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I. Introduction

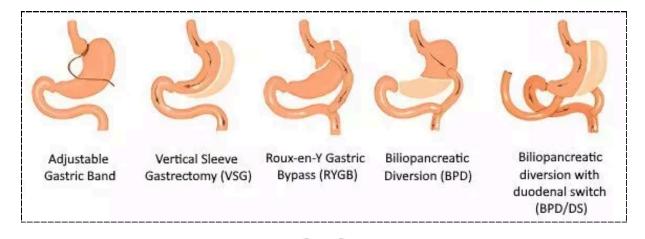
This resource was created by <u>Medical Students for Size Inclusivity (MSSI)</u>, an international community of medical students dedicated to addressing weight bias in medicine. We have seen many patients undergo bariatric surgery aimed at promoting weight loss, and remain concerned that patients may receive misleading or insufficient information from their healthcare providers before undergoing these operations.

While MSSI does not believe weight & BMI are accurate measures of health, or that weight loss improves health outcomes, we also champion patient autonomy. Weight discrimination permeates so many aspects of society, and the physical and mental harm it directly causes larger bodied people is immeasurable and farreaching. Our goal is to give patients desiring to undergo bariatric surgery to lose weight a more comprehensive understanding of bariatric surgeries, so they can make the most informed decisions about their care. Knowing what alternatives are available is part of full informed consent, so we also include evidence-based options for improving health that do not require weight loss.

II. An Overview of Bariatric Surgery

Types of Bariatric Surgery

There are five main types of bariatric surgeries, with sleeve gastrectomy and roux-en-Y gastric bypass (RYGB) as the most commonly performed in 2024 in the United States (1). <u>Image</u>



III. Responses to 5 Common Claims

Claim #1: There is a lot of evidence to prove the effectiveness and benefits of bariatric surgery.

A MORE COMPLETE VIEWPOINT:

Studies that portray benefits of bariatric surgery often have flaws in design such as...

- **High dropout rates:** Many studies have high dropout rates (up to 30%), meaning they may not capture the full picture after surgery (2).
- **Insufficient comparison groups:** Studies often lack a comparison group of people receiving regular, non-fatphobic care, so it's unclear how bariatric surgery outcomes compare to standard care for fat people. Control groups in these studies might include individuals seeking bariatric surgery, making them unrepresentative of the general fat population.
- Lack of weight-neutral interventions: Studies often don't include weight-neutral interventions, despite evidence that these can improve health.

Several studies also challenge the effectiveness and benefits of bariatric surgery by considering...

- **Number needed to treat (NNT):** In one study, it was found that 35 people with a BMI over 39 would need surgery to prevent one death over 20 years compared to regular medical management. This means 35 individuals must undergo the surgery, with its risks, to potentially save one life, *without* knowing the quality of life for that individual (3, 4).
- **Mortality benefit:** One study found that people that had bariatric surgery might live 2–3 years longer than those who didn't have the surgery. However, over 20 years, people in smaller bodies had a higher life expectancy than those who had the surgery, suggesting other factors, such as social stigma and discrimination, may influence mortality in larger-bodied individuals (4).
- **Unclear mechanisms of weight loss:** The exact reasons for weight loss following bariatric surgery are not fully understood. Research is ongoing to clarify these mechanisms (5).
- **Gender disparity:** About 80% of bariatric surgeries are performed on female-identifying individuals, despite equal obesity rates across genders. This disparity may stem from gender-based differences in body weight perceptions and societal beauty standards (6).

Claim #2: Bariatric surgery leads to improved health and/or reduces risk for many diseases.

A MORE COMPLETE VIEWPOINT:

Some studies show improvements in existing co-morbidities after bariatric surgery, while others indicate little change compared to those who did not undergo surgery. These improvements are often attributed to weight loss.

Confounding variables:

- Studies rarely discuss confounding factors like weight stigma, weight cycling, and healthcare inequities. These factors can influence health and are not accounted for when claiming bariatric surgery directly reduces co-morbidities.
- It's important to note that these studies are correlative, and correlation does not imply causation (2, 4, 7).

Quality of care:

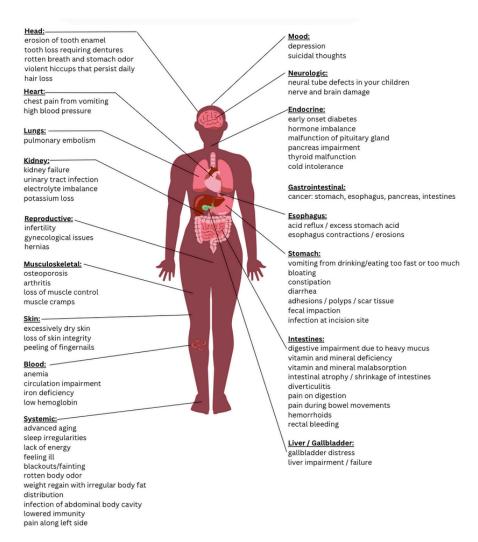
 Patients who undergo bariatric surgery often receive better follow-up care than the average larger bodied person. This improved care can lead to earlier diagnosis and treatment of diseases, contributing to better health outcomes and increased life expectancy, rather than the surgery itself being the sole factor.

Patient quality of life:

- Many patients report the need for psychological support after surgery to adjust to lifestyle changes, self-identity, and feelings of disorientation (8).
- Patients post-bariatric surgery have significantly increased rates of suicide ideation (9, 10) and significantly increased frequency of alcohol use (11).
- In addition, patients can develop or re-develop disordered eating behaviors including binge eating, restriction, and/or intentional vomiting. (12, 13, 14)
- Additionally, bariatric surgery patients require the number of appointments for follow-up and vitamin injections comparable to the number of visits required for an organ transplant patient. This can be a large, life-long time commitment requiring significant time off work.
- One year post-op, some patients report benefits such as increased activity levels and reduced concern about comorbidities like heart disease and sexual dysfunction. However, it's unclear if these benefits are due to the surgery/weight loss or a newfound sense of self-worth and confidence, which could potentially be developed without surgery (15).

Claim #3: Bariatric surgery is a relatively safe procedure that has few complications.

A MORE COMPLETE VIEWPOINT: Potential side effects & complications resulting from bariatric surgery are numerous and include (16, 17):



It is impossible to predict what side effects one may experience after having bariatric surgery. With the list of complications being both severe and long, it is misleading to present bariatric surgery as "a safe procedure with few complications." In fact, long-term health and quality of life could be worse (including far worse) after having the surgery than it would be without it (3).

In addition to these side effects, bariatric surgery can change the way medications are metabolized by the body, which can impact chronic disease management. For example, bariatric surgery has been shown to decrease blood levels of SSRIs/SNRIs, some of the most common medications used to treat depression (18). Ultimately, this could contribute to the 2–fold increase of suicide attempts/self-harm since in patients who have undergone bariatric surgery (19).

It is also important to keep in mind that patients who experience significant complications following surgery often falsely report an improved quality of life, as a result of social stigma. A post-surgery patient shared, "We're ashamed to talk about the negatives. After all, we've failed all our lives and now we've failed again. So we pretend that it's all rosy… But what scares me the most is the denial" (16).

Claim #4 - Your digestive system easily adapts after bariatric surgery.

A MORE COMPLETE VIEWPOINT:

Bariatric surgery takes a healthy digestive system, and surgically puts it into a diseased state (3). Because of this, it leads to significant changes in the digestive system, which necessitate lifelong adjustments in dietary habits to ensure proper nutrition and maintain overall health. Common complications after bariatric surgery when it comes to your digestive system include:

Nutritional deficiencies

• Unfortunately, those who undergo bariatric surgery will no longer be able to meet nutritional needs through food alone, and will require **multiple daily supplements as well as monthly vitamin injections** for the rest of their lives (20). If you were to stop taking the supplements (including if you are ever in a financial position in which you cannot afford them or don't have access to them) it could have serious, possibly life-threatening consequences (3).

Dumping syndrome

- Early dumping syndrome happens when food, especially high-carbohydrate food, moves too quickly into the small intestine resulting in symptoms such as nausea, vomiting, severe cramps, diarrhea, fainting, palpitations, sweating, and flushing (20). Late dumping syndrome happens 1–3 h after a meal and is characterized by weakness, sweating, and dizziness (20).
- To manage dumping syndrome, **life-long dietary modifications** are often recommended, such as:
 - o Eating smaller, more frequent meals
 - Avoiding foods high in sugar
 - Consuming high-protein foods
 - o Drinking fluids between meals rather than with meals
 - Lying down after eating to slow the emptying of the stomach (21).

Malnutrition

- Up to 1 in 5 people have malnutrition after bariatric surgery due to reduced food intake, loss of muscle mass, and malabsorption after surgery (22). Malnutrition is associated with frailty, hospitalization, and early death (22).
- A **life-long high protein diet** will be crucial for maintaining muscle mass, supporting healing, and preventing malnutrition.
- Fat malabsorption is relatively common after weight loss surgery and will manifest itself as greasy and foul-smelling stools, diarrhea and increased gas (23). If not treated in time, it can contribute to a deficiency of vitamins A, D, E, and K as well as omega-3 deficiency.

Food intolerances

- Because bariatric surgery typically involves reducing the size of the stomach or rerouting the digestive tract, this can lead to reduced stomach acid production, slower digestion, and altered nutrient absorption, making certain foods more difficult to tolerate (20).
- After surgery, you may find **difficulty tolerating certain textures**, such as tough meats, fibrous vegetables, or dense breads. You may find that you will be unable to eat foods you used to enjoy.

Keep in mind that lifelong dietary changes post-surgery can impact cultural, social, and emotional health.

Claim #5: Bariatric surgery is a "quick and permanent fix" for achieving weight loss

A MORE COMPLETE VIEWPOINT:

Weight loss is not guaranteed or sustained for all bariatric surgery patients.

- The efficacy of bariatric surgery depends on what an individual believes a "fix" to be. According to current standards, 1/5th of those who undergo bariatric surgery may not have a "successful" weight loss (24). Many who undergo the surgery end up regaining the weight they lose, within two years.
- A prospective, 10-year study of patients who had undergone roux-en-Y gastric bypass (RYGB), found that 93% of patients maintained at least a 10% weight loss from baseline, 70% maintained at least a 20% weight loss and only 40% maintained at least a 30% weight loss after 12 years (25).
- In a different five-year study of folks who underwent RYGB, researchers found that 40% of patients at follow-up regained some weight in comparison to their weight loss at 6 months post-surgery (26).

A Brief History Lesson

Did you know?

Bariatric surgery was **not** originally performed with the primary goal of weight loss. These are relatively new surgeries in response to the social understanding of "obesity." In 1966, a physician noticed that patients with stomach removal for **cancer** lost lots of weight. The then proposed the idea of bariatric surgery to respond to the increasing "obesity epidemic." (27)

IV. Alternative Options to Weight Loss Surgery

There are many reasons people want to lose weight. Given the limited evidence to suggest that weight loss is safe and sustainable, even with surgery, we encourage patients who may be interested in improving their health, to consider alternatives. To start, if your doctor is recommending weight loss for a health condition, you could ask what they might recommend to treat the same condition in a patient of a smaller body size.

As simple as it might seem, an alternative to using weight loss surgery is to make no changes. **Weight alone does not determine health, and other markers of well-being are more accurate and useful**. As mentioned above, interventions to reduce weight, including dietary restriction, exercise, and medications, have not resulted in sustainable weight loss for most people in the long term. If your healthcare provider is not willing to move away from using weight as a metric of health, finding a more supportive environment may be your next step.

Suggestions for Finding Size Inclusive Providers:

- Use search terms "size-inclusive", "weight-neutral", "weight-inclusive", or "Health At Every Size (HAES)-aligned" when looking for a new physician. You can use size-inclusive provider directories to look for providers in your area:
 - o https://asdah.org/haes-professional/
 - o Weight Neutral Provider Excel
 - o https://fatfriendlyhealthcareproviders.com/
- Ensure your provider's office promotes size inclusivity by offering inclusive seating in all patient care areas, access to appropriately sized blood pressure cuffs, and the option to decline being weighed and opt out of discussions about weight loss.

Below we present some other more sustainable ways to improve health, which do not focus on altering body weight, shape, or size:

Movement

Increasing movement by any amount can increase wellbeing, disease management and reduce mortality (28). This can look like exercise at a gym and can also include gardening, housework, dancing, playing with a dog or kids, and walking. Reducing uninterrupted time sitting with small amounts of movement also is helpful.

Nutritious Dietary Choices

Working on positive additions to your dietary intake can improve health outside of medication use. Here are a few ideas:

- Consuming a wide variety of foods, including servings of vegetables, fruits, legumes/beans, and whole grain products daily.
- Consistently consuming enough to meet your body's daily fuel demand.

- Learning to recognize your body's natural hunger and fullness cues. Consistent fueling helps us achieve this!
- Working with a size-inclusive (and culturally safe) dietitian can help support health food choices, tune in to your body's requirements, and offer new ideas that are easy to integrate into your food prep.

Mental Health Care

Internalized weight stigma has significant negative implications on mental health, including increased depression, anxiety, body dissatisfaction, and eating disorder symptoms, and decreased self-esteem. This association held true even when the data was controlled for weight, suggesting that it is the experience of weight stigma, not an individual's weight, that contributes to poorer mental well-being (29, 30).

Mental Health Services

- o Individual counseling / virtual counseling services
- Group therapy sessions
- Support groups

Free/Low-Cost Mental Health Practices

- Journal prompts
- o Gratitude and Mindfulness practices
- o Guided meditations on apps like Insight Timer or on YouTube
- Developing strong social ties
- o Recreation

Sleep Hygiene

Another proven way to positively impact health is to improve sleep quality & quantity. Strategies include:

- o Having a consistent bedtime / wake time
- Ensuring a dark and slightly cool room
- Implementing "wind down time" when electronic exposure is limited 30 minutes prior to sleep
- Sticking to a consistent bedtime routine, which could include stretching, hot showers, reading, or journaling

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V. In Summary...Questions to Ask Yourself Before Bariatric Surgery:

1	Do I have any health conditions that could be addressed more directly, rather than with pursuit of weight loss surgery? How would my health conditions be treated in a thin person? Are there screenings or preventative care measures that are being deferred for a trial of weight loss?
2	Do I feel that potential weight loss is worth the cost and potential life-long side effects? Am I prepared for the possible complications of bariatric surgery?
3	If I were to set weight aside, what would make the biggest difference in my health? Am I pursuing that as well?
4	Do I need help caring for myself in the body I have now? What professionals or community could I access for help?
5	Have I brought up some of my concerns to my healthcare team? Please feel free to use this resource as a guide for questions to ask your provider!

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