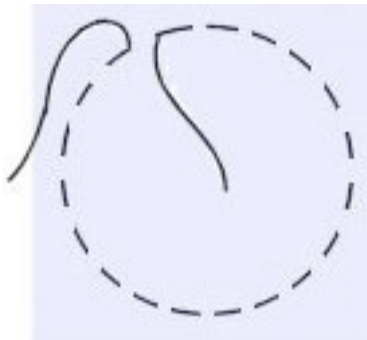


Project: Make a Purse-string Sphincter or Valve

In the digestive system, there are a number of places along the way that are designed to help regulate when, what direction, and how fast, food travels. These are called sphincters or valves. For example- the cardiac sphincter separating the esophagus from the stomach; the pyloric sphincter between the stomach and the duodenum; the ileo-caecal valve between the small and large intestines; and your anus.

Supplies:

1. square of material or a clean sock
2. needle
3. contrasting colour thread or wool.



Stitch large stitches around a rough circle of the material. Leave a long tail of thread at each end. Gently pull both ends to bunch up the fabric and make the circle smaller. Alternatively, you could do the same with the open end of a sock. Either way, you are creating a pouch, or a dead-end most similar to that of the appendix. If the sock had the same closure at the toe end, then it could better represent a stomach or a very short bowel.

Discussion Questions

- If a sphincter or valve did not close completely, what would you expect the contents to do? (Hint: think of a straw)
- If a sphincter or valve does not open, what would you expect the contents to do? (Hint: think of a balloon)
- What is a burp and why does the body do that?
- Why does 'passing wind' (flatulence) sometimes make incredible sound effects? (Hint: think of a balloon)