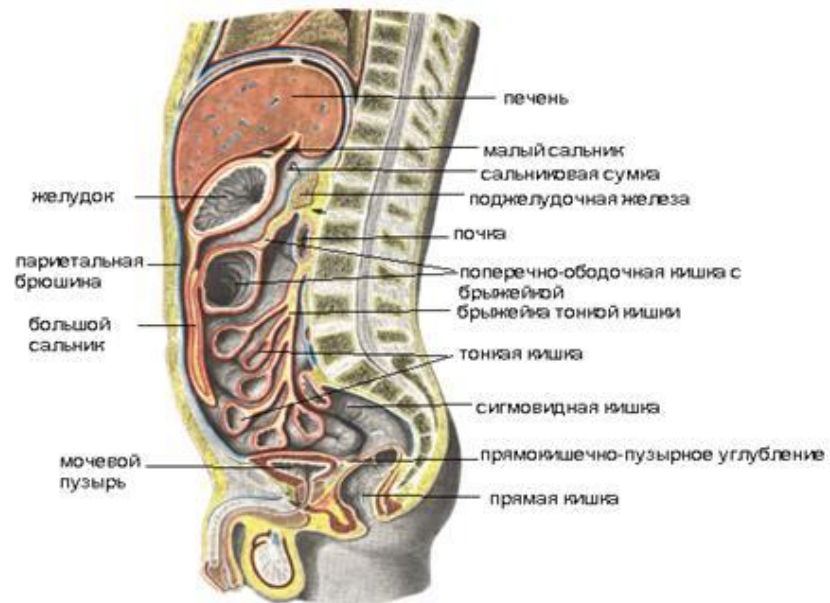
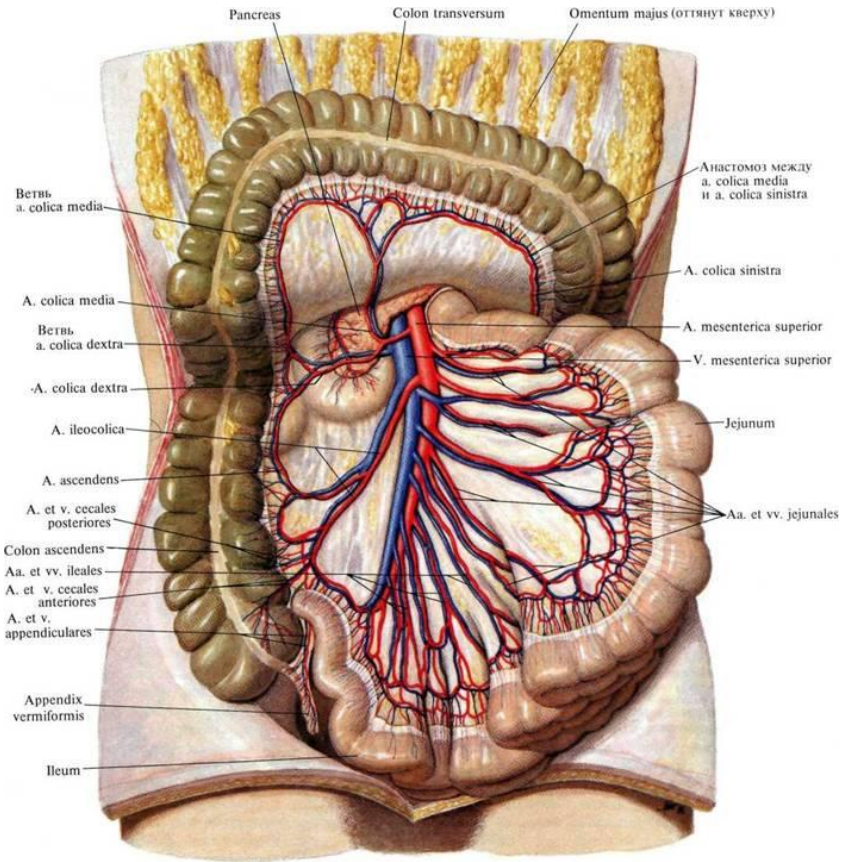




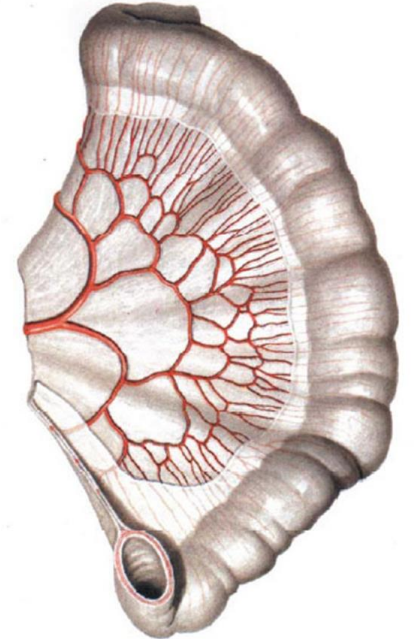
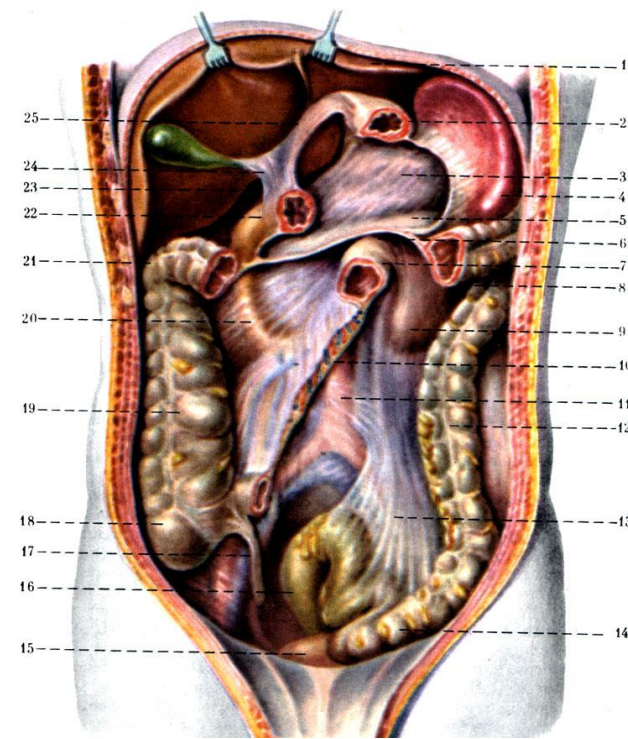
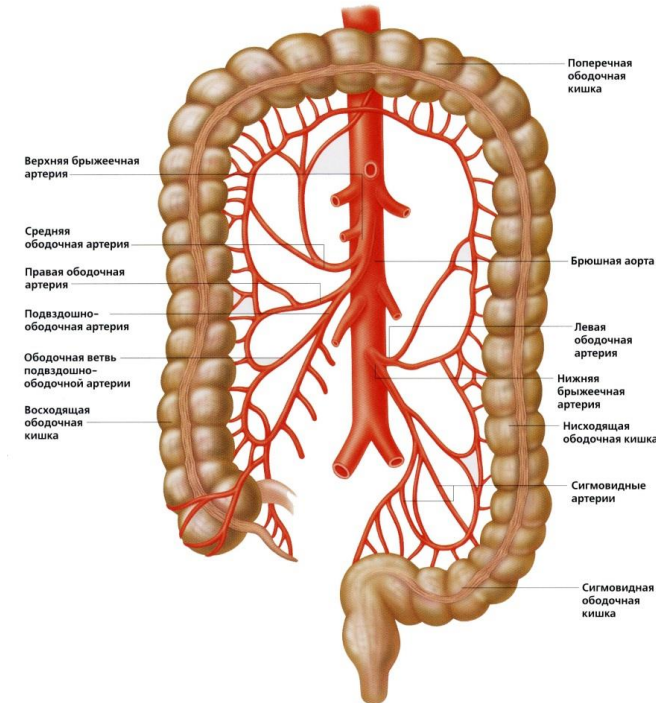
Pirogov Russian National  
Research Medical  
University

# **The basics of surgical interventions on the intestine**

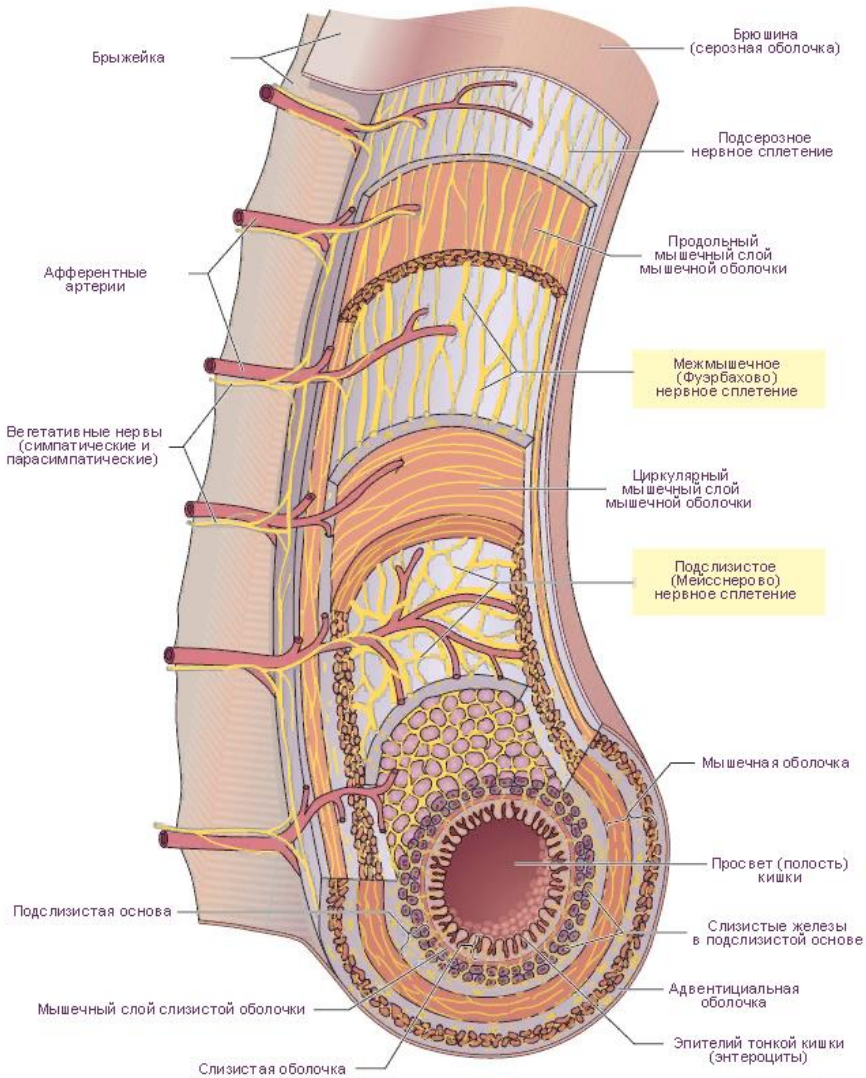


Взаимоотношение брюшины с органами и стенками большой полости

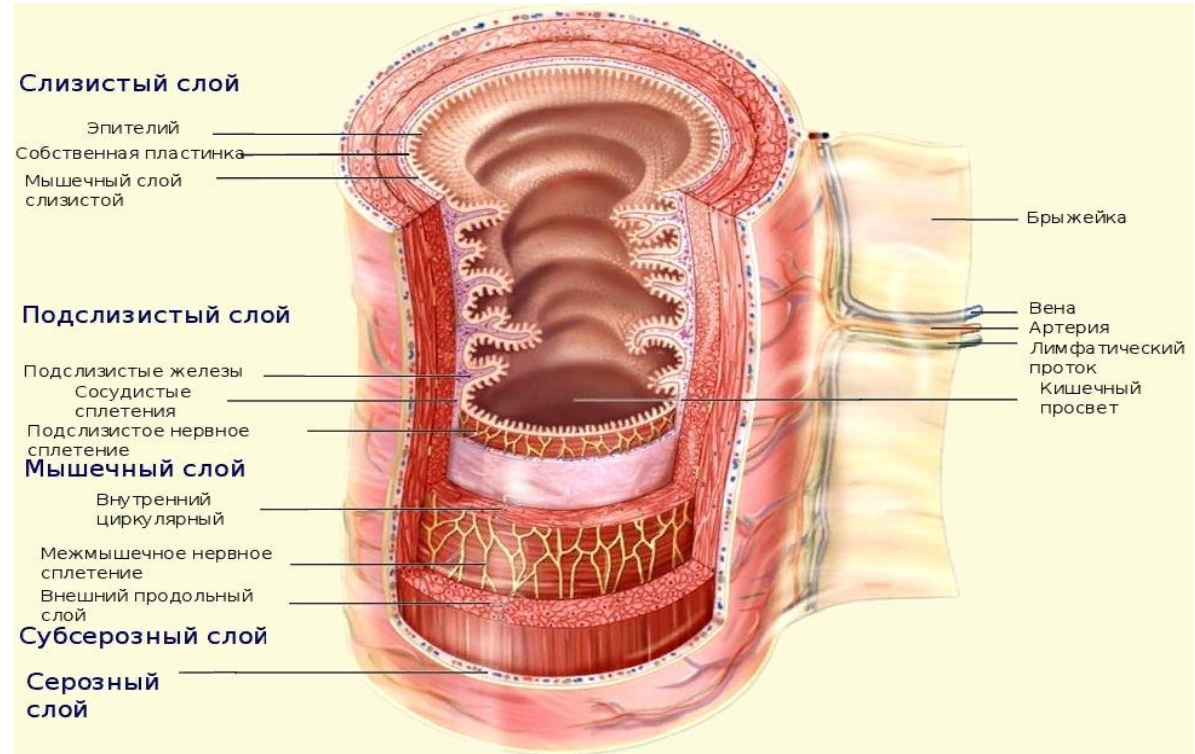
Артериальная система ободочной кишки



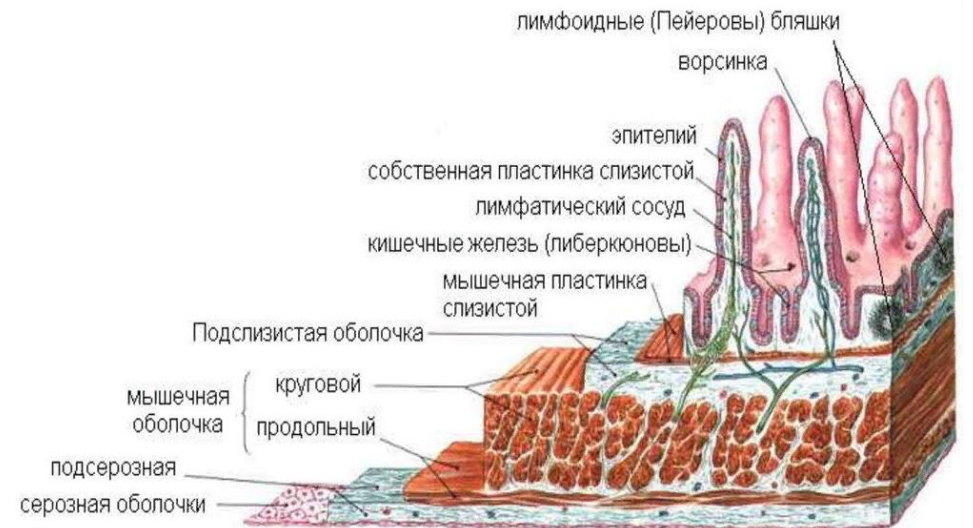




## Structure of the colon wall



## The structure of the wall of the small intestine





# Anatomical and physiological features of the wall of the digestive canal

## 1. The case structure

### Anatomically

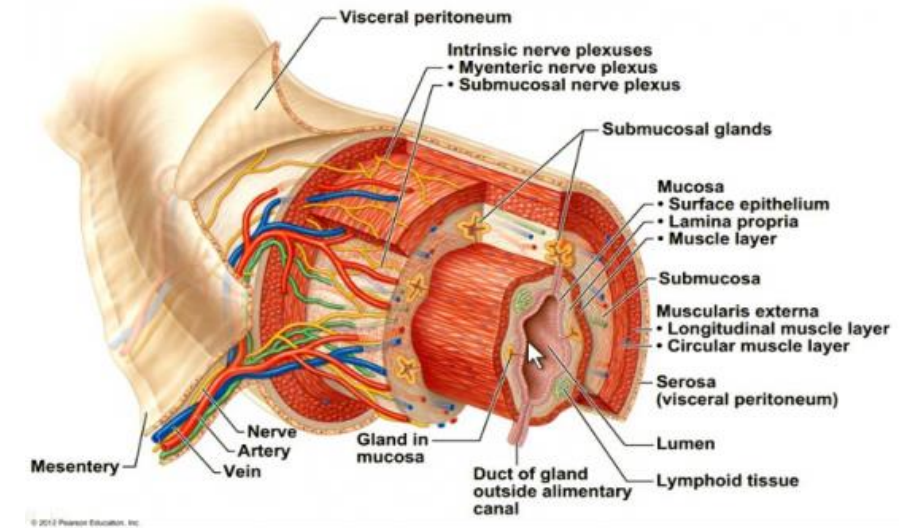
4 membranes - mucous, submucosal, muscular, serous

### Practically - 2 circular cases

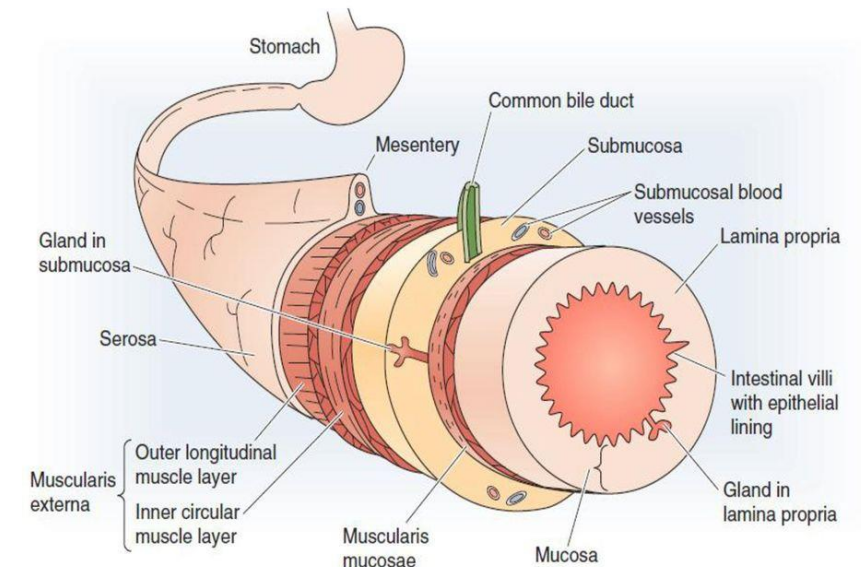
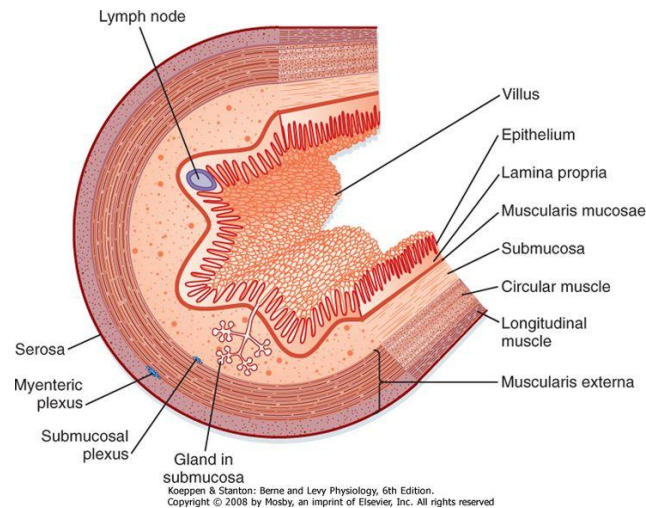
- external - serous-muscular (muscular-adventitious)
  - internal - mucosal-submucosal
- Loose connection between the cases: their mobility relative to each other in different organs to varying degrees

## 2. The biological role of the intestinal membranes (biological justification of the intestinal suture)

- serous membrane - bonding within a few hours after surgery (tightness of intestinal anastomosis)
- submucosa - strong in mechanical terms (mechanical strength of intestinal anastomosis)
- mucous membrane - does not tolerate mechanical injury, easily necrotises



## The Digestive Tract Wall





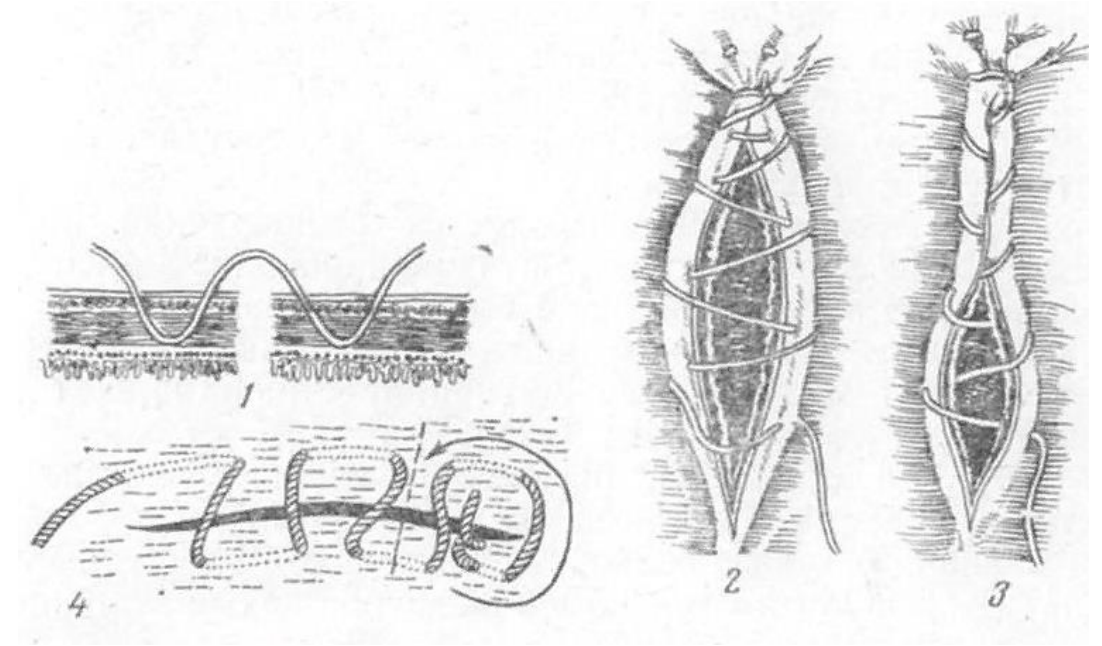


## General requirements for intestinal sutures

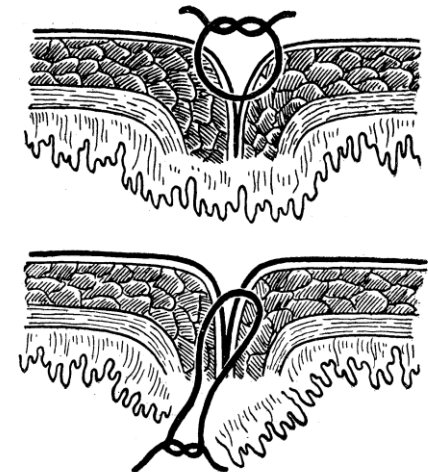
All types of sutures used in operations on the organs of the digestive tract (esophagus, stomach, small and large intestines)

### INTESTINAL SUTURE REQUIREMENTS

1. Tightness of the anastomosis (precise adaptation of the serous surfaces of the stitched areas)
2. Mechanical strength of the seam (inclusion of the submucosal base in the seam)
3. Prevention of narrowing of the organ lumen at the suture site
4. Ensuring reliable hemostasis (inclusion in the suture of the submucosal base)



### Eruption of intestinal sutures



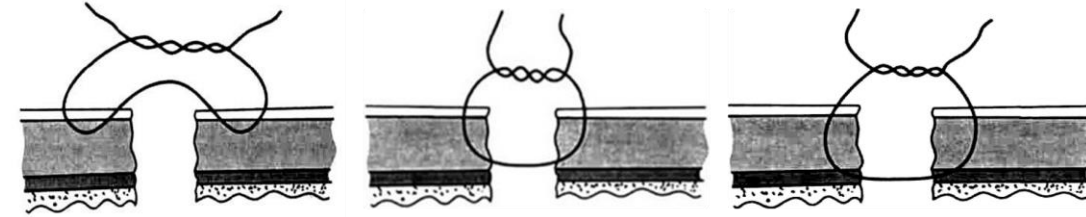


# Classification of intestinal sutures

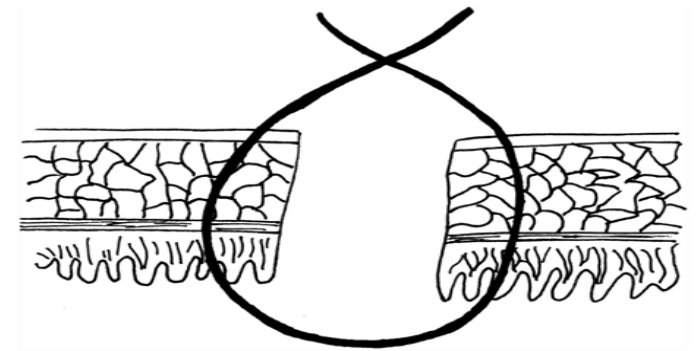
In relation to the lumen of the intestine :

- I. Non—penetrating (aseptic) sutures - the thread does not penetrate into the lumen of the intestine.
  1. Serous suture — only the serous membrane is captured
  2. Serous-muscular suture — the serous and muscular membranes are captured.
  3. Serous-musculoskeletal-submucosal suture — without entrapment of the mucous membrane.
- II. Penetrating (infected) sutures —the thread passes through the mucous membrane and is located in the lumen of the intestine.
  1. A through intestinal suture passed through all layers of the wall of the hollow organ.
  2. Muscle-submucosal-mucous suture.
  3. Submucosal-mucous suture.
  4. Suture of the mucous membrane.

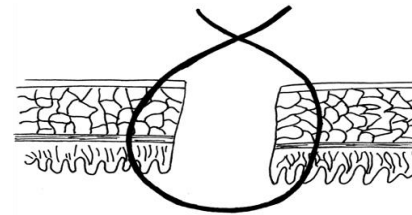
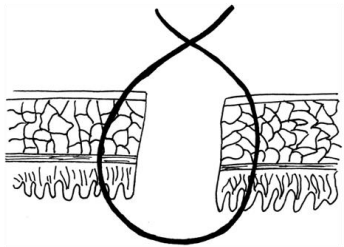
## Non-penetrating (aseptic) seams



## Penetrating (infected) suture



## Classification of intestinal sutures



Шов Жобера



Шов Шмидена



Скорняжный шов

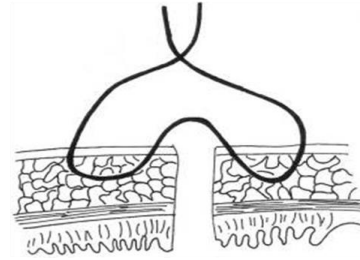




# Classification of intestinal sutures

По количеству рядов:

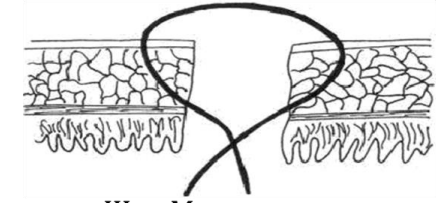
**Однорядные**



Шов Ламбера



Шов Пирогова



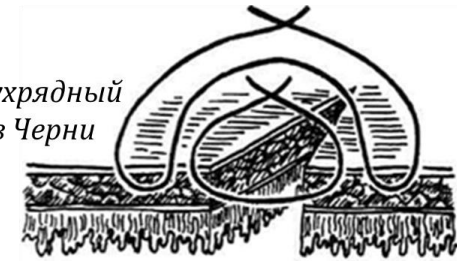
Шов Матешука

**Многорядные**

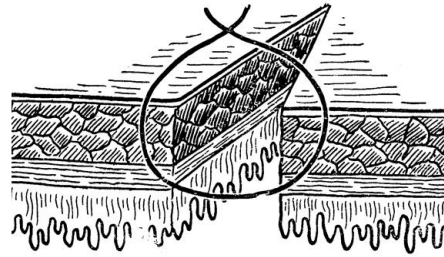
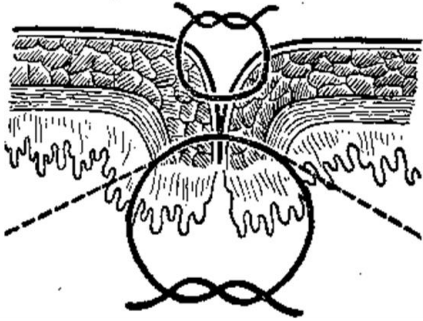
Двухрядный шов  
Альберта



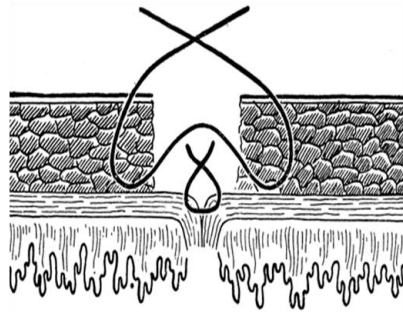
Двухрядный  
шов Черни



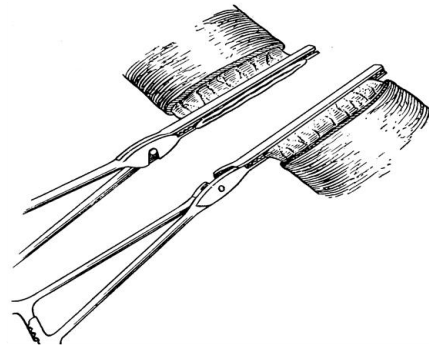
Сквозной шов



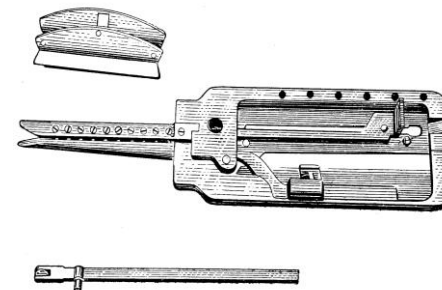
Серозно-мышечно-подслизистый шов



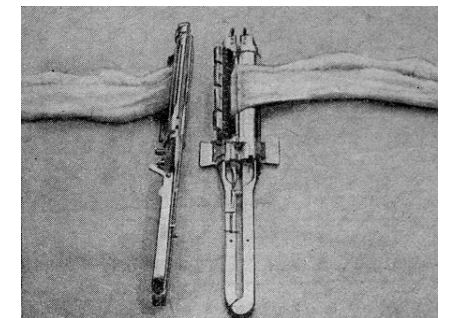
Кишечный шов Кирпатовского И.Д.



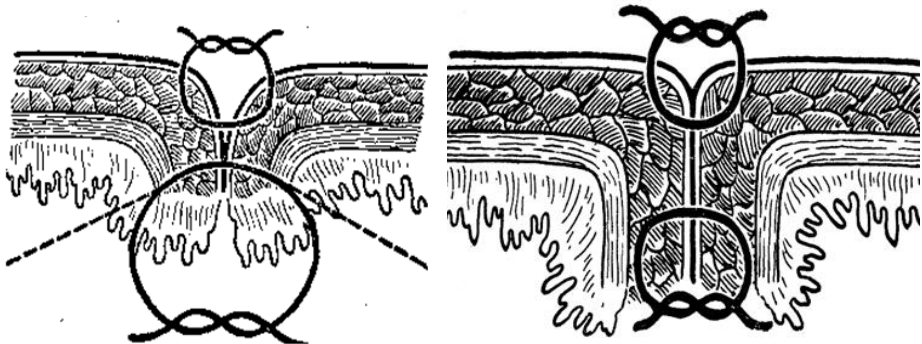
**Anastomosis machines**



gastrointestinal



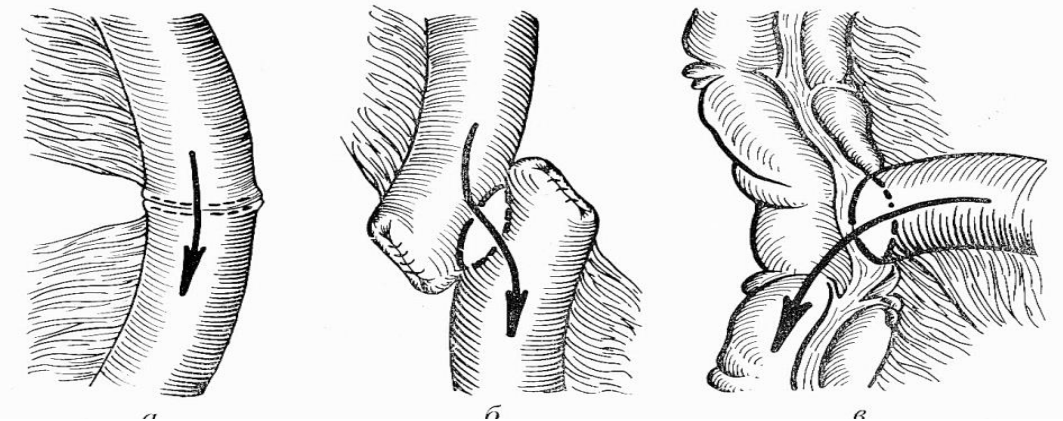
interstitial



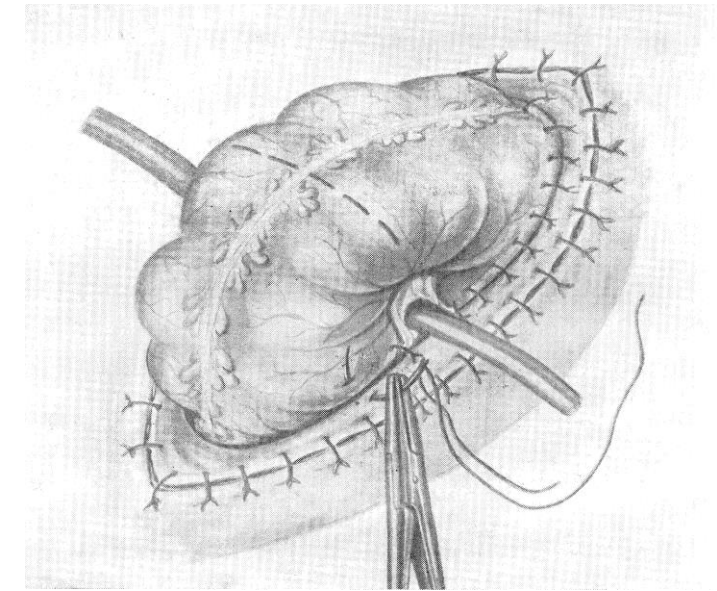




# Types of intestinal anastomoses

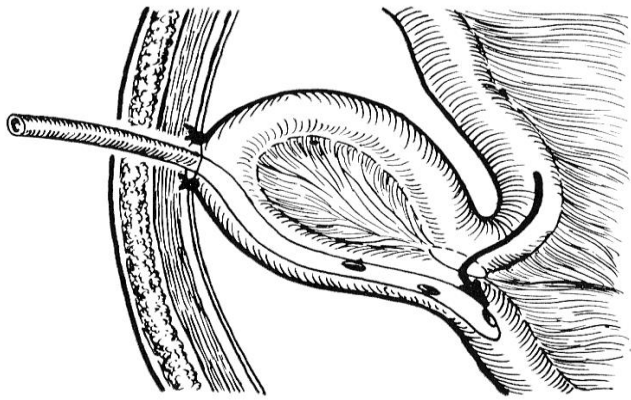


Anastomosis "end to end" Anastomosis "side to side" Anastomosis " end to side"



Double-barrelled colostomy

## Jejunostomy by Mayo-Robson



Jejunostomy of the Mайдан

