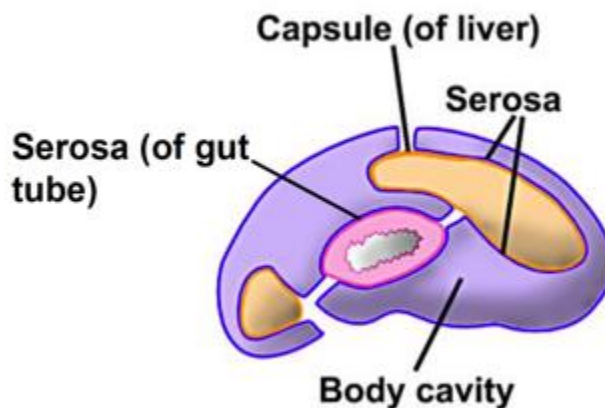
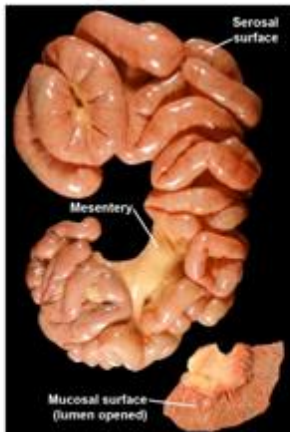
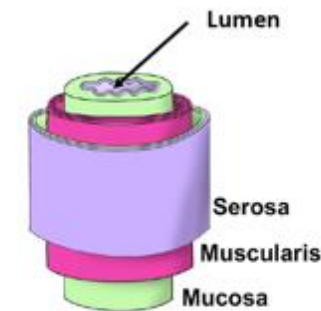


Viscera:

- Are organs that regulate the internal environment - mostly
- They occupy cavities in the body: thorax, abdomen, pelvis
- Are also found in the head and neck
- Involved with secretion, excretion, digestion and absorption

Hollow Viscera

- Consider principles of hollow viscera vs. solid
 - Organ can be hollow or solid - must be able to conceptualise both for now focusing on hollow viscera
- Typically tubular with a cylindrical wall and a lumen
- Lumen - light at the end of the tunnel
 - Lined by mucosa - mucosa is the internal layer and may have folds that increase surface area for absorption
- Muscularis - middle layer and contains smooth muscle that may produce waves of contraction - peristalsis
- Serosa - external layer which minimises friction



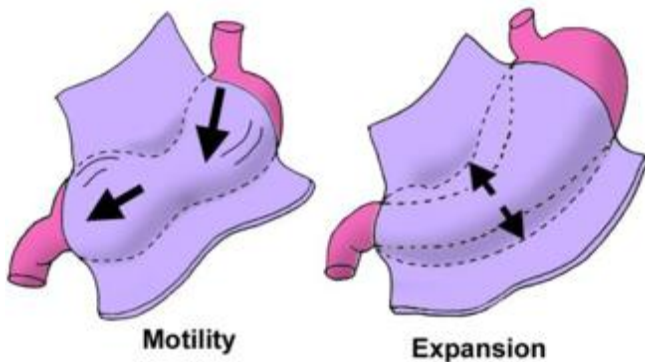
Serosa

- The outer layer of hollow viscera - covers the external surface of the hollow viscera
- Minimises friction --> the **serosa is well lubricated**
 - Consider the gut - will be moving whilst food moves through it - this will move the viscera as well. Thus it is important that it is **well lubricated** so that it will not stick to surrounding organs. - Peritoneal fluid often sits on the serosa - well lubricated
 - Important for minimising friction associated with movement
- Serosa exists essentially around all viscera in the body cavity
- Usually derived from lining of body cavities - whereby the serous membrane invaginates and then surrounds all the viscera
- Can be continuous with a mesentery attaching viscera to body wall e.g. small intestines --> the viscera is attached to the body wall by a mesentery

Muscle coats:

- This is the muscular layer which is situated between the mucosa and the serosa
- Wall: circular and longitudinal smooth muscle

- Provides for motility(peristalsis) and expansion - smooth muscle may be stretched without changing force of contraction to allow for storage of large volumes of liquids (bladder) or solids (rectum) in some of the hollow viscera e.g. stomach
 - Smooth muscle has the property where it can expand without changing the ultimate force of contraction and so it can produce a reservoir - e.g. stomach or bladder
- At critical point of storage/stretch reflexes are initiated to cause micturition or defecation



Lumen of tubular (hollow) viscus

- Hollow viscus is defined by the presence of a lumen
- Lumens can have both dilations and constrictions
 - Constrictions:
 - Usually at beginning and end of the tube but sometimes within the length of the tube
 - Also at specific sites along its course e.g. where the male urethra pierces the pelvic floor
 - This is really important for limiting movement of things through the tube - need constrictions to aid in limiting movement at particular times
 - Dilations:
 - Often occur within an adjacent viscera and allows the hollow viscus to collect things
- A duct tends to narrow where it approaches the wall of another hollow viscus - its orifice --> this point of narrowing and constrictions its function is to limit movement but can also have clinical significance --> kidney stones/gall stones are called **calculi**--> can get lodged in these constrictions e.g. kidney stones can get to over 2cm large --> very difficult for it to pass through the constrictions of the hollow viscera

