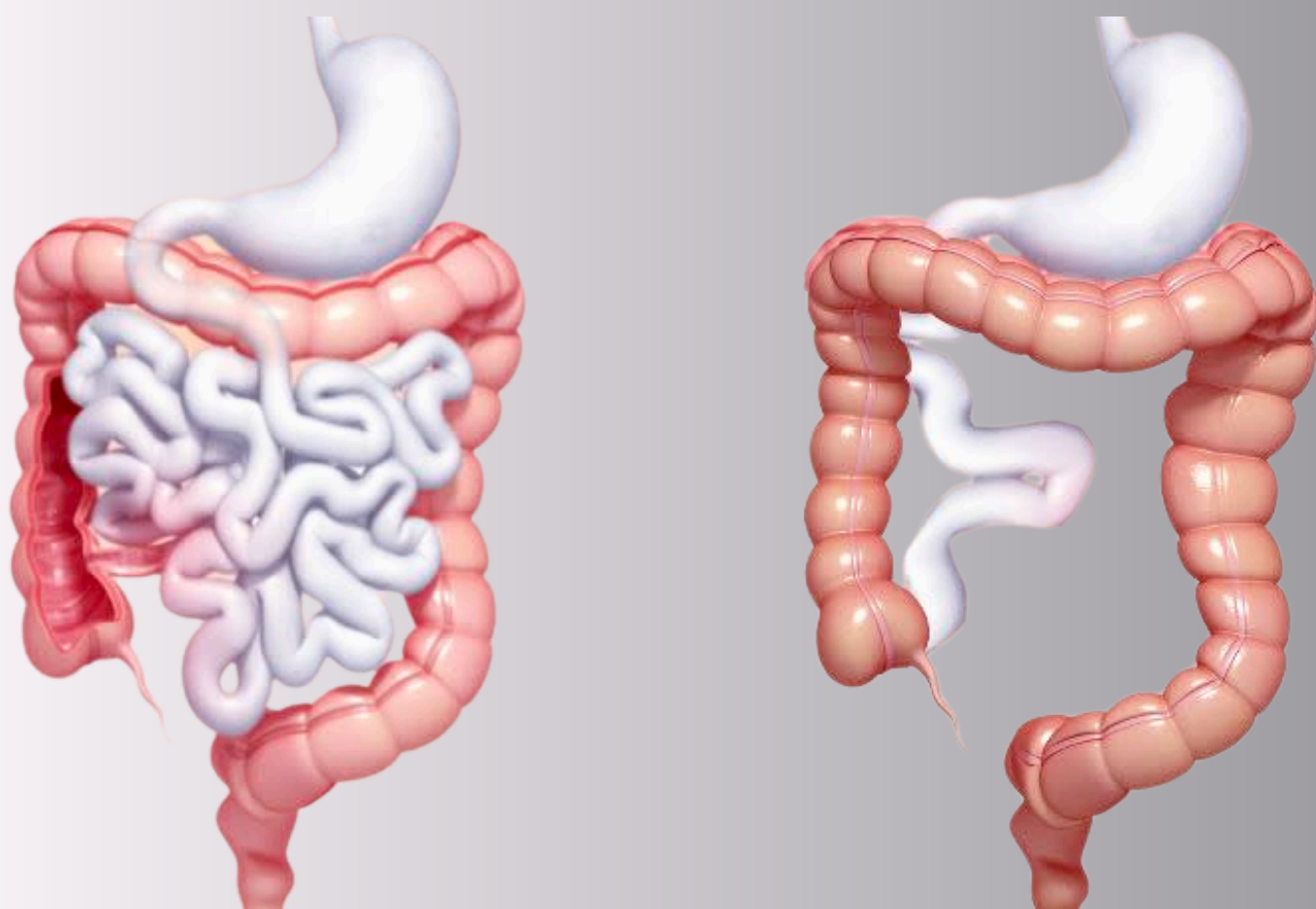


Small Bowel Surgical Procedures

*Visualizing the Connection:
Surgical Resection and Its Impact
on Short Bowel Syndrome*



SBSEF

Short Bowel Syndrome Foundation

Medical Advice Disclaimer

The Short Bowel Syndrome Foundation (SBSF) is committed to providing educational resources, support, and advocacy for the community we serve.

The information we provide is intended solely for educational purposes. It should not be used for self-diagnosis or to make surgical decisions without first consulting with your healthcare provider. Please note that SBSF does not provide medical advice.

If you have any health-related questions or concerns, we strongly encourage you to reach out to your healthcare provider.



Common Causes of Resection

Short Bowel Syndrome (SBS) often emerges as a complex journey that begins with the extensive surgical removal of parts of the small intestine. This journey is unique for each individual, as it can be influenced by various conditions



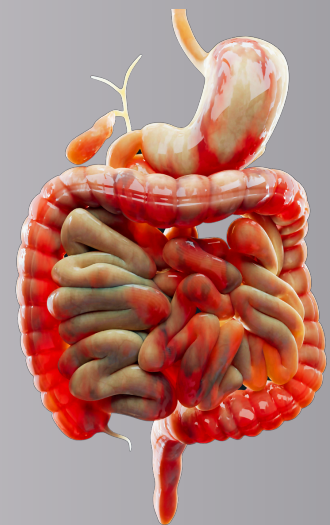
CONGENITAL ANOMALIES

Congenital Anomalies: Some individuals embark on this journey right from birth, with parts of the small intestine missing or damaged, which may require surgical intervention.



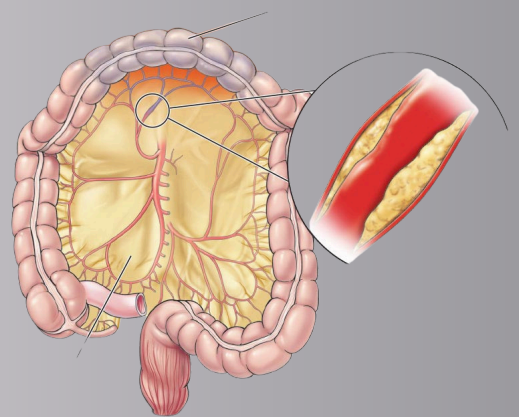
CROHN'S DISEASE

Crohn's Disease is an unyielding inflammatory bowel condition, can affect any part of the gastrointestinal tract, sometimes requiring surgery to remove the inflamed portions of the small intestine.



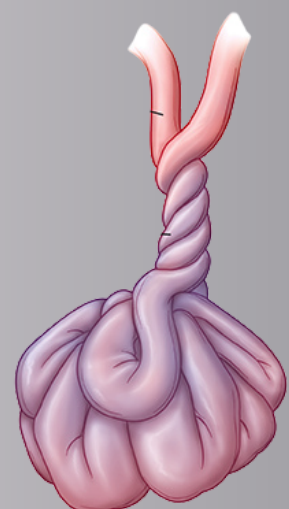
MESENTERIC INFARCTION

Mesenteric Infarction: This condition is like a roadblock in the artery that nourishes a large part of the intestine, often requiring the surgical removal of the affected intestinal segment.



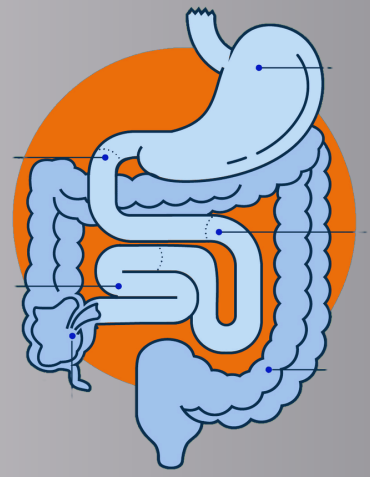
INTESTINAL VOLVULUS

Intestinal volvulus is a medical condition where a loop of the intestine twists around itself and the mesentery that supports it, resulting in a bowel obstruction.



WHAT IS A SMALL BOWEL RESECTION

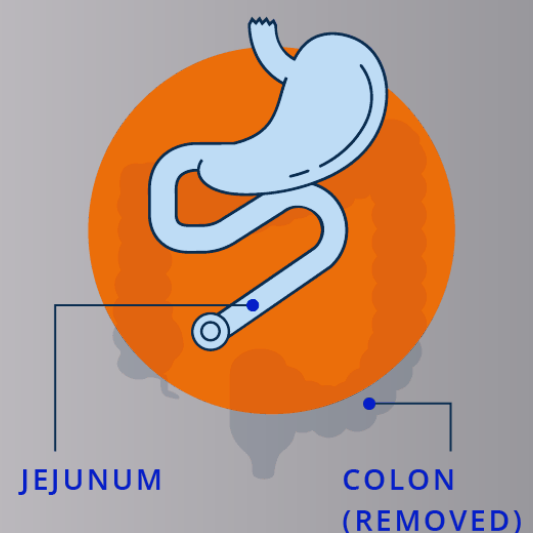
The small intestine, a key part of our digestive system, absorbs nutrients from food. It's a long organ with many coiled layers. A small bowel resection is a surgery that removes a diseased or damaged part of this organ. It's used for serious gastrointestinal issues like unusual growths, inborn disorders, chronic inflammation, or injuries. The goal is to restore function and prevent malnutrition, and the digestive system usually functions normally even after the surgery.



SURGICAL RESECTIONS

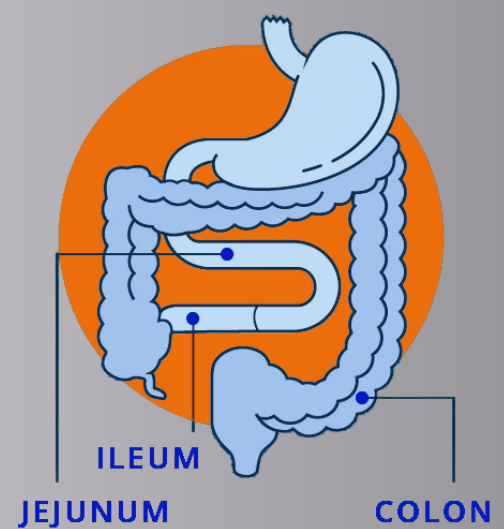
TYPE I: END JEJUNOSTOMY

End jejunostomy, which usually involves removing all of the ileum, some distal jejunum, and a large portion of the colon. This leaves the patient with a stoma.



TYPE II: JEJUNOCOLIC ANASTOMOSIS

Jejunocolic anastomosis, which involves joining the jejunum to the colon after removing the ileum.

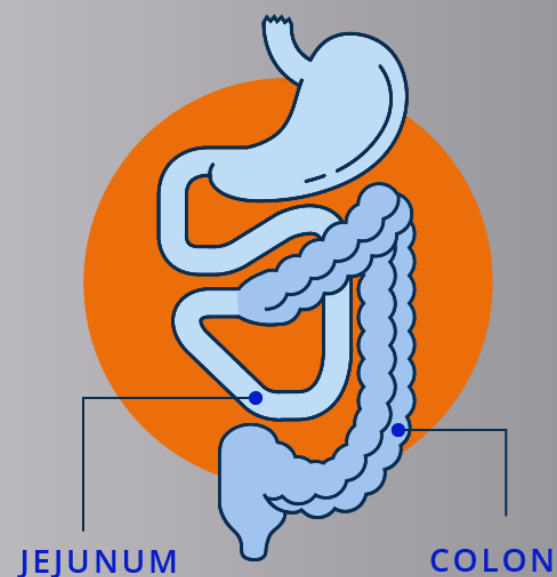


TYPE III: JEJUNOILEAL ANASTOMOSIS

There are two main types of jejunoleal anastomosis:

End-to-side anastomosis: The end of the jejunum is connected to the side of the ileum.

End-to-end anastomosis: The end of the jejunum is directly connected to the end of the ileum.



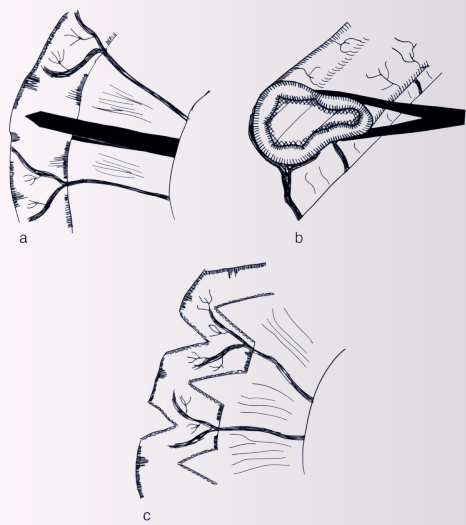
In both instances, an extensive length of the small intestine is bypassed, but not removed, excluding it from the digestive process.

COMMON SURGICAL PROCEDURES



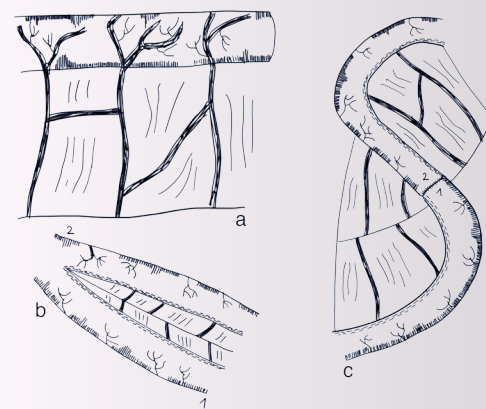
A small bowel resection is a surgical procedure aimed at removing a diseased or injured portion of the small intestine. Commonly undertaken to address serious gastrointestinal issues like tumors, congenital anomalies, persistent inflammation, or traumas, the procedure aims to restore intestinal functionality, prevent malnutrition, and optimize nutrient absorption within the digestive system.

Serial Transverse Enteroplasty Procedure (STEP)



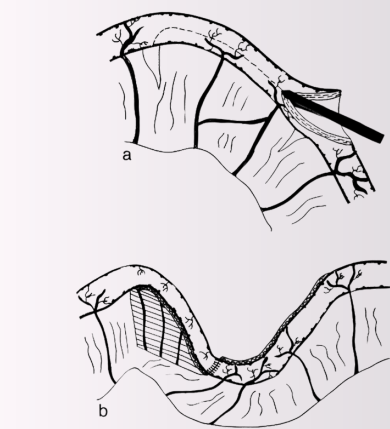
The STEP procedure is a special kind of surgery for people with Short Bowel Syndrome. Imagine folding a piece of paper back and forth in a zig-zag pattern—that's similar to what doctors do to the small intestine during this surgery. They make a series of cuts and then seal them with a stapler, which makes the intestine longer. This helps the body absorb more nutrients from food. However, like all surgeries, there are some risks involved, such as leaks where the cuts are made, infections, blockages, bleeding, the intestine stretching out again, and abscesses, which are pockets of infection, in the belly.

Longitudinal Intestinal Lengthening and Tailoring



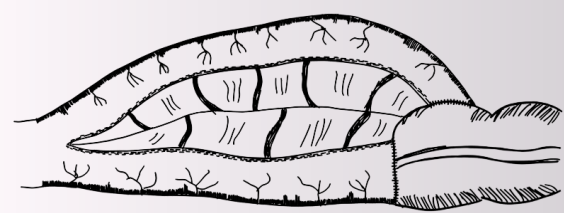
The surgical technique known as 'Intestinal Loop Lengthening' was pioneered by Dr. Adrian Bianchi in 1980, utilizing a porcine model for demonstration. This procedure entails longitudinally dividing a segment of the dilated small intestine into two halves. Subsequently, these halves are reconfigured into two slender tubes, effectively doubling the length of the original intestinal segment. This innovative approach aims to increase the absorptive surface area of the intestine, thereby enhancing nutritional uptake for patients with Short Bowel Syndrome.

Modification of LILT with One Anastomosis



A surgical method based on the LILT technique improves the process by avoiding multiple sutures. It involves separating tissue, sectioning the small intestine in a specific pattern using a stapler, and reestablishing intestinal continuity through a single connection. This technique benefits patients with Short Bowel Syndrome by enhancing nutrient absorption.

Double Barrel Enteroplasty (DBE)

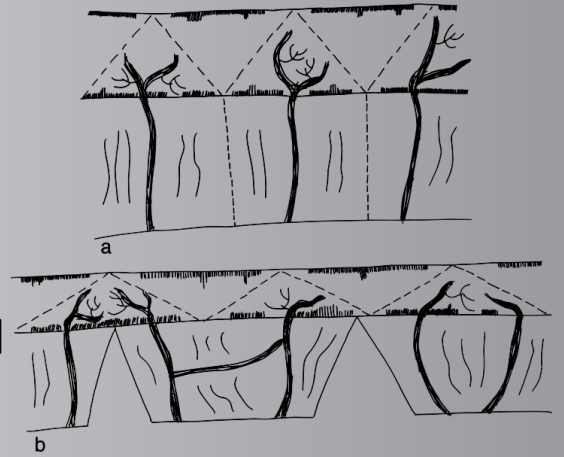


DBE is an adaptation of the original LILT technique. Similar to the LILT technique, parts of the small intestine that are dilated are longitudinally separated. In contrast to LILT, these two parts are not fashioned together into one narrow tube, but rather into two narrow tubes which run side by side. Through this, the traction on the mesenteric vessels and nerves is decreased.

COMMON SURGICAL PROCEDURES

Spiral Intestinal Lengthening and Tailoring (SILT)

The SILT technique involves less mesentery manipulation than LILT, avoids changing muscle fiber orientation like in the STEP procedure, and eliminates stapler use, reducing bleeding risk. It can be used in the small intestine with minimal dilation.



INTESTINAL TRANSPLANT

Transplant Overview

- An intestinal transplant, or short bowel transplant, is a surgery that swaps a diseased intestine with a healthy one from a deceased donor.
- It is a crucial treatment for intestinal failure and short bowel syndrome, benefiting those unable to continue total parenteral nutrition (TPN).
- Reasons for considering an intestinal transplant:
 - TPN leads to severe issues like liver damage, vein damage, or infections
 - Patient has critical cardiopulmonary conditions hindering major surgery
 - Patient has uncontrolled infection, malignancy, or other active conditions
- The surgery duration varies: 8 hours for a small bowel transplant and 12 hours or more for a multivisceral transplant.

Post-surgery, patients are usually in the transplant intensive care unit (ICU) for 1–4 days.

Types of Intestinal Transplants

Isolated Intestinal Transplant (Small Bowel Transplant): This procedure involves removing the diseased portion of the small intestine and replacing it with a healthy small intestine from a donor. This type of transplant is considered for patients with complications caused by intestinal failure, but who do not have liver failure.

Multivisceral Transplantation: This may be considered for patients who have multiple organ failure, including stomach, pancreas, liver, small intestine and/or kidney failure. This type of transplant involves removing the diseased organs and replacing them with healthy organs from a donor.

Modified Multivisceral Transplantation: This may be considered for patients who do not have liver disease/failure, but have organ failure of the stomach, pancreas, small intestine and/or kidneys. This type of transplant involves keeping your own liver, and removing the remaining diseased organs and replacing them with healthy organs from a donor.

Liver Intestinal Transplant: This procedure is performed in patients with both intestinal and liver failure.

Combined Liver and Intestine with Pancreas Transplant: This procedure is performed when the patient has failure of the liver, intestine, and pancreas.

IN SUMMARY

Small Bowel Resections

Small bowel resection is a surgical intervention designed to remove a segment of the small intestine afflicted by illness or injury. This procedure is frequently advised for individuals dealing with serious gastrointestinal ailments, including small intestine cancer, tumors, polyps, congenital abnormalities, disorders like Crohn's disease, or traumatic injuries resulting in small intestine perforation. The primary objective of this surgical intervention is to enhance the function of the small bowel and mitigate potential complications such as malnutrition.

Intestinal Transplants

Intestinal Transplantation: Intestinal transplantation is the surgical replacement of the small intestine for chronic and acute cases of intestinal failure. There are several types of intestinal transplants, each tailored to the specific needs and condition of the patient.

Remember

The choice of procedure depends on the individual patient's condition and should always be discussed with a healthcare professional.

Thank you for exploring our educational infographic book on Surgical Procedures in Short Bowel Syndrome. If you have any inquiries, feel free to contact your medical provider. This content is purely for educational purposes and should not be considered medical advice. All medical choices should be discussed between you and your healthcare provider. We are grateful for the Short Bowel and Rare Disease Industry's support.

Contact SBSF



Short Bowel Syndrome Foundation, Inc.

3440 L Street

Lincoln, NE 68510

402-429-8119

Contact SBSF



**Short Bowel Syndrome
Foundation, Inc.**

3440 L Street

Lincoln, NE 68510

402-429-8119

<https://www.shortbowelfoundation.org>

Find us on Facebook!

www.facebook.com/sbsfoundation

**Stay Tuned for New
Educational Topics in SBS!**