily Totals							
Calories	400	435	450	322	540	567	322
Fats	13	12.5	16	14	30	35	15
Carbs	12	11	3	9	16.5	7	8
Protein	58	66	70	42	51	56	49

*If necessary, consume additional protein drinks to reach daily protein goal of 70 grams.

One year after surgery

1. You should be eating three meals a day, no more, no less.
2. You should not eat more than 3-4 ounces per meal.
3. You must maintain your intake of protein to avoid malnutrition and serious complications related to low protein levels in your body.
4. You should be maintaining a diet with 70 grams of protein a day and 2 quarts of liquids per day. The total daily calories will vary between 800-1000 depending on your weight at one year. We caution patients to not exceed 1000 calories per day, unless we advise you otherwise. Patients who go below their ideal weight will need to eat more to maintain their weight.

Dietary Progression Summary Chart

Time after surgery	Food Type	Total Calories	Total Fats	Total Carbs	Total Proteins
0-2 Weeks	Phase 1 Liquids/ Protein drinks	400-600	30	< 40	70
3 Weeks -3 Months	Phase 2 Soft Food	600-800	30	< 40	70-90
3-6 Months	Phase 3 Regular Food	< 800	30	< 40	70-90
6-12 Months	Regular Food	< 800	30	< 40	70-90
> 12 Months	Regular Food	1000-1200 (depending on current weight, exercise and BMI)	30	40 - 60	70-90

Plateaus and Late Weight Gain

If you do experience a weight loss plateau, it is important to remember to avoid sugars and carbohydrates, as well as to increase your exercise. Keep a meticulous food journal on our MDPostOp™ online system as a matter of routine, as this will assist you in analyzing why your weight loss has stopped or is less than expected.

Body Compensation

Your body will adjust over time. The stomach will slowly enlarge, and the intestines will adapt to absorb more calories. This is why eventually everyone's weight plateaus, usually by the end of 12-16 months. This is why most people's complaints about dietary intolerances subside over the first year. Although virtually no one loses too much weight after a gastric bypass surgery, never let your weight drop below your ideal weight (weight at a BMI of 24 kilograms/meters^2) without calling us since you could develop severe nutritional deficiencies and become very ill.

The Dangers of Grazing

Grazing, a pattern of repeated episodes of consuming small quantities of food over a long period of time, can be a very dangerous behavior after weight loss surgery. The first year after surgery is a critical time to develop healthy eating habits, not just in what you eat but how you eat. Grazing can drastically slow or stop weight loss as it may lead to excessive calorie intake. Some people experience grazing behavior long before surgery, these patients need to be extra careful not to fall into the same patterns after surgery. Some patients who may have experienced "binge-eating" before surgery are at serious risk of becoming "grazers" after surgery. Eating behaviors are deeply ingrained and some patients can find themselves returning to these old patterns of eating months or even a year after surgery. The resolution of these eating behaviors can seem immediate in the days and weeks after surgery. Initially after surgery, patients do not have much interest in food. These patients are usually quite focused on eating the right things and are constantly reinforced by rapid weight loss.

Towards the end of the first year, when weight loss slows or you near your goal weight, you must stay focused and avoid grazing. Some patients have a tendency to test the limits, to see what they can "get away with". One patient said that she began to give herself permission to eat more as the intervals between her follow up visits increased. Most say that the content of their meals is appropriate, although they may eat a bit too much or snack too often, this can be dangerous ground. While certain eating patterns

may improve for some patients immediately following surgery, especially in the short-term, studies have shown that eating disturbances tend to persist following surgery and can be linked to less-than-adequate weight loss. It is important to continuously monitor your total daily calorie intake and your weight. If your weight loss stops or increases slightly you need to assess what you are eating and how much.

Do not eat all day long or consume multiple small meals. Stick to 3 healthy and sensible meals per day. Eat very small portions – never more than 4 ounces of food at a time. If you become hungry in between meals, drink a protein shake or some other protein rich food (turkey, fish, eggs).

The surgical weight loss procedure that you have is a powerful tool to help you get the weight off but in the years ahead keeping the weight off is more dependent on careful monitoring of your eating habits, total daily calories and activity levels. Remember to contact us or attend our support group if you have not been losing enough weight or have regained weight, we can usually make helpful recommendations.

Volume

Most patients experience an uncomfortable or "tight" feeling under their breastbone after they have eaten. You are just experiencing stomach fullness. Remember to eat very slowly and be observant of your body's signal that it is full. If you feel a sense of fullness, stop eating, do not stuff yourself. Learn to stop eating before you feel uncomfortable or bloated.

Keep in mind that, the stomach pouch will only accommodate 4 oz (1/2 cup.) Use small plates or food scales to guide your estimation of how much your stomach can hold at any one time. The starting volume of your stomach does not necessarily correlate with the volume of food you can have at one sitting. The stomach can be quite contracted or irritable and only allow a fraction of the total volume in. Never put more than 3oz of food on your plate at one time.

Head Hunger

As you probably know, the contribution of "stress eating" or "head hunger" to morbid obesity can not be over emphasized. Most patients have discussed these issues with their psychologists and therapists through many years of their adult life. Occasionally, as discussed above, after months of following a stricter diet after surgery, older habits and "stress eating" behaviors can slowly become a problem. Most patients can say that even after 1-2 years after surgery, they are only able to eat 1-2 small bites of well chewed chicken. However, they can eat many more French fries, potato chips, nuts, beans, etc. – all the foods that would sabotage good weight loss and lead to significant weight regain. Even if the surgical procedure has gone well, there are still psychological issues that can cause failure and must be addressed. In these cases, we often advise our patients to seek psychological or even psychiatric help after surgery to help with these issues. Substituting physical activities and hobbies are common solutions to these problems. Cancel lunch meetings and plan walking dates! We have had men take up knitting and plenty of patients are bike-riding, hiking, swimming, running, and enjoying other activities with friends and family. The difference after surgery is that most patients are now satisfied with small quantities of solid protein-rich foods, and thus the hunger factor is diminished in contributing to the problems.

The Importance of Exercise

The most successful patients (in terms of overall health and weight loss) who have had the Restrictive Vertical Gastroplasty/Gastrectomy procedure have two things in common: (1) They follow their dietary recommendations closely, and (2) they initiate and maintain a regular exercise program. It is essential that, within the first four weeks after surgery, you begin a regular exercise program. Initially, this may simply be walking around the neighborhood, five times per week for 40-60 minutes each time. Later (three to four months post-op), it will also involve low-impact resistance training (swimming, light weight-lifting, rowing, etc.). This will guarantee not only a good weight loss, but will also improve your stamina, energy level, and overall health. Remember, you lose weight when the energy expenditure is greater than the amount of calories (energy) eaten. Studies have consistently shown that individuals who make a habit of regular exercise not only live longer and have fewer health problems, but are able to maintain their weight loss indefinitely. If you need help with your exercise program, contact us and we will assist you. As stated earlier, MDPostOp™ is an excellent resource to help you keep an exercise journal and track your calories burned each day. This online system also allows us to monitor your progress with you. Always try to choose activities that are affordable and that you enjoy. In doing so, you will give yourself the best chance at maintaining a healthy lifestyle.

Calories Burned with Certain Activities: A World of Difference				
	E-mail colleague (1 min)	2	Walk to colleague's office (1 min)	4
	Ride elevator (2 mins)	3	Take stairs (2 min)	19
	Order take-out (1 min)	1	Cook meal	70
	Load dishwasher (10 mins)	23	Wash dishes	80
	Watch TV	35	Play cards	52
	Go to car wash	35	Wash car at home	104
	Play video game	53	Play basketball	280
	Mow lawn/riding mower	88	Mow lawn/power mower	193

The Good, The Bad and The Calorie

All proteins and carbohydrate foods are not created equal. Some are healthier than others, because of fat content, calorie counts and additives. The tables below help categorize a few to help you make better choices.

Sources of Protein (always try for 70 grams per day)

Good	Bad
baked or broiled skinless chicken	fried chicken
pork tenderloin	pork rinds or bacon
lean poultry like turkey or ostrich	chicken nuggets
baked or broiled seafood	fried seafood
eggs or egg substitute	fast-food egg biscuit sandwich
lean unprocessed deli meats like roast turkey	salami, or bologna
soy beans (edamame) or tofu products	canned beans
Boca Burger®, Gimme Lean®,	high fat sausage or hot dogs
lean ground beef or ground turkey	high fat ground beef or processed meats
shell fish like lobster, shrimp or crab	rice, beans, potatoes
	Refried beans
	Peanut butter

Carbs (always limit to 40 grams per day)

Good	Bad
Salads and green leafy vegetables	white bread, regular pasta, rice
cooked vegetables	cookies, crackers, potato chips
Tomatoes, celery	carrots, sweet potatoes, beets
blueberries	apple juice, orange juice, dried fruit
cucumbers, green beans	refried beans
radishes, green bell peppers	cereals, cream of wheat, instant oatmeal

Good Protein Supplements

Powders	Shakes and Bars
Crem-O-Lite Soups (R-Kane®) 15g prot/1g carb/70 cal	Pro-Cal 100 Protein Drink (R-Kane®) 15g prot/7g carb/100 cal
Z-Pro 25 (R-Kane®) 25g prot/7g carb/142 cal	Healthwise Fruit Shake in bottle (Healthwise®) 15g prot/1g carb/70 cal
Nectar (SI03) 23g prot/0g carb/90 cal	Healthwise Fruit Drink (Healthwise®) 15g prot/2g carb/60 cal
Healthwise Tea (Healthwise®) 15g prot/<1g carb/65 cal	Ultra Pure Protein Shake™ (Worldwide Nutrition®) 35g prot/1.5g fat/6g carb/170 cal
Pro Complex™ (Optimum Nutrition®) 55g prot/20g fat/4g carb/260 cal	Pure Pro Zero Sugar™ (American Bodybuilding®) 31g prot/4.5g fat/31g carb/280 cal

Isopure Zero Carb™ (Nature's Best®) 50g prot/0 g fat/0g carb/200 cal	Lean Body™ Bar (Labrada®) 30g prot/7g fat/19g carb/300 cal
Carb Fx Protein Powder™ (MET-Rx®) 46g prot/1.5 g fat/4g carb/210 cal	Pure Protein™ Bar (MET-Rx®) 30g prot/4g fat/13g carb/280 cal
Elite Series Mega Whey™ (GNC Pro Performance®) 40g prot/4g fat/4g carb/220 cal	ProteinPlus™ Bar (MET-Rx®) 35g prot/8g fat/29g carb/320 cal
Unjury™ (ProSynthesis Laboratories®) 20g prot/0g fat/0g carb/80 cal	Designer Whey Protein Bar™ (Next Nutrition®) 31g prot/6g fat/23g carb/270 cal
Whey Protein Concentrate™ (All the Way®) 22g prot/2g fat/2g carb/113 cal	Extreme Body Bar™ (American Bodybuilding®) 34g prot/7g fat/18g carb/110 cal
Designer Whey Protein™ (Next Nutrition®) 17.5g prot/1g fat/2.5g carb/87 cal	U-turn™ and Detour™ Protein Bars (Next Nutrition®) 32g prot/9g fat/21g carb/290 cal

Remember – there is a difference between protein supplements, (like those listed above) and calorie supplements (like Ensure®, SlimFast® and Boost®). Calorie supplements should *never* be substituted for a good source of protein because they contain a large amount of fat, carbohydrates and calories. Remember to always read labels!

The Carb Chronicles and What NOT to Eat

Concentrated Sweets

Most of the following foods and beverages are filled with "empty" calories in the form of sugar. Sugar-free versions of these items are acceptable. These products provide mainly calories with limited nutritional value (that is, vitamins, minerals, protein, and fiber). Every bite counts after weight loss surgery. An adequate amount of protein needs to be consumed to prevent malnutrition secondary to malabsorption following surgery. Filling up on these "concentrated sweets" can prevent weight loss and can replace healthier foods from your diet. They actually don't help you feel full. If you choose to eat healthier, more nutritional foods first with each meal, you will more likely not have any room or appetite for nutritionally "empty" foods.

Foods To Avoid	ice cream and frozen treats	soft drinks
	chocolate milk or flavored milk products	lemonade
	pudding and custard	Kool aid®
	sweetened, added-fruit, or frozen yogurt	sugared ice tea
	dried fruits	fruit juices and fruit drinks
	canned or frozen fruits in syrup	table sugar (Splenda® OK in small amts)
	jellies, jams and preserves	Honey, molasses
	sugar coated cereals	Candy
	doughnuts and pastries	regular Jell-O®
	popsicles	sugar gum
	cakes	Oranges, apples, pears
	pies	maple syrup
	cookies	sherbet/sorbet/gelato

More on Carbohydrates

Low fiber ("white") starches and simple sugars are very easy to over-eat and are one way people consume too many calories and gain weight. Managing carbohydrate intake is essential in order to meet restricted calorie goals for weight loss. Being aware of hidden sources and added calories in the carbohydrates we eat is also very important. Splenda® is a sugar substitute and OK in small amounts. Some nutritionists feel that Splenda® may cause sugar cravings in patients after weight loss surgery. Also, Splenda® can cause diarrhea in some individuals. Saccharin or Aspartame may be better if you require a sweetener; again, in small amounts.

Starchy foods include breads, cereals, grains, noodles, rice, starchy vegetables, baked goods, snack foods, and crackers. Many starchy foods may be low-fat or fat-free but can contain hidden sugars. Many have hidden fats added for the cooking or baking process and for added flavor and appeal. High-fat and sugar-loaded starchy foods include baked goods (cookies, cakes, etc.), some cereals, breakfast and energy bars, chips and other snack foods.

Fats are often added unknowingly to low-fat, starchy foods, which adds additional unaccountable calories. Examples are butter on toast, mayonnaise on a sandwich, cream sauce on noodles, cream cheese on bagels, and sour cream on potatoes. We all love the taste of these combinations but can learn to enjoy the taste of food instead of the high-calorie additions. Using very little or a lower fat substitute is also an option.

Review the portion sizes of the foods in the starch group so you can limit your total carbohydrate intake when meal planning. Avoid simple sugars, and be aware of added/hidden sugars and fats in your favorite foods, and the fats you add to your carbohydrates. This will help to keep calorie levels lower to aid in permanent weight loss after surgery. If the packaging states that a food item is fat free, you can be certain it is loaded with carbohydrates. If it state that the item is sugar free, you can be certain it is loaded with fat. When in doubt, look at the total calories. If the calorie count is very low, it will probably be OK to eat. Read labels!

What is the Glycemic Index?

The Glycemic Index describes the blood glucose response from consumption of a defined amount of carbohydrate. The lower the Glycemic Index the longer the feeling of fullness (satiety) and the slower the return of hunger. Carbohydrates with a low Glycemic Index are better choices than those with a high Glycemic Index. For example, raw carrots have a low Glycemic Index and are a reasonable choice, whereas fruit-flavored drinks have a high Glycemic Index. You should strive to consume less than 40 grams of carbohydrates each day, focusing on those with a Glycemic Index less than 40. This website, http://www.glycemicindex.com has a complete list of foods that have been measured. You may also want to purchase the "Glucose Revolution" book to read more about this topic.

Net Impact Carbs

The recent low-carb trend has led to strange new wording popping up in the health food sections of books, magazines and advertisements. Many patients have seen and asked about "Net-impact Carbs", "Actual Carbs" and "True Carbs". The advertising on the product label of many low-carb energy bars frequently states there are only two grams of "actual" carbs. The truth is that these bars still have just as many calories as regular bars. Manufacturers are using sugar alcohol instead of sugar. Sugar alcohols are slightly better than sugar as they will cause less of a spike in your blood sugar, but they are still calories that you absorb. The manufacturers thus try to claim that these sugar alcohols do not count, but they do. Sugar alcohols include: erythritol, isomalt, lactitol, maltitol, mannitol, sorbitol and xylitol. Be aware that the FDA does not regulate low-carb advertising so the only way to calculate the actual carb content and total calories in what you are eating is by looking at the "Nutrition Facts" box.

Treating Symptoms

Wound Care

You will have a thin layer of wound glue on each incision that may feel rough. Do not pick at this glue, it will flake away in about a week or two. Picking it off prematurely may cause the wound to open up. Showering is permitted immediately, and taking a bath after two weeks if all your incisions are healed. You may notice some bruising around your incisions, this is normal. If you experience increasing redness, pain or warmth at any of the wounds, you may have an infection, so please call us immediately. A small amount of redness (less than ½ inch) is common and usually consistent with healing. Some patients may have a small amount of drainage from their wounds. The body fills the open space beneath wounds with fluid and this tends to drain out. It is inconvenient and you may need to use a couple of gauze pads each day to catch the fluid. If the drainage increases in volume and saturates several gauze pads each day, or becomes thick and foul-smelling, please call us - we may need to see you.

Recovery and Activity

It is common to feel weak and tired immediately after discharge from the hospital. You should not drive for *at least* two weeks after surgery or as long as you are on narcotic medication. Plan on taking two to four weeks off of work. This varies greatly depending on the type of work that you do and how quickly you recover. You should be doing light walking in the first week or two after surgery and then increase your exercise after that. A good rule of thumb is that you should be walking at least 1-2 miles five times per week after the first month, 2-3 miles after the second month and 3-5 miles after the third or fourth month following surgery. Another good way to measure your exercise is with a pedometer. Try to work up to 10,000 steps per day by the end of the first month or two after surgery. Be cautious with heavy lifting (more than 20lbs) for the first 2 months after surgery as this can cause a hernia. You can develop a hernia at anytime in the future, but the wound is most at risk in the first one to two months.

Nausea and vomiting

Some patients have mild nausea in the first few months following the Restrictive Vertical Gastroplasty/Gastrectomy procedure. Nausea can be treated in several ways. First, try some decaffeinated green tea. This can be very effective. If the nausea is more than just mild, then call us. We will want to know about this and may need to prescribe a medication to help. If the nausea persists,

this may be a sign of a problem and therefore we should know about it. Both nausea and vomiting may occur after eating too fast, drinking liquids while eating, not chewing enough, or eating more than the stomach can comfortably hold. It is necessary to learn to eat very slowly and chew foods thoroughly. If vomiting occurs, stop drinking or eating until the nausea passes. After the nausea subsides, resume only fluid intake for 12-24 hours before attempting to eat solid foods. Nausea and vomiting can also be triggered after trying new foods. If this happens, allow a few days to pass before trying the same food again. Repetitive vomiting to the point that liquids cannot be kept down is potentially dangerous. Contact us if the vomiting becomes a problem. You may need to be readmitted to the hospital for dehydration. You may also need an x-ray or endoscopy to examine your stomach and intestine. Please do not wait too long to contact us as this may make treating the problem much more difficult. One of us is always available to answer questions, day or night.

Heartburn

Acid reflux symptoms may worsen after the Restrictive Vertical Gastroplasty/Gastrectomy procedure because of delayed stomach emptying. We will give you a prescription for an antacid which will further reduce the potential for heartburn to be a problem. If you do have symptoms of heartburn, it may be caused by eating or drinking too quickly. It may also be caused by stomach spasms or a stricture. Please let us know if you are having troubles with heartburn or regurgitation as it can be a sign of a problem.

Gas, Bloating and Odor

These symptoms are the most common in patients who have had the Duodenal Switch procedure and extremely rare after other weight loss surgeries. They are usually related to the malabsorption of fatty foods. Dietary modifications should help to reduce the frequency and severity of these symptoms. If you eat something that triggers these symptoms, then avoid it for a couple of weeks. If they become worse over time, please let us know. Patients who are bothered by gas may try over-the-counter medications that reduce gas production, such as Beano®, Gaviscon®, Phazyme®, Gas-X® and Lactinex®. Also try to monitor what you eat. If you eat something and develop lots of gas then don't eat it again for several months. Lactose intolerance may also be the cause of these symptoms and you may have to stop drinking milk for a while. Odor from loose stools can be treated sometimes with Devrom® (1-800-453-8898). Most patients deal with post op stool or gas odor by using a citrus-based, aroma spray. The odor is caused by malabsorption and may be improved by consuming less fat in your diet.

Stool Frequency and Diarrhea

You may have loose, frequent stools for a few weeks or even months after surgery. Occasionally, if you have had your gallbladder removed at the time of your bypass, you may develop diarrhea. This will slowly improve as you modify your diet. If this is problematic, please notify us and we can prescribe a medication to address this problem. Avoid those foods that seem to cause you to have diarrhea. You may take an occasional over-the-counter medication, such as Kaopectate® (for diarrhea) or milk of magnesia (for constipation) to help with bowel problems. However, you should not take drugs such as Imodium® or Ex-Lax unless you contact us first. If you are having numerous episodes of diarrhea each day, please call us as you may need some laboratory testing and prescription medications. The rule of thumb is if you have diarrhea while on protein drinks, then change to a different one. If you have constipation, drink more liquids.

Notes on Over-The-Counter Medications

Patients are able to take most over-the-counter medications used for treating colds, minor flu-like symptoms, aches and pains. Read all labels for the specific ingredients. Avoid non-steroidal anti-inflammatory medications such as ibuprofen, Advil, Motrin, Aleve, Naprosyn (naproxen sodium), etc. These medications can cause serious ulcers and life-threatening bleeding. If you are going to take them for more than 1-2 days please let us know immediately. Tylenol® or acetaminophen are always safe substitutes for these medications. Please read the instructions and never exceed the recommended dosage. Patients who must take aspirin may take a chewable baby aspirin (81mg) and always take an antacid such as Pepcid (famotidine) or Zantac (ranitidine) at the same time.

Hair Loss

You may experience dramatic hair loss, even coming out in clumps while brushing. Do not fret since this is common with rapid weight loss by any method. Hair loss will slow and stop as you approach your goal weight and your weight loss slows. At that point you hair will begin to grow back with finer hair. We may order blood tests if we are concerned about malnutrition causing hair loss. However, most of the time, the hair loss is a result of hormonal changes from changes in fat cells. Some patients find that taking a

Hair and Nail supplement that can be purchased from GNC® or other vitamin shop. Another option is to take the following supplements that may also help or slow hair loss:

1. Co-Enzyme Q/10 25-50mg per day
2. Biotin 300mcg per day
3. Flax Seed Oil 1-2 grams per day, gel-tabs, oil or sprinkles
4. Primrose Oil gel tab 500-1000 mg per day
5. Zinc 50mg/day

Remember, there are no bald, female, weight loss patients. All of the hair that you lose should regrow once you have reached your goal weight.

Potential Problems and Long Term Nutrition Issues

If you are experiencing any of the issues presented in this section, you need to contact us so that we may help in treating the problems promptly.

Inadequate Weight Loss

On average, patients who have undergone the Vertical Gastrectomy Surgery should lose 10-20 lbs the 1st month after surgery, and 5-10 lbs per month after this. We also ask that you notify us when you are 20 pounds above your goal weight. For patients not losing enough weight, please let us know so we can try to determine what can be done.

Excessive Weight Loss and What is "Ideal Body Weight" after surgery?

It is unusual for a Roux-en-Y gastric bypass, Lap-Band®, or Vertical Gastrectomy patient who is closely followed by their surgeon to lose too much weight; it is more likely with Duodenal Switch patients. Remember, standardizing your body weight is based on how tall you are and your body type and sex. The medical community uses the BMI as a way to do so.

BMI stands for Body Mass Index and is the ratio of body weight to height. The range of normal body weight is between a BMI of 18 to 25 kg/m^2. The actual, calculated Ideal Body Weight (IBW) is gender-specific and the calculations are derived from tables published by the Metropolitan Life Insurance Company height and weight tables. IBW for a man is different for a woman. For example, the IBW for a man 5 foot 5 inches tall is 134 lbs which is a BMI of 22.3 kg/m^2. For woman just as tall, it is 125 lbs or a BMI of 20.8 kg/m^2. Thus IBW is 21-22 kg/m^2.

Weight loss surgery is not a true "cure" for obesity. Surgery helps patients limit the amount of food they can eat in order to lose excess weight. In order to remain healthy with a smaller stomach capacity and/or a lesser ability to absorb food, the goal weight after surgery is different than that in patients without surgery. We prefer a BMI of 24-26 kg/m^2 as much safer and healthier. We believe that most patients would have to lose significant muscle mass to achieve a BMI of 21-22 kg/m^2. If you end up with a BMI as low as 21 kg/m^2 after weight loss surgery you may not have the physiologic reserve to fight infections and fatigue, and weakness might occur. A BMI of 24 kg/m^2 gives you a little extra weight to lose in times of illness. In addition, removal of excess skin can lead to additional weight loss and can put your BMI at much less than 21 kg/m^2. Remember, the long term "average" weight loss after surgery is about 70% of your excess body weight. This result places most patients in the 25-30 kg/m^2 BMI range.

Abdominal pain

Everyone who undergoes weight loss surgery should expect to have some abdominal discomfort in the first 1-2 weeks after surgery. This pain is caused by the small incisions made in the abdominal wall, spasms in the muscles of the abdominal wall or gas making its way through the intestines. Pain from these sources is usually well controlled with small doses of narcotics, either intravenous or taken orally. The frequency and severity of pain should slowly subside over a two week period. If the pain gets worse each day it may be a sign that something serious is happening and you should call us immediately. Safest rule of thumb: If the pain is moderate to severe and lasts more than 1-2 hours- call us!

Once you have recovered from surgery and have returned to work it is possible to still experience abdominal pain. It is important to identify which pains are minor "gas pains" and related to dietary choices and which pains are indicative of something more serious. The following items provide a brief description of possible sources of pain after surgery and percentage occurrence; most of these can be treated with just medication or an outpatient procedure.

Ulcer/Gastritis (<1%)

Ulcers and gastritis are areas of inflammation that occur in the lining of the stomach pouch. This is unusual in the Vertical Gastrectomy procedure. To prevent ulcers, we usually have you take an antacid for the first few months after surgery. The antacids also allow for proper healing. Ulcers can occur for reasons such as stress, smoking, alcohol use and taking anti-inflammatory (ibuprofen, Advil®, Motrin®, Aleve®) medications. The pain from ulcers usually occurs in the upper central abdomen and tends to be a constant burning pain. Associated nausea may also occur. If you develop this type of pain it should usually feel better within just a few hours of taking an antacid. If it does not, please notify us immediately. Some patients will need a procedure called an endoscopy to look into their stomach pouch for an ulcer. Fortunately, most patients just get better with antacids. If you are going to take any prescription anti-inflammatory medication you must be on an antacid (Nexium®, Protonix®, Aciphex®, Prevacid®, Prilosec OTC ®) to protect their stomach. However, there is still a risk of ulcers despite medication. Patients with painful arthritis may take COX-2 inhibitors (Celebrex®) if it is acceptable by their primary care physician. Recent medical data suggest that COX-2 inhibitors may place patients at higher risk for heart attacks and heart problems, so take these medications at your own risk and under the supervision of your primary care physician. Vioxx® has already been removed from the market because of these risks. ***Patients who take anti-inflammatory medication may have up to a 30% incidence of ulcer and bleeding.***

Stricture/Stenosis (1%)

Strictures are a narrowing within the stomach pouch itself. These do not usually cause significant pain. Usually, they prevent food and even liquid from emptying out of the stomach pouch. If this progresses, you may start vomiting and become dehydrated. The vomiting may cause you to strain a muscle in your abdominal wall and this could lead to pain. If you are having progressive difficulty keeping very soft foods and liquids down, then you may have a stricture. Please let us know and we will decide if you need an endoscopy procedure to dilate the area of narrowing.

Gallstones/Cholecystitis (3%)

For patients who still have their gallbladder after surgery, there is a 2-3% chance of developing gallstones. Your risk is much higher if you don't take Actigall® for at least the first six months after surgery. Gallstones can block the drainage of the gallbladder and lead to severe pain in the right upper side of the abdomen. It usually lasts for one to two hours. It can often come back a couple of times within a week. Patients describing this type of pain will need an ultrasound test. If gallstones or an inflamed gallbladder are noted, then removal of the gallbladder may be necessary. This additional surgical operation is called a laparoscopic cholecystectomy and can usually be done with a less than 23 hour stay in the hospital. Untreated gallstone pain can lead to severe inflammation or infection of the gallbladder, jaundice and even pancreatitis which can be a very serious medical disease.

Leak and/or Fistula (<0.25%)

A leak is a hole from the stomach or intestines directly to the abdominal cavity. It usually occurs within the first two weeks after surgery and must be diagnosed and treated quickly. It usually requires additional open surgery and a hospital stay longer than one month with many additional associated procedures. You do not want to have this. Our experience and technique (plus, you are drinking liquids for two weeks) has almost eliminated this complication. It does occur more frequently in patients undergoing revisions (this means they had a prior "stomach stapling"). The signs of a leak are increasing upper abdominal pain, difficulty breathing, fevers, sweating, chills, rapid heart rate and an elevated white blood count. Usually, patients are still in the hospital. If you have already been discharged, it is important to notify us as soon as possible if you are having any of these symptoms. We can usually diagnose this with x-ray tests. We almost always have to operate for this very serious problem.

Incisional hernia (<1%)

This is a separation of the muscles and connective tissue layers of the abdominal wall. Usually the intestines push through this hole and against the skin. Hernias can be chronically painful or acutely painful when a segment of intestines becomes lodged within the defect. If you feel any lump in your abdominal wall please call us. Hernias can often be reduced (intestines pushed back in) in the emergency room and surgical repair can be planned at a later date. Rarely, the intestines can lose their blood supply within the hernia and emergency surgery is necessary. Fortunately, laparoscopic surgery almost eliminates hernias in the abdominal wall. A few of our patients have had hernias from prior surgery. These have required repair after significant weight loss.

Obstruction/Blockage (1-2%)

Intestinal obstruction can occur for many different reasons: internal hernias through various openings between intestinal limbs, adhesions, intussusception, and ischemia. It is very unlikely to occur in the Vertical Gastrectomy since the intestines are not touched. The signs of an intestinal obstruction may be subtle. Some patients will have a bloated abdomen, vomiting and severe pain evolve over less than 8 hours. Others may have intermittent pain for weeks. There is not one x-ray test that is perfect at diagnosing this. Usually, a discussion with one of us will lead to the conclusion that this may be occurring. We might then recommend scheduling you for a diagnostic laparoscopy to look for adhesions, twists and points of obstruction within your intestines.

Kidney stones (<1%)

Kidney stones related to weight loss surgery occur because of chronic dehydration and/or from malabsorption. Some patients have had kidney stones prior to weight loss surgery and a new one could just represent a recurrence and not be related to weight loss surgery. These can produce severe pain on the right or left flank and back. It is very difficult to get comfortable while passing a kidney stone and many patients have to go to an emergency room for treating the pain and for diagnosis. The only way to minimize the chance of kidney stones is to drink lots of liquids (greater than 64oz/day) and consume a low oxalate diet (avoid chocolate, caffeine, nuts, dark green leafy vegetables, tea, cocoa, and pepper). Limiting your Vitamin C intake to less than 1 gram/day is also helpful. Patients who develop stones frequently may need to take potassium citrate.

Ventral Hernia

As discussed above, a hernia is simply a weak spot, defect or "hole" in the muscular wall or structures of the body. These may be very small or quite large. They can be caused by trauma or surgery, or can occur on their own. Some hernias are even present upon birth (congenital), due to inadequate development during the fetal period (when the fetus is within the mother's uterus). The only way to effectively fix or repair a hernia is through surgery. The term "ventral" describes the location of the body where these occur. Ventral is an anatomic term which describes the "front" or "belly-side" of the body.

Ventral Hernias can arise from a number of causes, just as other types of hernias. Good examples of these hernias are those caused by either trauma or straining or after a surgery (incisional hernias). Incisional hernias can occur anytime that surgery is performed. The frequency (how commonly they occur) of these hernias is determined by several factors: the length of the incision, the weight of the patient, the nutritional state of the patient, and whether the wound or incision becomes infected after surgery.

The Length of the Incision

This is one example where "smaller is better". The larger or longer the incision is, the more likely that it will develop a hernia. After most abdominal surgeries that are performed in an open or traditional manner (as opposed to laparoscopically), the likelihood of a hernia occurring is about 10%. This number may go as high as 30-40% in patients who are obese or malnourished. When a surgery is performed laparoscopically (surgery using small instruments and a TV camera) through very small incisions (usually less than ½ inch), the likelihood of a hernia occurring drops to less than 1%. This is one of the real advantages of laparoscopic surgery over open or conventional surgery – one that has been proven in many medical studies over and over again.

The Weight of the Patient

As people become heavier, more stress and tension is placed on the muscular wall of the abdomen. In addition, a higher pressure is noted inside the abdomen as one's weight increases. What this means is that following surgery, there is a larger amount of stress on the incision in heavier or obese patients, verses those who are not overweight. As mentioned above, in a normal weight individual, the likelihood of having a hernia develop after a traditional or open surgery is approximately 10%. The incidence of incisional hernia's occurring in obese patients (BMI greater than 35 kg/M^2) on average is 30-40%. Interestingly enough, the benefits of laparoscopic surgery seem to be present even in patients who are significantly overweight. After a laparoscopic operation, the incisional hernia rate is only 1-2%. Again, this demonstrates one of the true advantages of laparoscopic surgery for patients who are undergoing weight-loss surgery. It is important to remember however, that these lower rates only apply to **totally laparoscopic procedures**, as hand-assisted types of surgery (where the surgeon uses an incision large enough for his hand and also uses a TV camera) have much higher rates of hernia (20-30% in obese individuals).

What happens if you do develop a ventral hernia after surgery??

Most patients who do develop a hernia will note a bulge or lump at the site of their previous incision. This is generally more noticeable when you are doing strenuous physical activity or lifting heavy objects. The bulge may be associated with an achy pain or discomfort as well. If this does occur, you should inform your doctor or the surgeon who performed your surgery. Hernias are usually just an inconvenience; however they can cause serious problems. If a segment or piece of bowel becomes trapped in the hernia defect (hole), it can cause a blockage of the intestine, or worse, cut-off the blood supply to that section of the intestine. This can lead to strangulation of the intestine which is a medical emergency and requires immediate surgery.

Pulmonary Embolism

A pulmonary embolism, or PE, is a blood clot that travels from elsewhere in the body, usually the legs and pelvis, to the arteries in the lungs. The resultant effect on the body can be just some difficulty breathing but can also cause shortness of breath, fast heart rate, heart attack and death. A PE usually starts as a blood clot forming in the leg but can move to the lungs unexpectedly. Leg pain may be one of the first symptoms of a problem. The risk of a fatal PE is relatively low. Risk factors for PE include obesity, smoking, undergoing major surgery, cancer, oral contraceptives, age > 40, trauma, pregnancy, having a heart attack or heart failure, having a stroke, varicose veins, prior blood clot problems, and underlying "hyper-clotting" disorder.

We help minimize the chance of a PE by having patients walk to the operating room, placing stockings on your legs that squeeze or pump you legs to keep the blood moving during the operation, occasionally giving blood thinning medication before and/or after surgery, and walking soon after the operation is over. While you are in bed after surgery, it is good to exercise your calf muscles to keep the flow of blood moving. Walking everyday while you are awake helps significantly, especially while you are in the hospital. This activity should be continued at home.

Despite all of these efforts, especially if your BMI is greater than 50 kg/m^2 and your activity is limited, you may get a PE or a blood clot in your legs. If you get a PE, you may need several months of blood-thinning medication that needs to be started in the hospital and monitored closely.

Childbearing/Menstruation

Women of childbearing age who are having weight reduction surgery should use a non-oral form of birth control during the period of rapid weight loss (18-24 months) in efforts to avoid pregnancy (Ortho-Evra derma-patch system or Depo-Provera injections). This will have to be started 3-4 weeks following surgery. Please let your gynecologist or primary care physician know about this during your preoperative visit so that you can get this prescription filled before surgery. Patients should understand that maternal malnutrition might severely impair normal fetal development and produce an abnormal child. We strongly recommend pregnancy be avoided until you are more than 2 years post-op, your weight is stable for at least 3 months, your labs are normal, and you have checked with us. You should have special attention from your obstetrician and aggressive monitoring during the pregnancy. You will need extra vitamins(especially folate). Please let us know if you become pregnant. Estrogen derma-patch or injection program are probably the most reliable, and are highly recommended. The good news is that if you do get pregnant after significant weight loss, and follow our recommendations, there is evidence to suggest that it will be safer for you and your baby. Remember that many patients with obesity have fertility problems but may become more fertile with weight loss – so be careful! Some patients notice that they start to menstruate again after surgery. This may be transient or permanently associated with the weight loss. So be careful even if you think you have reached menopause. Please be aware that you may also need dosage adjustments of your contraceptive or even a different type of contraceptive after surgery.

Calcium, Parathyroid Hormone and Metabolic Bone Disease

The Vertical Gastrectomy procedure has little or no malabsorption. Metabolic bone disease is a long-term complication of operations that involve more malabsorption and can occur in about 5% of patients. Metabolic bone disease includes osteoporosis (chronic calcium deficiency), osteomalacia (Vitamin D deficiency) and secondary hyperparathyroidism (excessive parathyroid hormone (PTH) levels). Inadequate calcium intake and/or vitamin D intake can also cause these problems.

How can I prevent Metabolic Bone Disease?

Take 1000-1500 mg of calcium each day. Any form of calcium (citrate, gluconate, carbonate etc.) is acceptable unless you have suffered from kidney stones in the past. If you have had kidney stones, then the use of calcium citrate and avoidance of animal fats

(red meats) is generally recommended. In general, urologists (kidney specialists) recommend calcium citrate over calcium carbonate or gluconate, as calcium citrate may be better absorbed and less likely to precipitate kidney stones. If you have suffered from kidneys stones in the past, you should also take potassium citrate. Be sure your multivitamin has Vitamin D in it as this helps with calcium absorption. Patients with kidney stones should maintain a low oxalate diet by avoiding such foods as chocolate, carrots, celery, spinach, red meat, gelatin, pepper, nuts, strawberries, tea and plums.

What lab tests should I have checked?

You should have your calcium level, alkaline phosphatase, PTH and Vitamin D level checked every year. These tests are part of our routine yearly screening tests that we run on all of our patients. If your PTH level is too high or your Vitamin D too low then you need to have your vitamin regimen changed. In addition, you should also have a bone densitometry test as a baseline. If the tests are abnormal a second time and a bone densitometry test shows loss of bone, then you may need to have the malabsorptive part of your procedure either partially or completely reversed. Fortunately, the good habit of taking your calcium supplements and vitamin D supplements prevents this in most patients.

Anemia

Severe anemia following weight loss surgery is not common although mild anemia can occur in 10-15% of patients. Anemia can be due to deficiencies in iron, vitamin B_{12}, or folate. Iron-deficiency anemia is most likely to occur in menstruating women.

How can I prevent anemia?

In general, taking multivitamins that contain supplemental iron is sufficient to avoid significant anemia in non-menstruating women. In menstruating women, there is frequently already some level of iron-deficiency anemia. These latter patients should take additional, supplemental iron, either by taking 325 milligrams of standard iron pills once or twice a day or by taking one Chromagen Forte® capsule once or twice a day with food. Chromagen Forte® capsules are less likely to cause gastrointestinal discomfort or side effects, and contain vitamin B_{12} and folate. Vitamin B_{12} supplementation may (rarely) be required in the form of pills or injections.

What lab tests should I have checked?

You should have a complete blood count (CBC), coagulation profile, iron, iron binding capacity, ferritin, transferrin, serum RBC folate, vitamin B_{12} and blood chemistry checked once a year. These studies may need to be checked more frequently if you have a history of anemia prior to weight loss surgery.

Carnitine Deficiency

Carnitine is a derivative of an amino acid, or building block of protein. It is found in high energy demanding tissues, such as skeletal muscles, heart tissue, liver and adrenal glands. Carnitine helps convert fatty acids into energy. Genetic carnitine deficiency is rare and unusual. Nevertheless, low carnitine levels can result from certain medications, cirrhosis, kidney failure, dialysis, diabetes, heart failure, Alzheimer disease, or situations in which individuals are experiencing high energy usage states, such as severe illness. Low carnitine levels can result in severe fatigue, muscle weakness, liver and heart failure, and even mental status changes. Also, carnitine is essential in the developing fetus for processes underlying fetal maturation.

Thus, in weight loss patients, it is conceivable that because large amounts of fat stores are utilized for energy all over the body, including the liver, the use of carnitine in the body is significantly higher. Therefore, carnitine supply is lower due to higher demand. In addition, the weight loss from the surgery can cause you to lose some muscle mass which may deplete your bodies stores of carnitine.

Over the counter oral carnitine (L-carnitine) replacement in pill or liquid form is usually satisfactory and successful in stabilizing and/or reversing these effects.

Wernicke-Korsakoff Encephalopathy/Polyneuropathy & Excessive Vomiting

Severe behavioral changes and problems with memory loss can occur with a deficiency in Vitamin B1 (thiamine) and can be irreversible. These problems are usually developed due to excessive postoperative vomiting. If you are having persistent vomiting,

you should call us for evaluation and treatment, which may include thiamine replacement therapy. In the summer of 2004, we had a patient who went untreated by her primary care physician and suffered partial paralysis and dementia from thiamine deficiency. Excessive vomiting must be treated as soon as possible.

Follow-Up, Postoperative Lab Testing and Plastic Surgery

Routine Follow-Up Schedule

We generally like to see patients at 2-3 weeks after surgery for a post-op check. Be sure to call the office once you arrive home and schedule this appointment. If you are having trouble before you are scheduled to be seen in the office, don't wait it out, come and see us sooner or feel free to call anytime. After this, the routine follow-up schedule is at 3 months, 6 months, and 12 months after your surgery. Patients having slow or rapid weight loss or any other problems will need to see us more frequently. The 1 year follow-up requires that you have blood tests drawn, so be sure to have these drawn several weeks prior to your scheduled appointment time as noted above. Please stop your vitamins for 3 days before having these blood tests drawn – you may resume them after the blood test has been taken. If you are having problems or a prolonged weight loss plateau, call the office so that we can help you or fix your problem.

Laboratory Tests

We will want to run routine labs on all patients for the one-year anniversary of their surgery. You should have these labs drawn and call the office (415) 561-1310 for an appointment at least one month before this date so that we can make sure the results will be returned by the time of your visit. You can take the lab request slip (on page 30) to a lab that is convenient to your home or office. Just make sure that the results are mailed or faxed our office at (415) 561-1713.

If you are part of an HMO or managed care program, you will need to contact your primary care physician prior to obtaining these labs so that the costs will be covered by your insurance.

Plastic Surgery

The interest in undergoing additional surgery to remove excess skin increases as you lose weight. For those patients who do not have as much weight to lose, are younger, exercise frequently, or have favorable genetics, there is a chance that they may not need to undergo any type of tummy tuck, panniculectomy, abdominoplasty, lower body lift, or other plastic surgery procedures on even other parts of your body such as arms, legs, neck, and face to help with loose skin. For others and probably most patients, who are older, lose a lot of weight, perhaps don't do as much muscle toning exercises, surgery may be either necessary or just desired.

We do not recommend undergoing any type of plastic surgery procedure to help with loose skin until you check with us. You should wait until you are at your goal weight since if you are only half way there, more weight loss may lead to more loose skin. Also, comprehensive laboratory tests should be checked to help in optimizing your healing after such procedures. With nutritional or vitamin/mineral deficiencies, you may be at higher risk for complications after plastic surgery. Of course, the final recommendation is one that you are already familiar with: Look for an experienced surgeon. As you know, a surgeon who is an expert in his or her field may make a difference in a good versus a bad outcome. Your choice in our own expertise exemplifies that. Nevertheless, as with anything, problems may occur since that is the nature of the human body and medicine. Experienced and caring surgeons and physicians can help you through most issues you may have.

Appendix

Sources of Protein: Good and Bad

The following table is a list of common foods and their calorie and protein content. Not all of these foods can be considered good protein sources (i.e. beans, peas etc.) Choose proteins that are low in calories, carbohydrates, and fats. Watch out for the ones with red circles as they have more carbohydrates! For example, beans may sound like a good source of protein, but they are very high in carbohydrates and will work against you.

Food	Amount	Calories	Protein	Carbs
Bacon, Center cut	4 slices	100	8	0
Beans, Baked, Canned	½ cup	123	7	25
Beans, Kidney, Canned	½ cup	112	8	18
Beef, Eye of Round	3 oz	143	21	0
Beef, Top Loin	3 oz	176	21	0
Cheese, American Fat Free	1 oz	40	6	4
Cheese, Cottage, 1% Fat	½ cup	82	14	3
Cheese, Parmesan, Grated	¼ cup	128	12	1
Cheese, Mozzarella, Part-Skim	1 oz	78	8	1
Cheese, Ricotta, Part-Skim	¼ cup	90	8	3
Cheese, Swiss	1 oz	107	8	1
Chicken, White Breast Meat, No skin	3 oz	138	26	0
Chicken, Leg, No skin	3 oz	162	21	0
Cod, White, Baked	3 oz	89	21	0
Crab, Steamed	3 oz	82	17	0
Egg, Hard Cooked	1 egg	78	6	1
Flounder	3 oz	62	21	0
Halibut	3 oz	119	21	0
Ham, Lean, 5% Fat	3 oz	133	21	0
Hamburger, 90% Lean Ground Beef)	3 oz	169	21	0
Lentils	½ cup	101	9	20
Lobster, Steamed	3 oz	77	16	0
Milk, Skim	1 cup	86	8	12
Miso	¼ cup	142	8	19
Peanut butter	2 tbsp	190	8	6
Peas, Chick, Canned	½ cup	134	7	27
Pork, Tenderloin	3 oz	139	21	0
Pork, Loin Chop	3 oz	172	21	0
Salmon, Baked	3 oz	155	21	0
Shrimp, Steamed (15 large)	3 oz	84	18	0
Soybeans (Edamame)	½ cup	149	14.3	9
Soy Flour, Defatted	¼ cup	81.7	12.8	10
Soymilk, Plain	1 cup	79	7	4
Soy nuts	¼ cup	202	15	
Soy Protein Powder	¼ cup	107	25	
Steak, Sirloin, Trimmed	3 oz	166	26	0
Swordfish, Baked	3 oz	132	21	0
Tempeh	½ cup	165	16	8
Tofu	½ cup	94	10	2
Tuna, Canned, Water-packed	3 oz	111	25	0
Turkey, White Meat	3 oz	105	21	0
Veal Loin	3 oz	149	21	0
Veal Leg, Top Round	3 oz	128	21	0
Yogurt, Frozen, Vanilla, Sugar-free	½ cup	80	7	
Yogurt, Fruit, Fat-free, Sugar-free	1 cup	120	11	
Yogurt, No Fruit, Low-fat	1 cup	194	11	17

What is Yogurt?

- Yogurt is a mixture of milk and cream fermented by a culture of lactic acid-producing bacteria. Yogurt produced in the U.S. is made with two specific live and active cultures: Lactobacillus bulgaricus and Streptococcus thermophilus.
- These metabolize some of the milk sugar (lactose) in the milk into lactic acid. This action helps change the consistency of liquid milk into yogurt.

How do I know what is a good choice for yogurt?

- The best choice is plain yogurt, which only has 2 ingredients: live cultures and milk. In some highly-sweetened containers of yogurt, you are consuming more calories from the sweetener than you are from the yogurt.
- Be sure to read the protein and carbohydrate values on the nutrition panel. The higher the protein and the lower the carbohydrate content, the more actual yogurt you are getting in the container.

Health Benefits of Yogurt

- It provides protein, calcium, vitamins and other minerals
- Active cultures may aid digestion, ease diarrhea, boost immunity, and fight infection
- Because of their special properties, live and active cultures can help decrease the symptoms of lactose intolerance- the inability to digest the primary carbohydrates in milk due to a deficiency of the enzyme lactase.

Best Yogurt Choices- High Protein, Low Carbohydrates

Name	Calories	Total Carbs	Protein	Where to Purchase
Dannon Plain Non-fat	80	12 g	9 g	Most Grocery Stores
FAGE Total 2% Greek Yogurt	130	8 g	17 g	Trader Joe's
FAGE Total Light Greek Yogurt	130	5 g	11 g	Trader Joe's
Lucerne Pre-stirred Light (most flavors)	90	17 g	8 g	Most Grocery Stores
Yoplait Ultra (most flavors)	90	8 g	8 g	Most Grocery Stores

Bad Yogurt Choices- High in Carbohydrates, high in calories, lower in protein

Name	Calories	Total Carbs	Protein	Where to Purchase
Dannon Creamy Fruit Blends	170	33 g	6 g	Most Grocery Stores
Yoplait Thick & Creamy Yogurt	190	32 g	7 g	Most Grocery Stores
Dannon Frusion Fruit Smoothie	260	50 g	8 g	Most Grocery Stores
Breyers Fruit on the Bottom (most flavors)	240	46 g	9 g	Most Grocery Stores
Yoplait Original Fruit Flavors	160	33 g	5 g	Most Grocery Stores

Estimating Portion Sizes

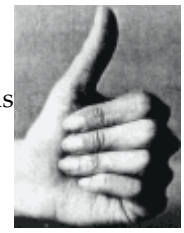
A FIST = ONE CUP

Your fist is about the same size as one cup. Compare the size of your fist to the amounts of these foods that you are eating.

A HANDFUL = ONE OR TWO OUNCES OF SNACK FOOD

One handful equals an ounce of foods. For bulkier snacks, like Soy Crisps, two handfuls equals one ounce which is the serving size listed on most snack-food labels. If you do not have measuring spoons, two tablespoons of liquid fits in your cupped hand.

A THUMB = ONE OUNCE OF CHEESE

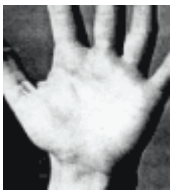


In general one thumb-size chunk is about one ounce of cheese. (Very hard cheeses such as aged parmesan, with very little water content, will weigh more than soft cheeses such as Mozzarella, which has more moisture).

A THUMB TIP = ONE TEASPOON

If the amount you have eaten matches the size of the top part of your thumb, it's a teaspoon. If you eat three thumb-tip-sizes, you've eaten a tablespoon. The top part of your index finger is about a half teaspoon.

PALM = THREE OUNCES



A serving of meat is a lot less than you think. A serving is about 2-3 ounces. We should have 2-3 servings of meat and meat alternatives per day. After being cooked, the size of your palm - minus fingers and thumb — meets half your day's requirement.

Tracking Weight Loss Table

	Date	Weight (pounds)	BMI (kg/m^2)	% Excess weight loss	Notes
Start				----	
3 week					
3 month					
6 month					
9 month					
1 year					
1 ½ year					
2 year					
2 ½ year					
3 year					
4 year					
5 year					
6 year					
7 year					
8 year					
9 year					
10 year					

Please let us know if you lose more than 25 pounds in any given month.
Please let us know when your weight is 20-30 pounds above your ideal or goal weight.

Never let your weight drop below your goal weight without calling us as you could develop protein malnutrition and become very ill.

Tips to Remember

Make sure you:

- Consume at least 70 grams of protein/day
- Have a source of lean protein at every meal
- Drink at least 64 oz of calorie-free beverages/day; NO CARBONATION
- Chew all foods thoroughly and eat slowly
- Do NOT eat & drink at the same time
- Eat 3 meals/day
- Take vitamins daily
- Watch portion sizes
- Follow-up regularly with your Surgeon & Dietitian
- Remember to stay within the recommended caloric intake daily
- EXERCISE
- Get your labs checked annually

To maximize weight loss the following should be avoided:

- Peanut Butter
- Nuts
- Bacon
- Sausage
- Hot dogs
- Bratwurst
- Bologna
- Salami
- Breaded & fried foods
- Fast Food
- Rice
- Beans
- Pasta
- Dessert
- Pork Rinds
- Potato Chips/Pretzels
- Popcorn
- Alcohol
- Candy, cakes, cookies, ice cream (including Sugar Free)
- Heavy sauces & gravy (i.e. alfredo)
- Fruit Juice

Start Your Own Walking Program

Introduction

There are many reasons for starting your own walking program. Here are just a few:

- improved quality of life
- relieved pain
- increased concentration on work
- get in touch with nature
- increased blood flow
- feeling better about yourself

For these reasons, walking as a form of exercise is very beneficial.

Exercise Guidelines

Here are some general guidelines that should be applied to your exercise regimen. The first thing to do though before starting any kind of exercise program is to contact your doctor. He or she can give you advice and feedback about your individual medical conditions (if any) in relation to participating in an exercise program.

- Warm-Up: You should incorporate a warm-up into your program. This should be 5 to 10 minutes of light activity. This will cause a slight increase in your heart rate and get your muscles warmed up for the more vigorous part of your exercise session.
- Stretching: Light stretching should be done after the warm-up. This will loosen your muscles and prepare your body for the exercise session. This will also help in the prevention of injury.
- Mode: Exercise must use large muscle groups, such as the arms and legs, over a prolonged period of time. The exercise must be rhythmic in nature and continuous. Walking is a perfect example of this.
- Intensity: This is how hard you are exercising. For most older adults, this ranges from 50% to 70% of your heart rate reserve. Calculate your target heart rate zone and see how to apply it to your exercise session.
- Duration: Exercise should be between 20 to 60 minutes of aerobic exercise. It is important to work up to this level if you are just starting an exercise program.
- Frequency: Exercise should be performed 3 to 5 days a week.
- Cool-Down: It is also important to cool-down after your exercise session. This should consist of lower intensity exercise. This will also allow your breathing and heart rate to slow down and return to pre-exercise levels.

Exercise Tips for Walking

- Wear proper footwear: A good pair of sneakers will give your feet proper support and help to reduce the incidence of injury.
- Plan when you will walk each day: It will help you develop a regular schedule and avoid excuses for not walking.
- Walk with a partner: You will be less likely to skip your walk and it will make the walking more fun.
- Plan a few walking routes: It will be a change of scenery and adds variety to your walking. Make some routes around your home or work site. Also go to the local school's track or to a nearby park.
- Keep an exercise log: It will help you keep track of frequency and total time of exercise.

Evaluating Your Progress

- One of the first questions you might have after exercising is how many calories you're burning during your walks
- Another evaluation measure is your body mass index (BMI). This is a measure of body composition which takes into consideration both your height and weight.
- Your resting heart rate is another measure of progress. Over time after exercising, your resting heart rate will be slower which indicates your heart is able to pump more blood with each beat.

Sample Walking Program

	Warm Up	Activity	Cool Down	Total Time
WEEK 1				
Session A	Walk slowly 5 min.	Then walk briskly 5 min.	Then walk slowly 5 min.	15 min.
Session B	Repeat above pattern			
Session C	Repeat above pattern			
Continue with at least three walking sessions during each week of the program.				
WEEK 2	Walk slowly 5 min.	Then walk briskly 7 min.	Then walk slowly 5 min.	17 min.
WEEK 3	Walk slowly 5 min.	Then walk briskly 9 min.	Then walk slowly 5 min.	19 min.
WEEK 4	Walk slowly 5 min.	Then walk briskly 11 min.	Then walk slowly 5 min.	21 min.
WEEK 5	Walk slowly 5 min.	Then walk briskly 13 min.	Then walk slowly 5 min.	23 min.
WEEK 6	Walk slowly 5 min.	Then walk briskly 15 min.	Then walk slowly 5 min.	25 min.
WEEK 7	Walk slowly 5 min.	Then walk briskly 18 min.	Then walk slowly 5 min.	28 min.
WEEK 8	Walk slowly 5 min.	Then walk briskly 20 min.	Then walk slowly 5 min.	30 min.
WEEK 9	Walk slowly 5 min.	Then walk briskly 23 min.	Then walk slowly 5 min.	33 min.
WEEK 10	Walk slowly 5 min.	Then walk briskly 26 min.	Then walk slowly 5 min.	36 min.
WEEK 11	Walk slowly 5 min.	Then walk briskly 28 min.	Then walk slowly 5 min.	38 min.
WEEK 12 AND BEYOND	Walk slowly 5 min.	Then walk briskly 30 min.	Then walk slowly 5 min.	40 min.

SURGICAL WEIGHT REDUCTION PATIENTS

Annual Post-Operative Laboratory Testing

Instructions to Patients:	1. Please STOP taking all of your vitamin and mineral supplements at least 3 days prior to having your blood drawn. 2. Please do not eat or drink anything the morning of your blood draw (fast overnight).

Patient Name _____

Patient Phone _____

Physicians Gregg H. Jossart, MD Paul T. Cirangle, MD John J. Feng, MD

ICD-9-M Diagnosis Code: Weight Loss 783.12

Laboratory Tests

Panel Name	Included Labs
Hematology	CBC (including diff), Platelet Count Prothrombin time (PT), INR, PTT Iron, Total Iron Binding Capacity, Ferritin, Transferrin
Comprehensive Metabolic	Sodium, Potassium, Chloride, Carbon Dioxide (bicarbonate), BUN, Creatinine, Glucose Calcium, Magnesium, Phosphorous Albumin, Total Protein Bilirubin (Total), SGOT (AST), SGPT (ALT), Alkaline Phosphatase PTH (Intact) TSH
Specialty Chemistry	Carnitine, Folate (serum/RBC), Selenium, Vitamin A, Vitamin B6, Vitamin B12, Vitamin D (25 OH), Zinc
Cardiovascular	Cholesterol: Total, Triglycerides, LDL, VLDL, HDL

Doctor's Name _____

Doctor's Signature _____

Please Fax Results to (415) 561-1713

Bariatric Advantage® LapSF Vitamin Supplementation

Please Print Clearly And Fill Out All Fields.
Phone: (800) 898-6888 Fax: 949-553-0844

Patients Name: _____ Address: _____

Home: (__ __ __) __ __ __ - __ __ __ __ Apt/Suite #:_____

Office: (__ __ __) __ __ __ - __ __ __ __ City:_____ State: _____

Cellular: (__ __ __) __ __ __ - __ __ __ __ Zip Code: ___ ___ ___ ___ ___

E-Mail Address: _____

Surgeon's Names: Jossart, Cirangle, Feng
Group Name: Laparoscopic Associates of San Francisco

Procedure	Regimen	Patient Preference	Frequency
Lap-Band®	Multi-Formula Chewable	○ Orange Citrus ○ Tropical	2 / Day
	Chewable Calcium Citrate	○ Mint ○ Chocolate ○ Cinnamon	3 / Day

Procedure	Regimen	Patient Preference	Frequency
Roux-en-Y	Multi Formula Chewable	○ Orange Citrus ○ Tropical	2 / Day
	Chewable Calcium Citrate	○ Mint ○ Chocolate ○ Cinnamon	3 / Day
	Iron	○ Chewable (Berry)	1 / Day
	Sublingual B-12		1 / 2 Days

Procedure	Regimen	Patient Preference	Frequency
Duodenal Switch	Multi-Formula Chewable	○ Tropical	3 / Day
	Chewable Calcium Citrate	○ Mint ○ Chocolate ○ Cinnamon	3 / Day

Procedure	Regimen	Patient Preference	Frequency
Vertical Gastroplasty	Multi-Formula Chewable	○ Orange Citrus ○ Tropical	2 / Day
	Chewable Calcium Citrate	○ Mint ○ Chocolate ○ Cinnamon	3 / Day
	Sublingual B-12		1 / 2 Days

Additional Products			
☐	Coromega™	○ Orange Flavor	1 / Day

ORDERS WILL BE RECEIVED QUARTERLY

Restrictive Vertical Gastrectomy