

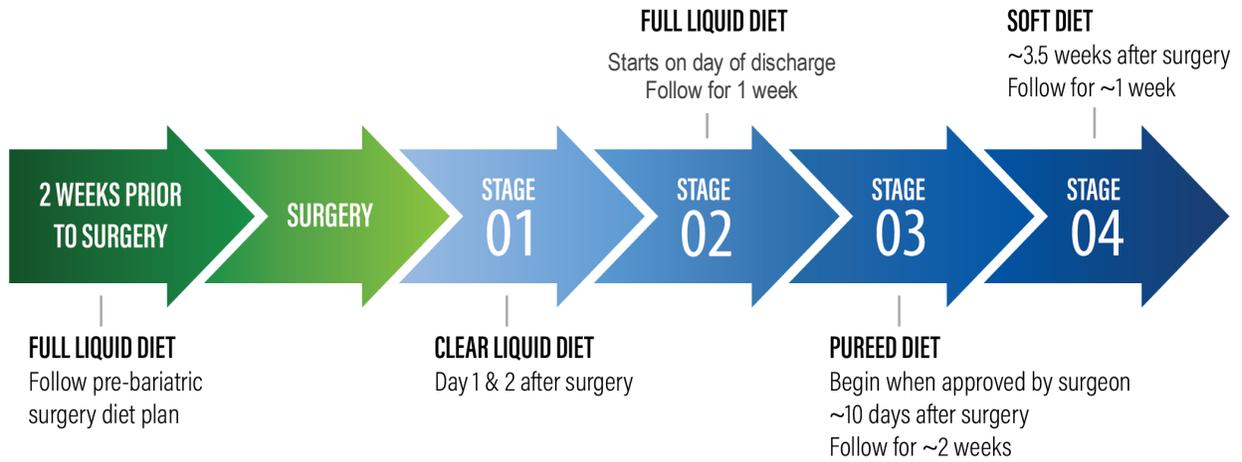


PREPARING FOR BARIATRIC SURGERY



NUTRITION PLAN

Bariatric Surgery Diet Plan



Pre-Surgery Liquid Diet Introduction

This diet is your “nutrition prescription” 2 weeks before surgery

The pre-surgery diet is approximately 1000 calories, but provides adequate protein (60-80 grams per day) and carbohydrates.

You will begin taking a chewable multivitamin and calcium supplement during these two weeks.

Why do I need to follow this diet?

- This diet will help to shrink the size of the liver, which makes surgery safer and may even reduce the time of your surgery
- It is also low in calories so that your body will begin to burn fat for fuel
- Remember, bariatric surgery is a LIFESTYLE change, and this diet will also help to prepare you for the post-surgery diet

Helpful hints for this diet stage

- Be sure to consume at least 64 oz fluid per day (including protein drinks)
- Drink LOTS of calorie-free clear liquid drinks to stay hydrated
- Hunger pangs may be present, but these will subside after a few days
- Try different protein shake options before starting your pre-surgery diet to find the best fit for you

Protein shake options (in detail on the next page)

- Make your own protein shake using skim milk and protein powder
- Buy a pre-made protein supplement

Do not consume...

- Caffeine
- Carbonation
- All sugar-sweetened beverages

Pre-Surgery Liquid Diet Details

Option 1: Make your own protein shakes

1. Mix whey protein powder + skim milk
 - Each scoop of protein powder is different, so measure out however much would equal **20 g protein**
 - Drink 3 servings each day
 - Be sure to spread them out throughout the day
2. Choose 4 other liquid foods from List B
3. Choose plenty of calorie-free clear liquids from List C to stay hydrated!

Note: You are allowed up to 2 teaspoons of butter or oil per day (with hot cereals)

3 protein shakes + **4** Items from list B + **Plenty** of items from list C = 

Option 2: Buy Pre-Mixed Protein Shakes

1. Unjury ready-to-drink Shake, Optifast 800 Shake, ProtiMax Shake Mix, or Ensure High Protein: Drink 4 bottles per day
 - Make sure you spread these out throughout the day!
2. Choose **3** other liquid foods from List B

4 protein shakes + **3** Items from list B + **Plenty** of items from list C = 

OR

1. Glucose Controlled Boost or Calorie Smart Boost: drink 4 bottles per day
2. Choose **2** other liquid foods from List B

4 protein shakes + **2** Items from list B + **Plenty** of items from list C = 

OR

1. Premier Protein Shake or Ensure Max: Drink 2 bottles per day
2. Choose **6** other liquid foods from List B

2 protein shakes + **6** Items from list B + **Plenty** of items from list C = 

AND

- Choose plenty of calorie-free clear liquids from List C to stay hydrated!
- You are allowed up to 2 teaspoons of butter or oil per day (with hot cereals)

LIST B

- ▶ Single serve Greek yogurt (can be flavored, but no chunks!)
- ▶ 1 package of Cream of Rice
- ▶ 1 package of original flavored Cream of Wheat
- ▶ 1 package of original flavored Grits
- ▶ 8 oz of Soy milk
- ▶ 2 packs of sugar-free, snack pack pudding
- ▶ ½ can split pea soup (strained)
- ▶ ½ can creamy tomato soup (strained)
- ▶ 8 oz of 100% cranberry/apple juice

LIST C

- ▶ 8 cups (64 oz) of fluid per day (including protein drinks)
- ▶ Water
- ▶ Sugar-free popsicle
- ▶ Sugar-free gelatin
- ▶ Bullion
- ▶ Sugar-free, non-carbonated beverages
- ▶ Herbal hot tea/decaf black tea
- ▶ Unsweetened decaf iced tea

Stage 1 Details: Clear Liquid Diet

Follow on Days 1 & 2 after surgery

How to follow the clear liquid diet

- Drink only clear liquids for the first two days after surgery
- This includes:
 - Water
 - 100% clear juices
 - Decaffeinated tea/herbal tea
 - Flavored sugar free drinks (ex. Crystal Light)
 - Sugar-free gelatin
 - Sugar-free popsicles
 - Low-sodium broth
 - Sugar-free sports drinks

Please do not consume...

- Caffeine
- Carbonation

Staying hydrated is #1 goal

- Drink 1 oz water (1 medicine cup) every 15 minutes to reach daily goal of 64 oz without causing over-filling or discomfort of the stomach
- Dehydration signs and symptoms:
 - Dark colored urine or infrequent urination
 - Dry mouth
 - Lightheadedness or dizziness
 - Nausea
 - Fatigue

Tips for success during this stage:

- **Remember, the new stomach pouch can only take 1 to 1 ½ ounces of fluid at one time**
- Drink Slowly
- Don't use a straw or gulp. Too much air or fluid can cause pain
- Room temperature liquids may be more comfortable
 - Avoid extremely hot or extremely cold liquids
- Sip on clear liquids constantly throughout the day
- Drink a variety of different clear liquids, include at least one broth or one sugar free sports drink
- You can dilute juices if it tastes better
- Remember this is just for a short-term, this allows some resting time and healing of the digestive system

Stage 2: Full Liquid Diet

Starts on the day you leave the hospital – Follow for 1 week

Goals

- Goal is 60-80 g protein per day from protein shakes
 - This is equal to about:
 - 3: whey protein + skim milk drinks
 - 4: Optifast 800 Shake, ProtiMax Shake Mix, Ensure High Protein, Glucose Control Boost, Calorie Smart Boost
 - 2-3: Premier Protein shakes or Ensure Max
- 500-800 calories per day (including adequate protein) to promote healthy weight loss

Full liquid options:

- Whey protein + skim milk (or fat-free Lactaid or unsweetened almond/soy milk)
- Commercial protein drinks
 - Should have >15 g protein and <5 g carbohydrates per 8 oz serving
- Non-fat Greek Yogurt
 - Can include flavors, but no chunks or lumps
- Blended split pea, bean, or lentil soup
 - No chunks or lumps

Tips for success during this stage:

- Continue to sip slowly throughout the day!
- Take your Multivitamin and Calcium supplements as directed by your doctor
- Remember, protein is very important in helping to heal new wounds and building new cells and tissue

How to Avoid Dumping Syndrome:

Dumping syndrome is a rapid gastric emptying that commonly occurs with bariatric surgery. It is usually accompanied by nausea, vomiting, abdominal pain, sweating, and/or rapid heartbeat. Sometimes, very low-blood sugar can result from an episode of dumping syndrome; this can be dangerous.

It can be caused by eating large amounts of sugar, simple carbohydrates, or high fatty foods. **To avoid the risk of dumping syndrome, avoid eating too much sugar (carbohydrates), high-fat foods, or eating too fast.**

Stage 3: Pureed Diet

Begin about 10 days after surgery (whenever surgeon advances diet) – Follow for 2 weeks

About 10 days after surgery, you should have a post-op appointment with your surgeon. He/she will advise you when and if you are ready to advance to Stage 3 of the Bariatric Diet. Following this diet carefully allows continued healing, continued weight loss and intake of essential nutrients.

Steps of the pureed diet:

1. Add pureed protein foods into your diet
 - a. Eat 1 ounce 4-6 times per day
 - b. Portion sizes should be very small
2. Begin adding fruits and non-starchy vegetables once protein foods are tolerated
3. SMALL amounts of starchy foods can be introduced into diet once fat serving is tolerated
 - a. Avoid rice, bread, and pasta at this point

*1 fat serving per day may be added to pureed protein, vegetables, or starches

Remember, do not drink fluids with meals! Drink 30 minutes before eating and/or 30 minutes after eating to begin drinking again.

Goals during this stage:

- Provide high value protein that are in a pureed form
 - You still need 30-40 grams of protein in the form of a protein supplement
- Hydration! Remember to keep drinking clear, calorie-free liquids
- Eat 4 to 6 meals/snacks each with 1 ounce of protein foods plus fruits and vegetables

Tips for success during this stage:

- Chew all food to the consistency of applesauce
- If food feels 'stuck' get up and walk around, (drinking fluids may cause more discomfort)

Stage 4: Soft Diet

Begin this diet about 3.5 weeks after surgery (after tolerating the pureed diet) - Follow for 1 week

How to follow the soft diet:

- Focus on consuming protein first!
 - See list below for options of protein
- Chop all foods to the size of a pea
- Eat only cooked fruits and vegetables
 - See list below for options of fruits and vegetables
- Eat tender cuts of meat
- Eat slowly (it should take 30 minutes to complete a meal)
- Stop eating when you are no longer hungry
- Smaller, more frequent meals may be better tolerated

Please avoid...

- Fibrous foods, seeds, and peels
 - Asparagus
 - Broccoli stalks
 - Celery
 - Skin of apples, pears, and potatoes
 - Popcorn
 - Coconut
 - Dried fruit
- Pasta and untoasted bread

Tips for success during this diet:

- Chew your food thoroughly!
 - Try chewing each bite 20 times
- Eat protein first
- Do not drink fluids with meals
 - Wait to drink 30 minutes before eating, or 30 minutes after eating

Why Protein?

- Protein Goal 60-80 grams per day
- Eat protein foods first, so if you get full you will still meet your protein needs.
 - 2 tablespoons of meat/poultry/fish = 1 ounce = 7 grams of protein
 - 1/3 size of deck of cards of meat/poultry/fish = 1 ounce = 7 grams of protein
- Try using a free app, like MyFitnessPal to track your meals if you are unsure of how much protein you are consuming

Meal Ideas

Sample Protein options

- **Very Lean Protein (35 calories per oz)**
 - Chicken/turkey (skinless)
 - Water-packed tuna
 - Fish: Cod, Tilapia, Trout, Haddock, Snapper
 - Egg whites
 - ¼ cup egg white substitute
 - Vegetarian meat substitute
 - Shellfish (crabs, scallops, shrimp)
- **Lean Protein (55-70 calories per oz)**
 - Pork and beef tenderloin
 - Sirloin
 - Flank steak
 - Egg
 - Salmon
 - Dark meat chicken/turkey (skinless)
 - Lean ham
 - Canadian bacon
 - Tofu
 - Dried peas/beans
- **Meatless-protein options**
 - 1 cup skim milk, 1% milk, or unsweetened almond milk
 - 1 single serve non-fat Greek yogurt
 - ¼ cup fat-free cottage cheese
 - ¼ cup fat-free ricotta cheese
 - 1 oz reduced-fat cheese
 - Reduced fat cheese sticks

Sample Fruit/Vegetable Options

- **Fruits**
 - 1 small fruit or ½ cup canned in 100% juice
 - 2 ounces of unsweetened applesauce
 - 2 ounces peaches or pears (cooked, no-sugar added)
 - ¼ small banana
 - ¼ cup cooked potatoes
 - ¼ cup cooked sweet potatoes
 - ¼ cup cooked winter squash
- **Vegetables (1/4 cup = 1 serving)**
 - Beets
 - Broccoli
 - Cabbage
 - Cauliflower
 - Green beans
 - Green peppers
 - Mushrooms
 - Onion
 - Spinach
 - Yellow squash
 - Zucchini

Things to avoid long term	Why?
<ul style="list-style-type: none"> ● Straws ● Gum ● Carbonated beverages 	<p>These items can put excess air into the stomach</p>
<ul style="list-style-type: none"> ● Caffeine 	<p>Caffeine can cause dehydration</p>
<ul style="list-style-type: none"> ● High fat meats such as bacon, sausage, bologna, scrapple, and hot dogs ● Fried foods ● 2% and whole milk dairy products ● Any food cooked in excess butter/oil ● Beverages and foods high in sugar 	<p>These items increase your risk for dumping syndrome and can have more calories</p>
<ul style="list-style-type: none"> ● Tough dry meats ● Soft bread ● Pasta 	<p>These items may get stuck in the throat and can expand in the stomach, which causes stretching</p>
<ul style="list-style-type: none"> ● Alcoholic drinks 	<p>Alcohol sensitivity increases dramatically after surgery</p>

The Importance of Vitamins & Minerals

Multivitamin After Surgery

Important Facts:

Chewable or liquid vitamins should be started **2 weeks prior to surgery** with liquid diet and are needed for six months following surgery (*after 6 months tablets may be swallowed, however chewable/liquid vitamins may be better absorbed*)

Multivitamin Criteria: (for Roux-en-y, Gastric Sleeve, and Duodenal Switch surgeries)

1. Choose a multivitamin that is **complete with iron**
2. Take enough multivitamin tablets each day to equal 200% of Daily Value of these vitamins/minerals:
 - Vitamins A, C, D, and E
 - Riboflavin, Niacin, and Vitamin B6
 - Pantothenic acid, Copper, and Selenium
3. Take enough multivitamin tablets each day to equal 80-100% of Daily Value of these vitamins/minerals:
 - Vitamin K, Iron, Thiamin, Folic acid, Vitamin B12, Biotin, and Zinc

Sample Vitamin Choices:

Vitamin Brand	Daily Serving Size	Where to find
Bariatric Advantage® Ultra Multi with Iron	2	www.bariatricadvantage.com
Celebrate® Multi-Complete 36, 45, or 60	2	www.celebratevitamins.com
ProCare Health® Bariatric Chewable	1	www.precarenow.com
Nascobal nasal spray + BariActiv® Calcium, D ₃ & Magnesium + BariActiv® Multivitamin + BariActiv® Iron & Vitamin C	Take as directed on each label	Available by <u>prescription only</u> and covered by some insurances

Additional Supplements After Surgery

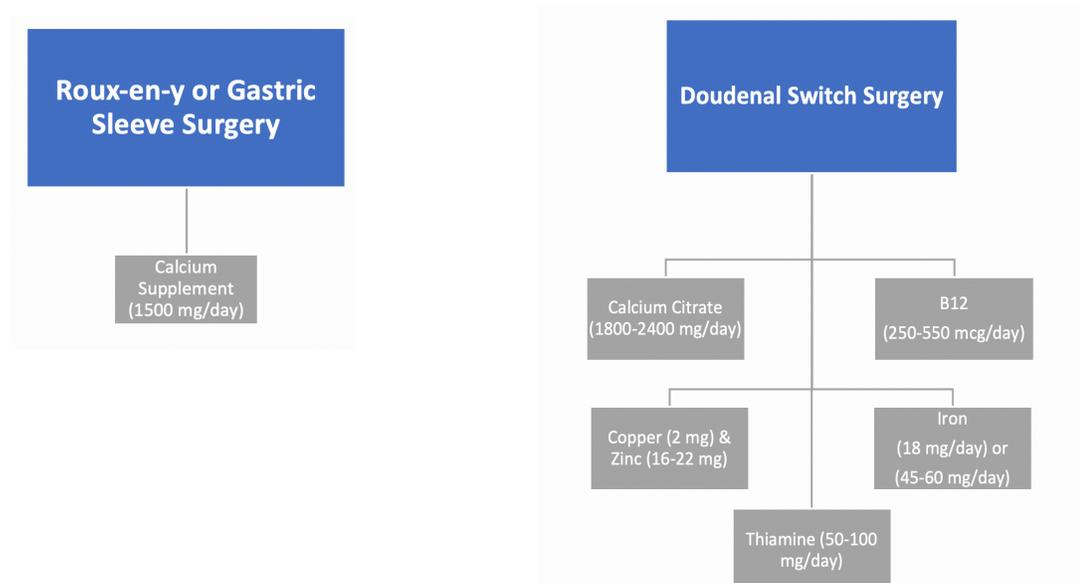
If you have Roux-en-y or Gastric Sleeve Surgery - in addition to your multivitamin, you also need:

1. Calcium Citrate: 1500 mg per day
 - Take 500-600 mg of Calcium 3 times per day
 - Separate each calcium supplement by at least 2 hours (the body can only absorb 500-600 mg calcium at one time)

If you have the Duodenal Switch Surgery - in addition to your multivitamin, you also need:

1. Calcium Citrate: 1800-2400 mg per day
 - Take 500-600 mg of Calcium 4 times per day
 - Separate each calcium supplement by at least 2 hours (the body can only absorb 500-600 mg calcium at one time)
2. Zinc & Copper:
 - 16-22 mg Zinc per day
 - 2 mg Copper per day
3. Thiamine:
 - 50-100 mg per day
4. B12:
 - 350-500 mcg per day
5. Iron (if you are a menstruating woman):
 - 45-60 mg/day

More supplementation is needed after duodenal switch surgery because risk of vitamin/mineral deficiency is higher. Most patients will undergo vitamin and mineral blood level checks every 3 months for the first year after surgery to ensure proper levels are maintained.



Supplementation Tips and Sample Options

Calcium

- Remember to take Calcium 2 weeks before surgery and one day after hospital discharge
- **Make sure to space calcium properly**
 - Separate calcium from iron (or multi-vitamin containing iron) by at least 2 hours
 - Separate calcium supplements from each other by at least 2 hours
- When choosing a Calcium supplement, remember that Calcium Citrate is better absorbed
- Consume 2-3 servings of high Calcium foods (dairy products) per day

Zinc/Copper

- Zinc and copper may be taken together in one supplement
- Make sure to read the label to get at least 16-22 mg Zinc and at least 2 mg Copper

Iron

- Taking Iron supplement with a Vitamin C-rich food (such as citrus fruits, peppers, broccoli, sweet potatoes, etc.) can help increase iron absorption in the body
- **DO NOT take iron supplement within 2 hours of taking calcium or zinc/copper supplements**
 - Iron competes for absorption space in the body with Calcium, Zinc, and Copper

Sample Supplement Choices by Brand:

	Bariatric Advantage® (www.bariatricadvantage.com)	Celebrate® (www.celebratevitamins.com)
Calcium Citrate	Calcium Citrate Chewy Bite Calcium Citrate Chewable	Calcium Citrate Soft Chew Calcium PLUS 500 Chewable
Zinc and Copper	Zinc 50 (with copper)	Zinc plus Copper
Thiamin	Vitamin B1 Thiamin	Thiamin (B-1)
B12	Vitamin B12	B-12 Quick-Melt
Iron (if 45-60 mg needed)	Iron 45 mg Chewable Iron 60 mg	Iron 60 + C Soft Chews Iron (45 or 60) + C Chewable

Common Deficiencies After Surgery

Fiber

Fiber Supplement Tips

- You may need a fiber supplement at any time during the post-surgery diet or after
 - Make sure to get at least 14 g of fiber for every 1000 calories that you eat
- Sample Fiber Supplements
 - Benefiber
 - FiberCel
 - Wonderlife

Vitamin B12

Vitamin B12 Tips

- Less B12 is absorbed from protein after surgery
- B12 may be needed in higher doses after surgery
 - B12 is included in most Multivitamins, however additional supplementation may be needed
- It is important to check with your doctor to see if you need more B12

Vitamin D

Vitamin D tips

- Recommended dose is 3000 IU of D3 daily (already provided in Bariatric Advantage Advanced Multi EA and Celebrate Complete 36)
- Vitamin D is best absorbed with food



LIFE AFTER BARIATRIC SURGERY



NUTRITION

Arriving Home from the Hospital:

When you arrive home from the hospital, it is important to make sure you are following the post-surgery diet correctly. It is also important you are taking the correct measures to stay hydrated and heal properly.

Tips to ensure the best healing process:

- Make sure to walk every hour
- Take your medication as directed by your doctor
 - Space pills out once every 15 mins
- Don't do any heavy lifting
- Call your surgeon if concerns arise

When to Notify Your Surgeon

Notify your surgeon right away if you experience:

- Rapid heart rate
- Chest pain
- Difficulty breathing
- Excessive nausea
- Persistent vomiting
- Pain not controlled with pain medication
- Problems with incision (redness, pain, swelling, drainage)
- Any concern that something doesn't feel right



Mid-Atlantic Surgery office phone number is: (410) 543-9332
If you are having a medical emergency, call 911

Dietary changes after healing

When you have bariatric surgery, whether that be gastric sleeve or gastric bypass surgery, the way you eat will change. Bariatric surgery permanently alters the GI Tract (where we process and digest food), so the way we eat food will change too.



Some things that will change after surgery:

The volume of foods you can eat

- After you are finished healing, your new stomach can only hold ~6 oz of food at one time
- This will affect the amount of protein, fiber, vitamins, and minerals you get from your food

The way your body absorbs nutrients

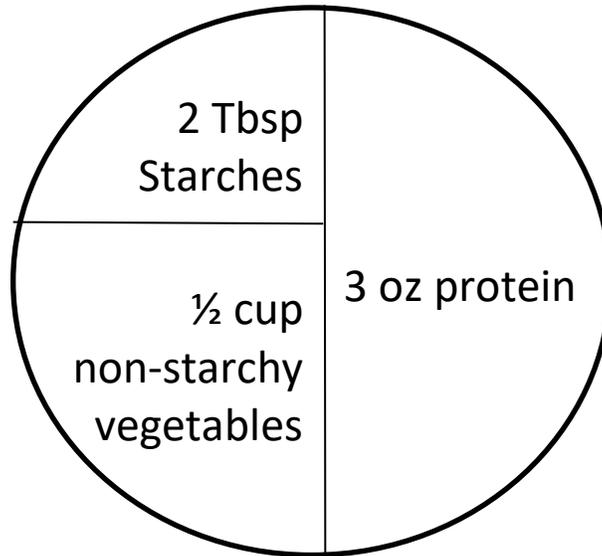
- Your body will absorb nutrients differently after surgery, this may cause vitamin/mineral deficiencies or malnutrition
- You will need to take multivitamins with iron and calcium supplements after surgery to ensure your body is getting enough of what it needs

Hydration status

- Getting enough water can be a challenge when your stomach can only hold ~6 oz at a time
- It is vital to ensure you are sipping on water all throughout the day to stay hydrated

Eating After Surgery

Since bariatric surgery changes the way our bodies process food, we need to eat a little differently to make sure that our bodies are getting all of the nutrients that they need.



Example of how to set up your plate after surgery

Basic tips to ensure you're getting everything that your body needs:

Always eat your protein foods first

- Examples of protein food include: meat, fish, nuts, dairy products, or beans/legumes

After eating your protein foods, make sure you get some fruits and vegetables

- These foods will give you vitamins, minerals, and fiber

You can have SMALL amounts of starchy foods after you eat your protein and fruits/vegetables

- It is important to limit these foods to stay on track with weight loss after surgery

Don't eat and drink at the same time

- Eating and drinking at the same time can cause you to overload your stomach

Frequently asked questions

Why do I feel thirsty all the time?

It is very easy to get dehydrated after surgery. It is important to sip liquids throughout the day in between your meals.

I haven't had a bowel movement for several days and am feeling constipated, what do I do?

It is normal for the amount and frequency of stool to decrease after surgery. This is related to a decreased intake of food volume, and also decreased intake of fiber (found in fruits, vegetables, and whole grains). You can use a fiber supplement and/or stool softener to make it easier for you have a bowel movement.

I'm starting to lose my hair, should I be worried?

Not consuming enough protein after surgery can cause hair loss. Also, hormonal changes after surgery can occur that cause you to lose some hair. In most cases, your hair will grow back. Sometimes hair grows back differently such as curly or straight. It is important to keep up with consuming enough protein through foods and protein supplements. You may also consider adding biotin to your vitamin/mineral supplements.

I'm getting frustrated with eating. My food gets cold and I don't enjoy eating out any more.

After surgery, it should take you much longer to finish a meal. The volume of foods you can eat at one time will also decrease quite a bit. If you are eating with a companion, ask about sharing a meal, or order off of the appetizer list for your dinner. You can also ask your server to bring a box with your meal, and box ½ of your entrée to take home before you start eating.

What do I do about loose skin?

Some skin will tighten up over time. Give yourself one year after your weight maintains itself. Most products do little to tighten your skin. You can try undergarment wear to give support under your clothes (ex. Spanx), or discuss other options with a plastic surgeon.

I feel like I'm on an emotional roller coaster. What's going on?

Hormonal changes and new changes to your lifestyle can cause a surge of emotions that are difficult to manage. Attending the support group hosted by CoreLife can be beneficial in learning how to manage these feelings. Support groups are held on the third Wednesday of every month from 5 pm – 6 pm at the CoreLife office on Still Meadow Blvd.

Can I Do This on My Own?

Navigating the nutrition world can be very difficult. There is a lot of information (and a lot of false information) out there to decipher. Both before and after having bariatric surgery, it is important to make sure you are always getting the protein, fluid, vitamins, and minerals that your body needs to stay healthy. It is also important stay up to date on current research and recommendations for life after bariatric surgery.



How to be sure that you're getting what you need:

Use your resources

- Read and re-read all resources provided to you by your surgeon and dietitian
- If you try to find new resources, make sure they are current and written by a reputable source

To make this process easier and to maintain success after surgery, consider joining CoreLife. We can help ensure you are getting what you need by:

- Meeting with our Registered Dietitian weekly
- Making sure you are prepared for the pre- and post-surgery diets
- Helping you stay healthy and on-track after surgery
- Help you maintain long-term success

The good news is, CoreLife accepts most major insurances, making this one of your most affordable resources!