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# NUTRITION 101

SMG BARIATRIC SURGERY



# LEARNING OBJECTIVES

- Define a S.M.A.R.T. goal and develop S.M.A.R.T. goals related to your health and bariatric journey.
- List the benefits of food journaling and put journaling into practice.
- Utilize a food journaling app to track your food intake and progress.
- Understand calorie, protein, meal frequency, and fluid goals to achieve prior to bariatric surgery.
- Describe why a bariatric multivitamin is essential pre and post bariatric surgery.



# BEGINNING YOUR BARIATRIC JOURNEY

Welcome! The SMG Bariatric Team is excited to be a part of your weight loss journey.

Following this course, you will receive a **Welcome Message in MySparrow** from our team going over Bariatric Clearances that will need to be completed prior to surgery.

If you have not already, **ensure you activate your MySparrow account and turn on notifications** as this is our program's preferred source of communication. We will be in contact with you via MySparrow **many times** throughout your journey.

If you require assistance with this, please contact Sparrow IT via telephone: 517-364-4357.



# OBESITY AS A CHRONIC DISEASE

- Obesity is a chronic disease that requires ongoing effort and permanent lifestyle changes.
- Bariatric surgery is not a cure nor is it considered a “one and done” approach to treating obesity.
- Weight loss surgery is a **TOOL** to help you achieve a healthier weight and lifestyle.



## BENEFITS OF A 10% WEIGHT LOSS

Improves blood sugars	Higher self-esteem
Improved cardiovascular health	Decreased joint pain
Decreased stroke risk	Energy boost
Improved sleep/sleep apnea	Improved mood
Improved mobility	Adventurous attitude

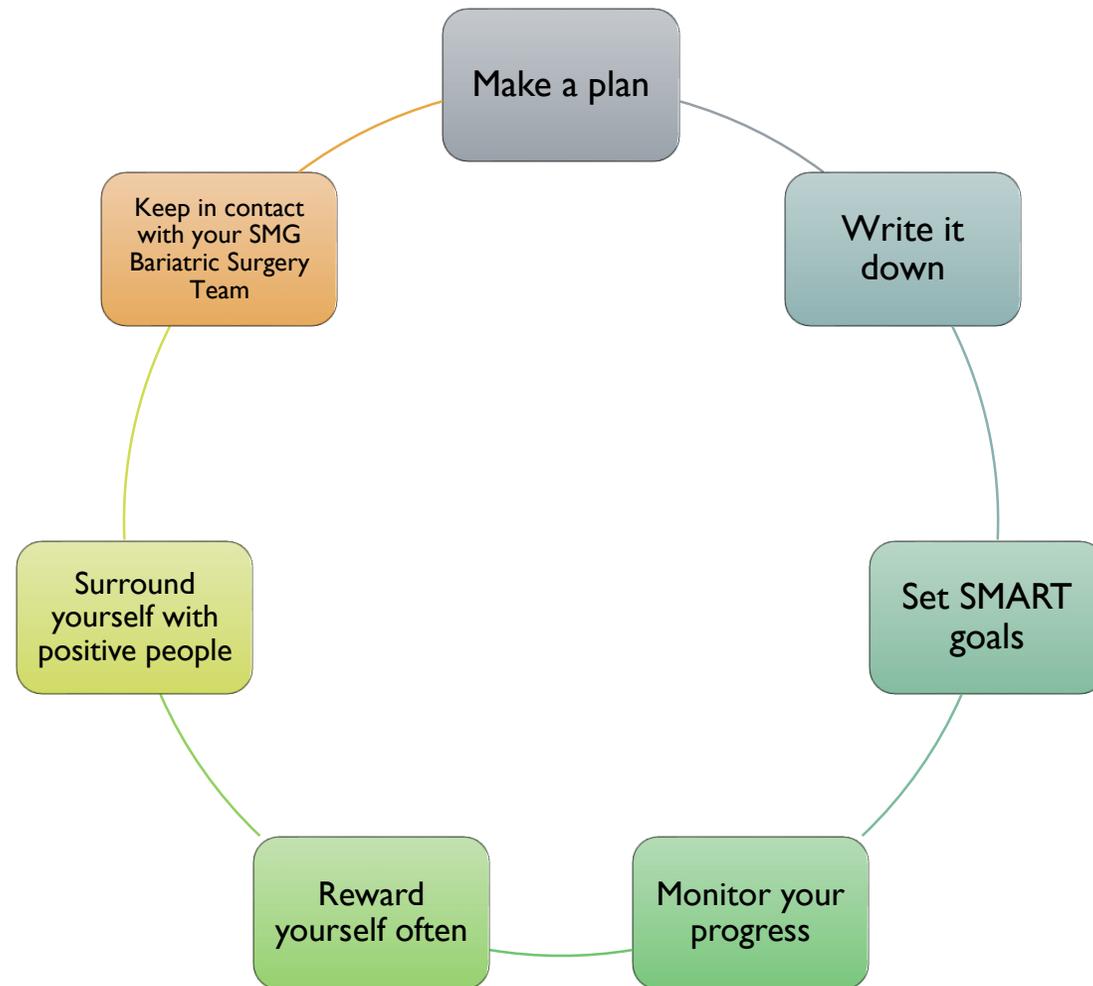


# ACHIEVING LONG TERM SUCCESS

- To achieve long term success, it is necessary to make a number of permanent lifestyle changes.
- You will need to change your eating habits, behaviors, mindset, stress management strategies, and physical activity.
- Establishing healthy self-care habits is the key.



# KEYS TO SUCCESS



# START MAKING CHANGES NOW

- The SMG Bariatric team expects you to start making small lifestyle changes now in preparation for weight loss surgery. Demonstrating these changes sends the message that you are committed to the process and a good surgical candidate.
- The surgery only alters the size of your stomach; you have to do the rest to get the results you want long term.
- The sooner you start, the more prepared you will be for surgery, recovery, and for the rest of your life.
- Certain things will be different once you have surgery, such as the amount of food you may eat at one time, but the fundamentals are the same: **healthy habits create a healthy body and life.**



# GOAL SETTING

- The first step is identifying the types of behavior directly impact your weight: *what* you eat, *why* you eat, and *how much* exercise you do. Then consider what you need to do to change those behaviors.
- For example, “I don’t exercise enough, I need to walk more during the week” OR, “I snack on chocolate bars during the day, I need to choose a lower calorie snack instead.”
- It’s best to write down your goals and state them in a POSITIVE WAY!
- Instead of, “I won’t eat ice cream at night,” try, “I will eat a piece of fruit every night for an evening snack.”



# S.M.A.R.T. GOALS

**Specific** – “I will start to exercise” is vague; “I will walk for 15 minutes during my lunch break 3 times/week” is specific.

**Measurable** – “I will walk 15 minutes 3x/week can be measured by counting how many minutes you walk and how many times you walk during the week.

**Achievable** – “I will walk 15 minutes 3x/week and do weight training 2x/a week” is attainable. Unattainable goals can decrease your motivation to succeed. For example, “I will look like an athlete after 2 weeks of exercise” is not likely.

**Relevant** – make sure your goals match the outcome you want. For example, if you are already walking 3 days/week and want to start weight training, you would set a goal about weight training!

**Time Bound** – set an end date to evaluate the goal, for example “I will participate in weight training 2x/week for the next 2 weeks”.



# REWARD YOUR SUCCESS

<b>Buy a new workout outfit</b>	<b>Buy yourself a new water bottle</b>
Get a massage	Learn a new sport
Purchase a new pair of running shoes	Attend a local sporting event
Take a cooking class	One-on-one personal training session
Purchase a new audiobook to listen to on your walk	Buy a new blender
Try a new meal kit service	Purchase a piece of workout equipment
Get a pedicure	Get new containers for your lunch
Get a new yoga mat	Try out some new headphones
Host a game night for family/friends	Buy a new kitchen gadget (like an air fryer or pressure cooker)
Set up a fun activity to do with your kids	Hire someone to clean your house for a day
Get a new hair-style	Go to a concert



# FOOD JOURNALING

- **It is a requirement of the SMG Bariatric program to use a virtual food journal using your phone, tablet, or computer. This must be used daily.**
- Food journaling increases your awareness of your food habits and promotes accountability.
- By seeing your daily food habits, you will be able to identify goals to work on.
- While it may be uncomfortable to write down “unhealthy” foods you have eaten, it will help to identify patterns in your behaviors. This allows you to develop strategies to improve these behaviors.
- Keeping a food journal will help your SMG Bariatric Dietitian in their assessment of your intake and allow them to provide personalized recommendations.
- Research shows that individuals who log intake are more likely to reach their weight loss goals and maintain them.



# JOURNALING CAN HELP IN A VARIETY OF WAYS...

- Increased nutritional awareness – “That double cheeseburger was that many calories? I had no idea! Next time, I’ll get a single.”
- Portion control – “Rather than eating 3 cheese sticks, I’ll have one with an apple.”
- Meal-planning – “Tomorrow, I am going to eat X,Y, and Z for my meals and snacks to ensure I meet my nutrition goals.”
- Goal setting – “My protein intake looks a little low. I will set a goal to increase that this week and track my progress.”
- Dietary management of health conditions such as diabetes, hypertension, hyperlipidemia, heart burn or GERD, food allergies/intolerances – “My blood sugar always spikes when I eat a plain bagel for breakfast. I’ll try pairing ½ of a bagel with some protein instead.”

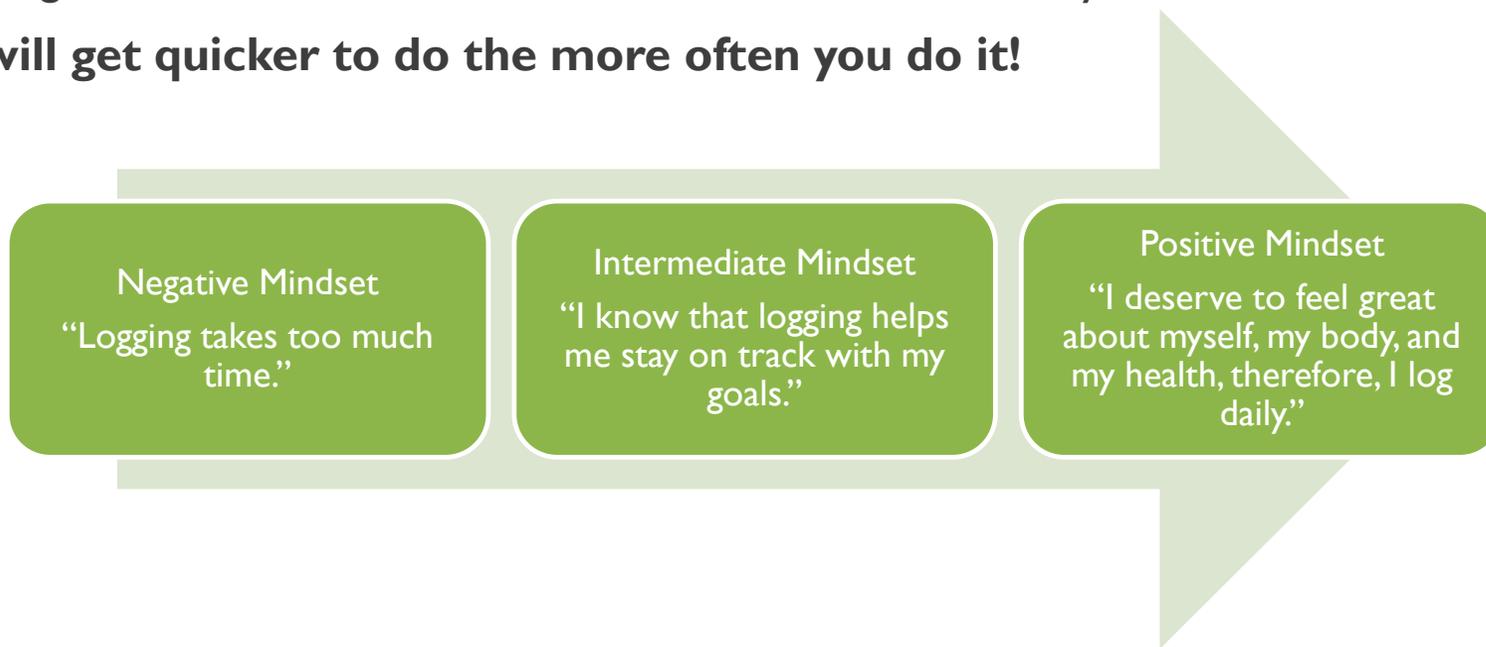


# TIPS TO HELP YOU PRIORITIZE JOURNALING

1. Set an alarm or a reminder at the beginning or end of your day. Consider logging a day in advance to practice meal planning.
2. Take a picture on your phone so you don't forget what you ate if you must log at a later time.
3. Try adding favorites for items you typically eat or creating recipes for quick logging.

Rather than thinking, "this takes too much time" or "this is tedious," shift your mindset from negative to positive.

**Remember, it will get quicker to do the more often you do it!**



# MY HEALTHY JOURNEY APP SET UP

1. Download the *My Healthy Journey* app.
  1. This app can be downloaded in the App store and the Google Play store.
2. Once you have downloaded the app, enter the SMG Bariatric Clinic Code which is “6994.”
3. The app will then prompt you to enter your personal information, i.e. name, date of birth, email address, and phone number. You may enter a goal weight; this is **OPTIONAL**.



# LOGGING YOUR FOODS ON MY HEALTHY JOURNEY

## How to Log your Food

1. Click on the large white and blue button with the fork and knife that says, “ADD CALORIES”
2. Under each meal (Breakfast, Lunch, Dinner, and Snack), notice the blue plus sign next to eat meal name. Select.
3. Notice tabs underneath the search bar. Select “SEARCH.” Search for a food item in the search bar. Be specific. Include the name of the food, the brand, and the flavor. You may also select the blue barcode in the upper right hand corner to scan the barcode on the package of the food item you are wanting to log.
4. Select the food that BEST matches the food you’d like to log. Select the item by clicking the square next to it. Once you have made your food selection, notice My Healthy Journey shows, “ # of Servings” and “Serving Size.”
5. To adjust your serving size, select the blue text and adjust accordingly using the plus and minus signs.
6. To adjust the # of servings, select the blue text and adjust the number to be equivalent to the amount you consume.
7. Once your food entry looks correct, select the blue button at the bottom of your screen which says “Quick Add.” This will add your food to your log.



# NUTRITION REPORTS

## How to View and Assess your Nutrition Intake

1. At the top of your diary screen, notice the blue circle showing your calorie intake. Next to this, you will see Fat, Carbs, and Protein. This shows how many grams of each you have consumed.
2. Select, “Tap to view details” to bring up a more detailed look at your dietary intake.
3. Notice Protein, Total Fat, Cholesterol, Sodium, Available Carbohydrates, and Vitamins and Minerals are shown.
4. Your goal is to pay close attention to these numbers and aim to meet the Nutrition Goals shown in the following slide daily.



# NUTRITION GOALS

- Women: **1200** calories per day
- Men: **1500** calories per day

## Carbohydrate Goal:

- *120g per day if consuming 1200 calories.*
- *150g per day if consuming 1500 calories.*

## Protein Goal:

- *90g per day if consuming 1200 calories.*
- *113g per day if consuming 1500 calories.*

## Fat Goal:

- *40g per day if consuming 1200 calories.*
- *50g per day if consuming 1500 calories*



# USING YOUR BLUETOOTH BODY COMPOSITION SCALE

1. At your first dietitian appointment, you will receive a BALANCE Body Composition Scale that can be linked to your My Healthy Journey App via Bluetooth.
2. It will be expected that you weigh yourself using this scale **at least once per week**. It is recommended to weigh yourself on the same day each week prior to drinking any fluids or eating any foods.
3. To ensure your weight and body composition is accurately updated in your My Healthy Journey app, you will need to enable Bluetooth on your mobile device.
4. Once you have enabled Bluetooth, open your My Healthy Journey app and select the “plus” sign located on the bottom of the screen.
5. Select the icon showing a scale and step on your BALANCE scale.
6. The app will show it is syncing as you stand on the scale.
7. Once the app finishes reading your weight and body composition, click “save.”
8. This will then upload your current weight and body composition into your My Healthy Journey app.



# BARIATRIC NUTRITION GOALS

Now that your food journaling app is set up, let's dive into the basics of your bariatric nutrition goals.

1. Consume 5-6 small, frequent meals.
2. Consume 70-90 grams of protein.
3. Drink 64-80 ounces of water.
4. Take a bariatric multivitamin, daily.



# SMALL FREQUENT MEALS

**Goal #1: Work toward eating 5-6 small, frequent meals.**

Why?

- Increases satiety.
- Assists with portion control.
- Prepares you for eating smaller amounts after surgery and ensures you are meeting your daily nutrition goals.



# PROTEIN GOAL

**Goal #2: Consume 70-90 grams of protein per day.**

Why focus on protein?

1. **Satiety** - dietary protein generates key satiety hormones that signal to our brain that we are full.
2. **Blood sugar stabilization** - protein helps slow digestion and prevents post-meal blood sugar spikes.
3. **Hormone Regulation** – protein is a part of everything in the body from the hemoglobin that transports oxygen to hormones that control metabolic functions like thyroid hormones, melatonin, dopamine, and serotonin.
4. **Improves recovery** – a protein rich diet speeds recovery and healing following bariatric surgery.



# PROTEIN RICH FOODS

## Meat

- Extra lean (95% lean) ground beef, 3 oz.: 25 grams of protein
- Ground turkey (85% lean), 4 oz.: 19 grams of protein
- Ground chicken, 4 oz.: 20 grams of protein
- Chicken breast, ½ cup: 20 grams of protein

## Dairy

- Greek yogurt:
  - Plain: 15 grams of protein
  - Flavored (varies): 12-18 grams of protein
- Nonfat cottage cheese, ½ cup: 7.5 grams of protein
- String cheese: 7 grams of protein
- 1 egg: 6 grams of protein

## Seafood

- Tuna (1 packet, 2.6 oz.): 17 grams of protein
- Tilapia, 1 fillet: 23 grams of protein
- Salmon, 3 oz.: 17 grams of protein

## Meatless

- Lentils, ¼ cup: 12.5 grams of protein
- Black beans, ¼ cup: 10 grams of protein
- Split peas, ¼ cup: 12g of protein
- Tofu, ½ cup, 10 grams of protein
- Edamame, 1 cup (in pods) 17 grams of protein
- Veggie burger, 1 1g of protein

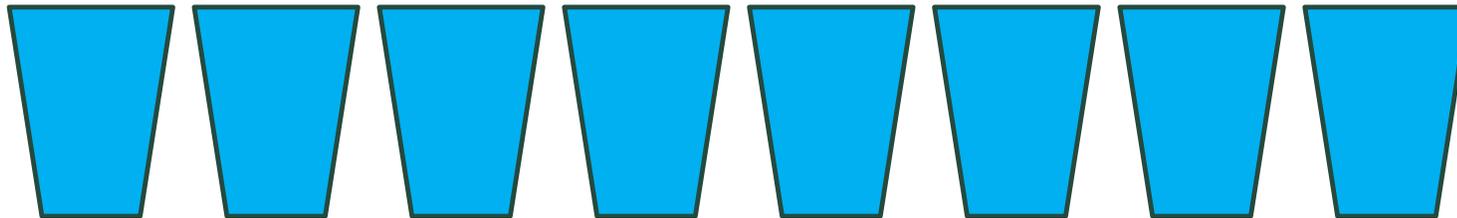
## Protein Supplements

- Core Power Protein drinks: 26 grams of protein
- Premier Protein: 30 grams of protein
- Flavorless protein to add to other foods:
  - Nonfat dried milk, ¼ of a cup: 6 grams of protein
  - Unjury protein powder Flavorless (can buy in our office), 1 scoop: 21 grams of protein
  - Beneprotein, 1 packet: 6 grams of protein



# WATER GOAL

**Goal #3: Aim to drink 64-80 ounces of water throughout the day (8 cups minimum).**



# BENEFITS OF WATER

- Water helps carry other nutrients throughout the body and helps transport waste products.
- Fluids function as “joint lubricants” and “cell shock absorbers.”
- Enables numerous chemical reactions and helps regular body temperature.
- Water helps regulate bowel movements.
- Adequate fluid intake can help fight off certain illnesses like kidney stones, UTI’s, and hypertension
- Hydration aids in cognitive function and mood.
- When it comes to weight loss, as fat breaks down, the body requires increased fluids to eliminate the resulting wastes. Plus, drinking more fluids can help you feel full.



# SIGNS OF DEHYDRATION

Headaches	Loss of energy	Constipation
Dry lips and tongue	Dry skin	Muscle or joint soreness
Muscle cramps	Light headedness	Nausea/Vomiting
Elevated body temperature	Water retention problems	Hoarse voice
Restlessness	Low volume/dark urine	Rapid heart rate



# MORE ABOUT WATER AND FLUIDS

It is important to maintain adequate hydration – not only for weight loss and maintenance, but for recovery post op and to prevent dehydration.

- Water, Crystal Light, MiO, Powerade Zero, Vitamin Water Zero, Propel are **OK**

Sip, NEVER gulp.

Avoid using straws.

- Increases risk of trapped air bubbles in the stomach.

No caffeine, carbonated beverages, or alcohol.

- Caffeine: mildly dehydrating, increases risk of reflux and ulcers, decreases absorption of calcium and iron.
- Carbonation: bubbles can cause pain and stretch pouch, sugary beverages are addicting and full of sugar.
- Alcohol (abstain for one year post op): empty calories, puts stress on liver, risk of developing alcoholism.



# CAFFEINE – A NO GO AFTER BARIATRIC SURGERY

- Excess caffeine may cause anxiety, insomnia, heartburn and stomach upset, act as a diuretic, and can speed up heart rate. It can also increase risk for gastric ulcers following bariatric surgery.
- Coffee is the main source of caffeine; soft drinks, tea, liquid water enhancers, and OTC and prescription drugs may also contain caffeine.

Coffee, brewed (6oz)	105mg
Coffee, instant (6oz)	60mg
Coffee, decaffeinated (6oz)	2mg
Espresso (2oz)	120mg
Tea, brewed (6oz)	40mg
Tea, decaf (6 oz)	2mg
Cola (12oz)	45mg
Excedrin (1 tab)	65mg
5 hour energy drink	200mg



# OUT WITH THE SODA

- Soda contains large amounts of phosphoric acid which can lead to decreased bone health and reduce tooth enamel.
- Excess artificial sweeteners can increase carbohydrate cravings.
- Acts as a diuretic.
- Not filling for high calorie density and can make weight loss difficult.
- Carbonation can cause bloating and discomfort following bariatric surgery.



# WHAT'S THE DEAL WITH ARTIFICIAL SWEETENERS?

- Also known as sugar substitutes, these are chemicals added to some foods and beverages to make them taste sweeter and are typically no calories or are very low calorie.
- Common examples include aspartame (equal, nutrasweet), saccharin (sweet n low), sucralose (Splenda).
- Some studies have shown that artificial sweeteners may increase appetite.
- Early studies showing potential effects on gut health.
- Other alternatives could include monk fruit, stevia, or xylitol.



# ALCOHOL

- Alcohol provides calories but no essential nutrients and often is in place of more nutritious foods and beverages.
- Carbohydrates are typically added from other ingredients like sugar in mixed drinks and the calories add up quickly!
- Ounce per ounce, pure alcohol provides more calories than sugar and less than fat.
- Calorie content depends on the proof of alcohol (amount of alcohol in liquid).
- Light beer has ~1/3 the calories of regular beer.
- Dry wine has few calories than regular bodied wine and dessert wine.
- Following bariatric surgery, the body absorbs calories from alcohol at a more rapid rate. It also stresses your liver. Intake of alcohol may lead to the development of alcohol dependence. **You MUST avoid alcohol for one year following surgery.**



# HOW TO INCREASE FLUID INTAKE

- Designate a certain water bottle to helping meet your goals. For example, you could drink 4 – 16oz bottles, 3 – 24 oz. bottles, or 2 – 32 oz. bottles.
- Adjust based on activity level and climate.
- Carry a water bottle with you when you're on the go.
- Set reminders.



## HOW IN INCREASE FLUID INTAKE, CONTINUED

- Consume fluids before you are thirsty .
- Journal your intake.
- Eat foods with a high water content.
- Make homemade popsicles.



## VITAMIN GOAL

- **Goal #4: Begin taking a daily multivitamin (no gummies, no Flintstones, and no vitamin patches).**



# WHY IS A MULTIVITAMIN IMPORTANT?

- It is critical for your body to have the right amount of vitamins and minerals to function properly, assist in keeping you healthy, and may potentially assist with reaching weight loss goals.
- Vitamins and minerals help regulate your body's systems, such as:
  - Metabolic rate
  - Brain activity
  - Appetite and hunger
  - Metabolism of fat and carbohydrates, including sugar
  - Absorption of other nutrients
  - Thyroid and adrenal gland function
  - Storage of energy
  - Assist with healing



# WHY IS A MULTIVITAMIN IMPORTANT?

- The ideal way for the body to get the proper amount of vitamins and minerals is through food. However, this may not always be achievable after bariatric surgery (also called weight loss surgery).
- It is important to keep in mind that getting your vitamins and minerals from food also provides other health benefits, so it is still important to follow a healthy eating plan.
- In addition, when individuals have extra fat mass certain nutrients are utilized differently in the body creating potential deficiencies.
- Bariatric surgery often leads to weight loss in part due to people eating less and also due to possible malabsorption.
- In addition, there may potentially be changes in gut hormones depending upon the type of bariatric surgery that was performed.
- Nutrient intake is altered following bariatric surgery for several reasons including:
  1. Possible malabsorption of nutrients.
  2. Reduced total intake of food decreasing the intake of nutrients consumed.
  3. Possible avoidance of certain foods (either due to tolerance issues or to optimize weight loss) reducing the intake of specific nutrients in those foods.



# RECOMMENDATIONS FOR A MULTIVITAMIN

- The American Society for Bariatric and Metabolic Surgery (ASMBS) sets guidelines for vitamin and mineral supplementation for individuals undergoing bariatric surgery.
- Start supplementation early as it is easier to treat and prevent deficiencies pre op vs. post op.
- Therapeutic (desired) blood levels for vitamins and minerals:
  - Vitamin D3: 50
  - Vitamin B12: 500-900
  - Iron Saturation: 30
  - Hemoglobin: above 11
  - Folic acid: 20
  - Vitamin B1: 100



<b>2019 ASMBS Guidelines for VSG</b>	
<b>Multivitamin (MVI)</b>	
Thiamin	At least 12 mg / day *
Folic Acid	400 – 800 mcg / day from MVI 800 – 1,000 mcg / day total (female, child bearing age)
B12	Oral: 350 – 1,000 mcg / day
Vitamin D	3,000 IU (75 mcg)
Vitamin A	5,000 – 10,000 IU (1,500 – 3,000 mcg) / day
Vitamin E	15 mg / day
Vitamin K	90 – 120 mcg / day
Copper	1 mg / day from MVI
Zinc	8 – 11 mg / day from MVI
Zinc to copper ratio: 8 – 15 mg of zinc for every 1 mg of copper	
<b>Iron (from all supplements)</b>	
At least 18 – 60 mg / day ** CANNOT take with Calcium	
<b>Calcium (from food and supplements)</b>	
1,200 – 1,500 mg / day Take in divided doses Calcium Citrate may be taken with or without meals	
<b>Other</b>	
Protein (often individualized)	Minimum of 60 g / day with some patients needing higher amounts of 80 – 90 g / day
Fluids (often individualized)	At least 50 oz / day to ensure adequate hydration
* At risk patients: rapid weight loss, protracted vomiting, the need for parenteral nutrition, excessive alcohol, neuropathy, encephalopathy, and/or heart failure. At risk patients need at least 50 – 100 mg of thiamin daily.	
** Low risk patients (males and patients without a history of anemia) need 18 mg of iron from their multivitamin. Higher risk patients (menstruating females who have had SG, RNY, or BPD / DS or those with anemia) need at least 45-60 mg of iron daily.	



# RECOMMENDATIONS FOR A MULTIVITAMIN

- A bariatric-specific multivitamin is one that was designed specifically for the bariatric patient.
- They are designed to provide the appropriate level of supplementation to support the needs of a bariatric patient as their needs are different from the general population.
- Another difference among bariatric-specific multivitamins is the forms of each nutrient used.
  - Bariatric multivitamins use the form of the nutrients that are most bioavailable, meaning that nutrient has the best chance for absorption.



# COSTS OF VITAMINS AND MINERALS

Type of Procedure	Estimated Monthly Cost
Roux-en-Y Gastric Bypass / Sleeve Gastrectomy	\$25 - \$55 per month



## OTHER IMPORTANT CONSIDERATIONS

As previously discussed, it is critical to take vitamin and mineral supplements as directed in order to maintain normal laboratory studies and reduce the risk of nutritional deficiencies. Maintaining normal nutritional laboratory levels may also assist with reaching and maintaining weight loss goals. However, it is also important to follow a few other guidelines.

1. Complete pre-operative laboratory studies.
2. Take your vitamin and mineral supplements as prescribed.
3. Complete post-operative laboratory studies.
4. Look for high-quality supplements.
5. Do not self-prescribe.



# REVIEW

Answer the following questions and send your responses to your Bariatric Dietitian as a message in your MySparrow app.

1. What is one S.M.A.R.T. goal that you would like to work towards achieving this month?
2. Which app needs to be downloaded onto your phone?
3. How many grams of protein should you aim to consume daily?
4. What is your daily goal for water?
5. What type of vitamin should you begin taking now?

