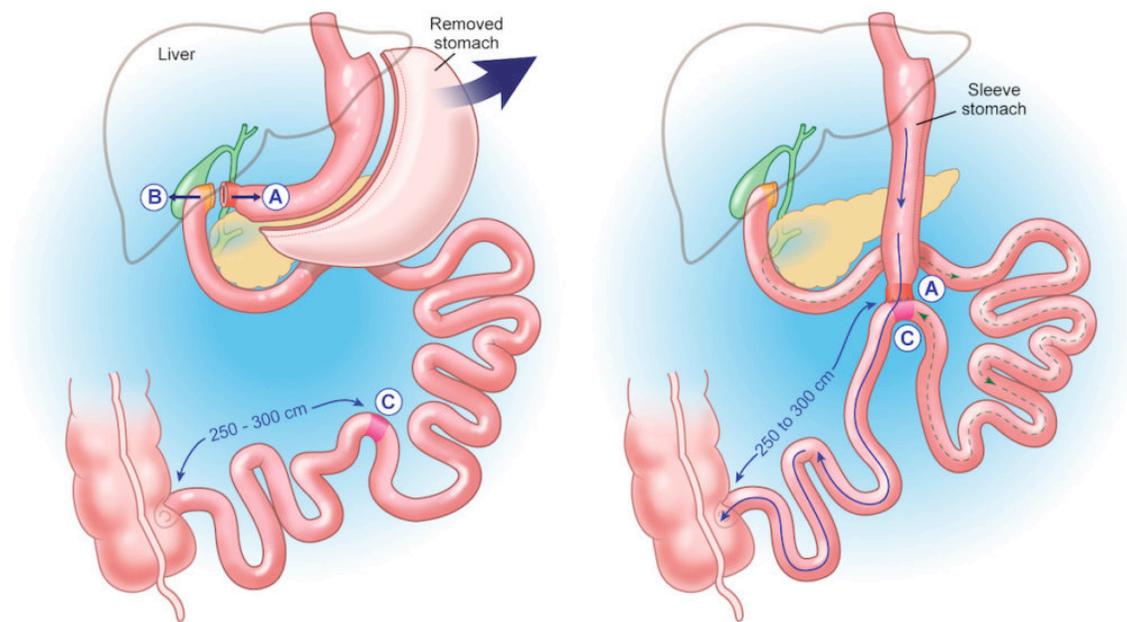


SADI-S

The SADI-S abbreviation stands for a medical mouthful of incomprehensible words: Single Anastomosis Duodeno-Ileostomy with Sleeve gastrectomy. We will explain what all this means. The SADI-S is a procedure that was developed in the early 2000s. It consists of a sleeve gastrectomy and a bypass of some of the small intestine with one connection between the duodenum and the small intestine. There are now many reports about the success and safety of the surgery and many thousands of patients had the surgery in the US and worldwide. The surgery was endorsed by the American Society of Metabolic and Bariatric Surgery in October of 2019.



The surgery works in three ways.

1. The sleeve gastrectomy part creates a 2-3oz small stomach and as a result, a person cannot eat much. The eating portions are small.
2. The food will move from the new small stomach directly into the lower 10 feet of the small intestine and bypass the first part of the small intestine, which is about half of the small intestine. Normally, the small intestine that is available to absorb calories and nutrients is around 15 to 25 feet long. The result is that less of the calories are absorbed.
3. Certain hormones in the body are changed. The hunger hormone Ghrelin is reduced and most persons after surgery will have no hunger for many months. Several hormones that regulate blood sugar are changed so that blood sugar is much better controlled. The SADI-S is excellent for diabetes treatment.

The advantages of the SADI-S over the sleeve gastrectomy alone or over the gastric bypass are:

- Better initial weight loss and better long-term weight loss than sleeve and bypass.
- Less chance that the weight will come back.
- Better diabetes treatment than sleeve and bypass.
- Much more stable blood sugar levels throughout the day than with sleeve and bypass.
- Less acid reflux than sleeve.
- Lower risk of internal hernia than gastric bypass.
- Lower risk of stomach ulcer than gastric bypass.
- Lower risk of abdominal pain than gastric bypass.
- Only one connection between structures in the abdomen rather than two in the bypass.
- Patients can take anti-inflammatory medications (NSAIDS).

Regarding the general surgical risks, they are the same as for sleeve gastrectomy and gastric bypass.

Disadvantages of the SADI-S over the sleeve gastrectomy alone or over the gastric bypass are:

- Newer procedure, 7-year results are available.
- More vitamin and mineral deficiencies than in the sleeve.
- 1-3 bowel movements per day in some persons.
- Occasionally diarrhea so bad, that a surgery needs to be done to correct this.
- Occasionally vitamin/protein/nutrient levels are so low that a surgery needs to be done to correct this.
- A leak inside the abdomen happens with all three surgeries at a rate of 1-2 per 1000 patients. The SADI leak at the connection between the duodenum and the small intestine may be more difficult to treat than after gastric bypass.

Comparison of the three surgeries: Best/good/least

- | | |
|-------------------------------|------------------------|
| ▪ Weight loss initial | SADI / Bypass / Sleeve |
| ▪ Weight loss long-term | SADI / Bypass / Sleeve |
| ▪ Diabetes treatment | SADI / Bypass / Sleeve |
| ▪ Daily blood sugar stability | SADI / Bypass / Sleeve |
| ▪ HTN, Sleep apnea, heart | SADI / Bypass / Sleeve |
| ▪ Reflux | Bypass / SADI / Sleeve |
| ▪ Sweet eaters | Bypass=SADI / Sleeve |
| ▪ High BMI | SADI / Bypass / Sleeve |
| ▪ Ease of surgery | Sleeve / SADI=Bypass |
| ▪ Ease of recovery | All similar |

- Can do normal endoscopy Only the Sleeve

Comparison of risks:

- Sleeve more risk of worsening or new reflux and Barrett's and need to do Bypass or other surgery
- Sleeve with risk of stomach stretching
- Bypass with risk of stretching of stomach-intestine connection
- Bypass more risk of internal hernia with intestine blockage, which requires emergency surgery than SADI. No risk for Sleeve.
- Bypass the only one with risk of stomach ulcer, pain and rupture at the stomach to intestine connection
- Bypass more risk of inexplicable pain in the abdomen
- SADI and Bypass more risk of low protein, anemia or nutrients (can be fixed with another surgery)
- Bowel movement: SADI more loose and frequent 1-3 per day, more diarrhea (may need surgery to correct)
- Bowel movements: Bypass and Sleeve more constipation
- Need to follow up in the office with labs diligently: SADI and Bypass more than Sleeve