



EXAMINATION OF THE GASTROINTESTINAL SYSTEM

GASTROINTESTINAL EXAMINATION PROCEDURE

1. General observation
2. Close inspection
3. Auscultation
4. Percussion
5. Palpation (general and organ-specific)
6. Other evaluative procedures

Preliminary observations

- ▶ **Does he look well?**
- ▶ **Is he panting for breath?**
- ▶ **Does he look pale ?**
- ▶ **Is he overweight or too slim?**
- ▶ **Does he have a disproportionately large abdomen and slim limbs?**
- ▶ **Is the patient very nervous or in obvious physical discomfort?**

Close inspection

(Face, hands, abdomen)

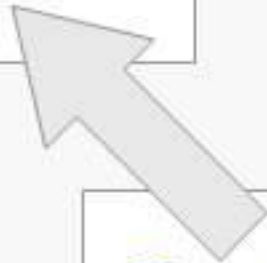
Ulcerative colitis

**Cirrhosis of
the liver**

**Gastrointestinal
causes of finger
clubbing**

Cancer

Crohn's disease



Finger clubbing



Palms

- ▶ **Dupuytren's contracture**
 - ➡ Liver disease

- ▶ **Palmar erythema**
 - ➡ Liver disease
 - ➡ Contraceptives
 - ➡ Pregnancy

- ▶ **Jaundice esp. in fingers and nail beds**

Dupuytren's contracture



Chronic liver cirrhosis / Alcoholism

Palmar erythema

- **Chronic liver disease**
- **Rheumatoid arthritis**
- **Thyrotoxicosis**
- **Pregnancy**
- **Contraceptives**
- **Normal**



Face



Pale:

- Anaemia



Jaundice:

- Sclera of the eyes
- Skin



Cyanosis:

- Central: in mucous membranes of mouth, conjunctivae, lips
- Peripheral: in fingers, tip of nose, ears

Inspection of the mouth

➤ **Anaemia**

“Paleness esp. in mucous membranes”

➡ **Smooth tongue**

➡ **Angular stomatitis**

(In iron deficiency check nails for Koilonychia)

➤ **B12 or Folate deficiency**

“ Smooth or ‘beef-steak-like’ tongue”

➡ **Peripheral neuropathy**

➡ **Angular stomatitis**

Examination of the mouth

Look out for any of the following:

- **Check for cyanosis or pallor**
- **Dry tongue - dehydration**
- **Candida - Red tongue with white patches**
- **Coated / furred tongue - intra abdominal pathology?**
- **Inspect the teeth for cavities**
- **Check gums for gingivitis (receding or bleeding)**
- **Check for ulcers - Aphthous, Crohn's disease, coeliac, ulcerative colitis**

Inspection of abdomen

Inspection of the abdomen

- **The distribution of body hair**
- **Striae or stretch marks**
- **Surgical scars**
- **Nodules**
- **Swelling**
- **Movement with respiration**
- **Peristalsis**
- **Dilated veins**
- **Spider naevi**
- **Pulsations**
- **Herniae**

Inspection of thorax and abdomen

▶ **Purplish / pink striae**

→ **Cushing's disease**

▶ **Superficial veins over abdomen**

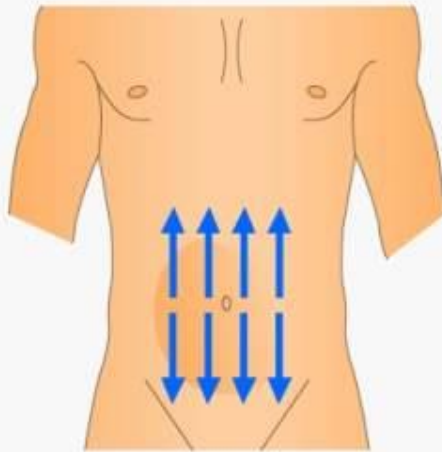
→ **Portal hypertension**

▶ **Uniform swelling**

→ **Ascites**

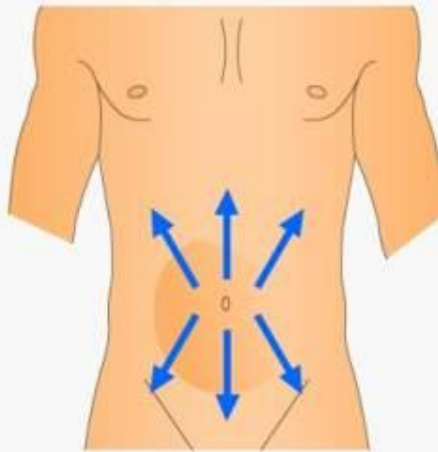
Abdominal blood flow through abdominal veins

Normal blood pattern



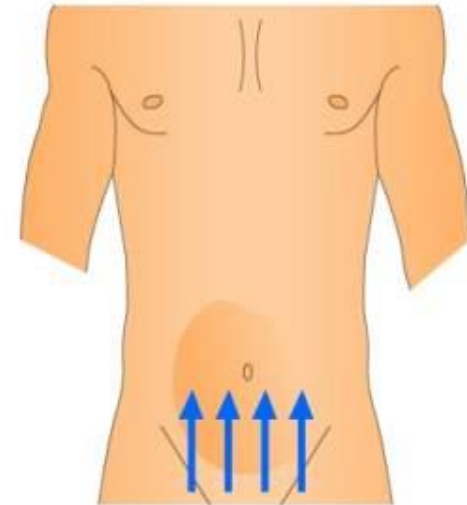
Venal flow away from a mid umbilical transverse direction

Portal hypertension



Venal blood flow radiating away from umbilicus

Obstructed vena cava



Venal flow draining superiorly from pelvic region

Clinical features of Chronic Liver disease:

- **Jaundice / icterus**
- **Clubbing**
- **Palmar erythema**
- **Dupuytren's contracture**
- **Parotid gland enlargement**
- **Leukonychia**
- **Flapping tremor**
- **Facial telangiectasia (Dilatation of surface capillaries)**
- **Spider naevi**
- **Gynaecomastia**
- **Testicular atrophy**
- **Foetor hepaticus**
- **Confusion**

Clinical features of:

Anaemia

“Paleness esp. in mucous membranes”

-  **Koilonychia**
-  **Smooth tongue**
-  **Angular stomatitis**

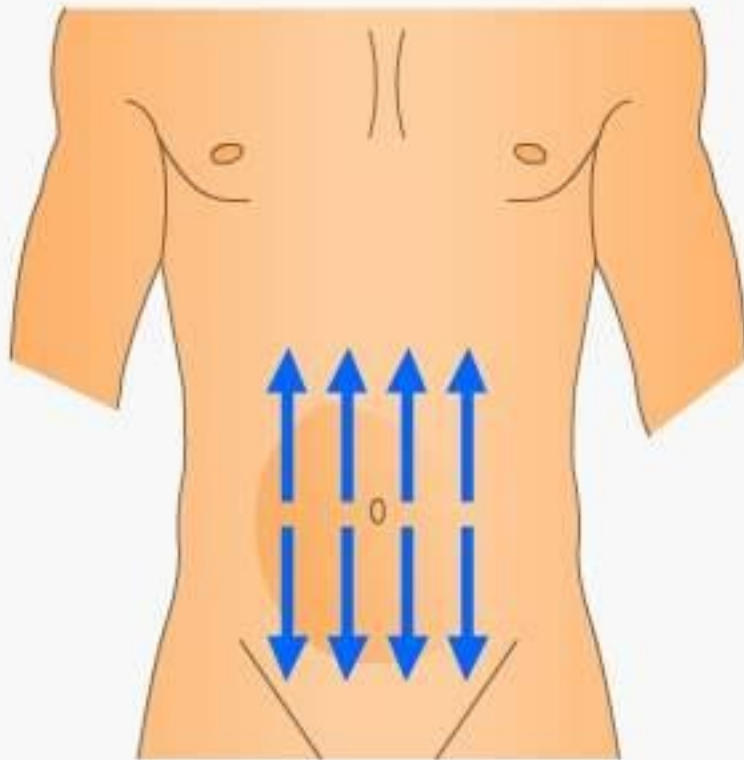
B12 or Folate deficiency

“ Smooth or ‘beef-steak-like’ tongue”

-  **Peripheral neuropathy**

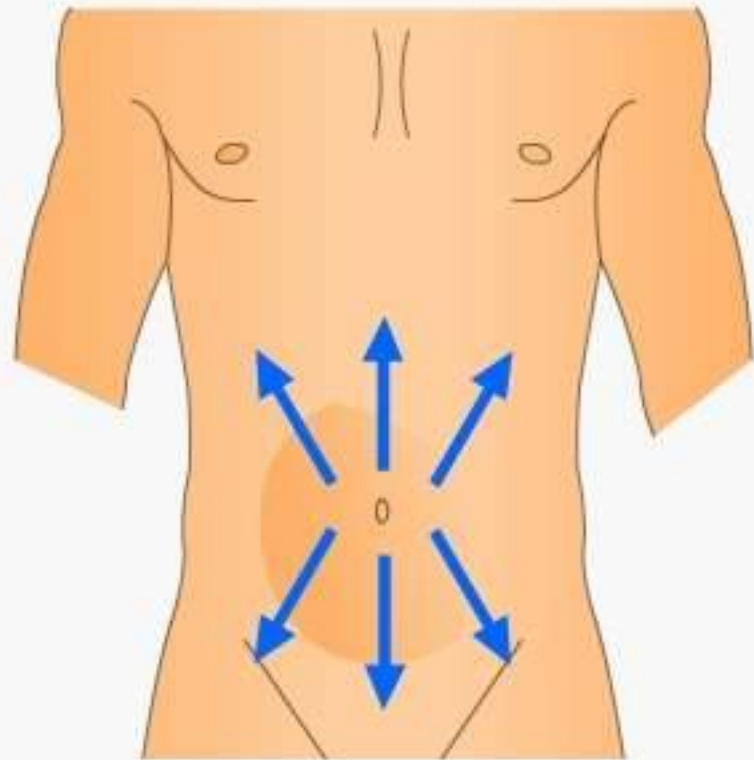
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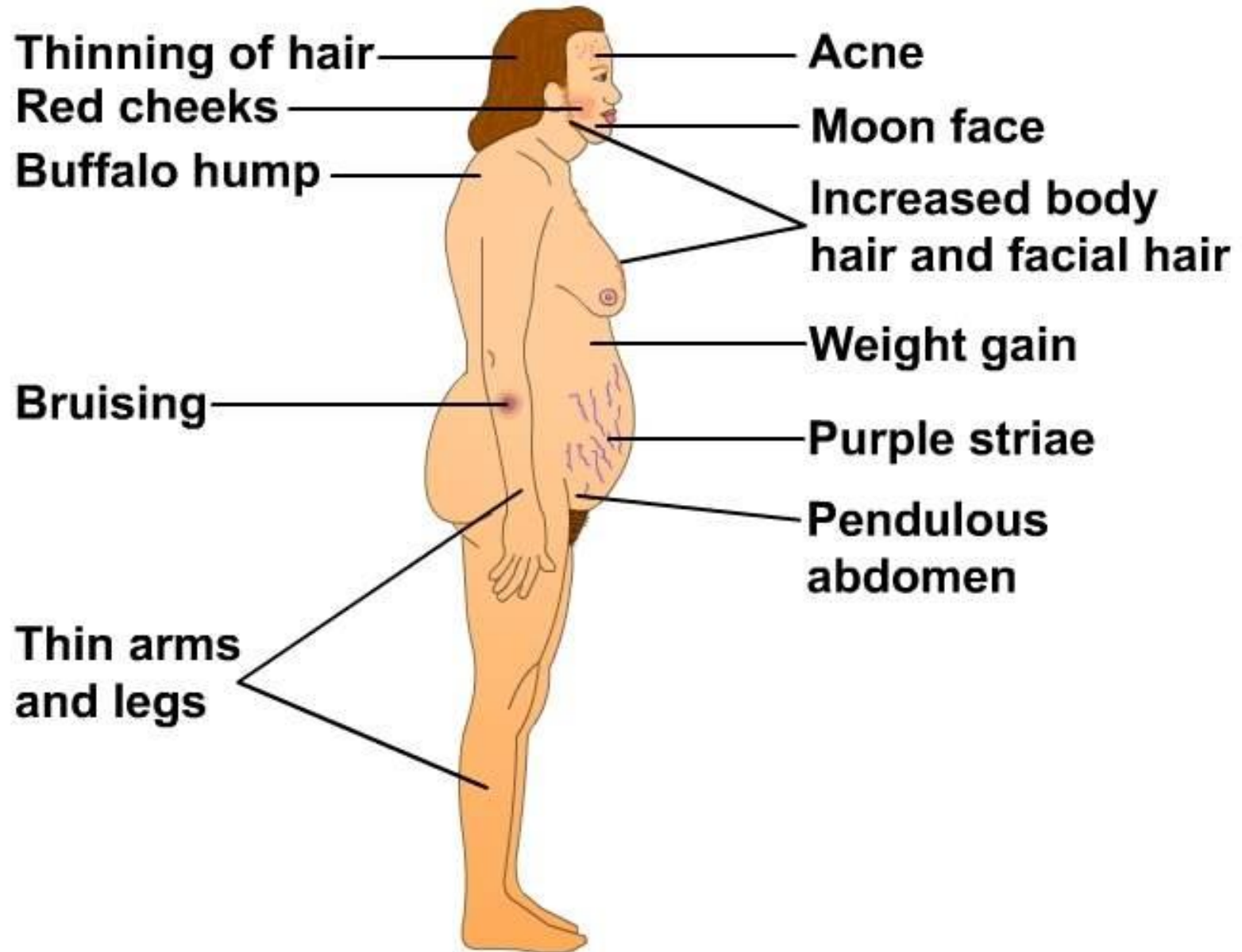
(Venal flow away from a mid umbilical transverse direction)

Portal hypertension



Venal blood flow (Radiating away from umbilicus)

Cushing's Syndrome



Clinical features of Chronic Liver disease:

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- **Fetor hepaticus**
- **Confusion**

Spider naevus

- ▶ Liver disease
- ▶ Pregnancy
- ▶ High oestrogens



Auscultation

Auscultation

Listen to bowel sounds produced by peristalsis: (borborygmi)

- ▶ **Normally produced at 5 to 10 second intervals**
- ▶ **Absent bowel sounds**
 - ➡ Paralytic ileus
 - ➡ Generalised peritonitis
- ▶ **Excessive bowel sounds:**
 - ➡ Diarrhoea
 - ➡ Partial obstruction of the bowel (high pitch sounds)

Auscultation

Listen for bruits from turbulent blood flow:

- **Around the bifurcation of the abdominal aorta**
 - **Over the common iliac arteries**
 - **Over the renal arteries**
-
- ➡ **Atherosclerotic occlusions**
 - ➡ **Aneurism**

Percussion

Percussion

- ▶ **Assess whether abdominal contents are:**
 - Solid (Dull)
 - Hollow (Resonant)
 - Air-filled (Tympanic)
 - Fluid-filled (Dull)
- Also percuss for organ size delineation

Shifting dullness

- **Patient lying on his side**
- **Wait a few moments**
- **Percuss abdomen from lower to top side**
- **Fluid will sink to the lower flank (dull)**
- **Air will rise to the top flank (tympanic)**

General palpation

(Light palpation)

Light palpation

Feel for:

- **Abdominal tenderness**
- **Superficial organs**
- **Muscular resistance / guarding**

Deep Palpation

(Organ-specific palpation)

Deep palpation



Feel for: Masses & organs

- Location
- Size
- Consistency
- Shape: regular or irregular, smooth or rough
- Tenderness
- Whether is pulsatile
- Mobile or fixed
- Can you get your palpating hand above or below the mass?

The spleen

- **Located under the left costal margin
(Beneath 10th rib, anterior axillary line)**
- **Not normally palpable**
- **If enlarged projects towards the
umbilicus**
- **Traube's space: Deep to 6th rib on left
anterior axillary line & costal margin**

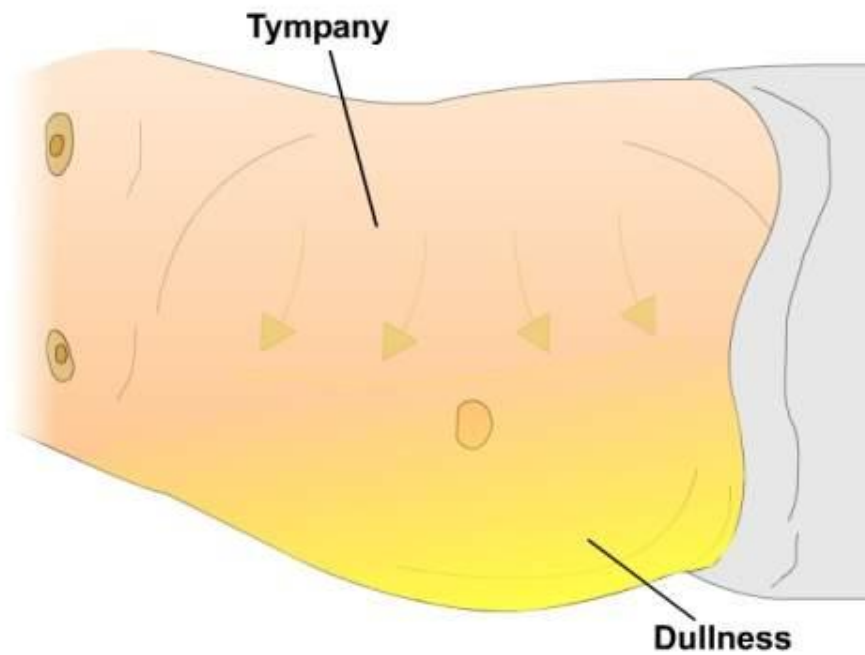
The kidneys

- **Under the 12th rib just below the costal margin**
- **Not usually palpable**

Fluid wave



Ascites

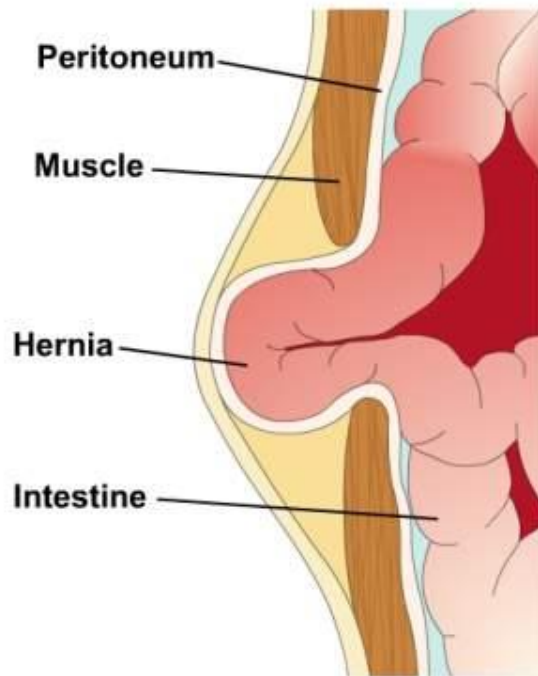


Hernia examination

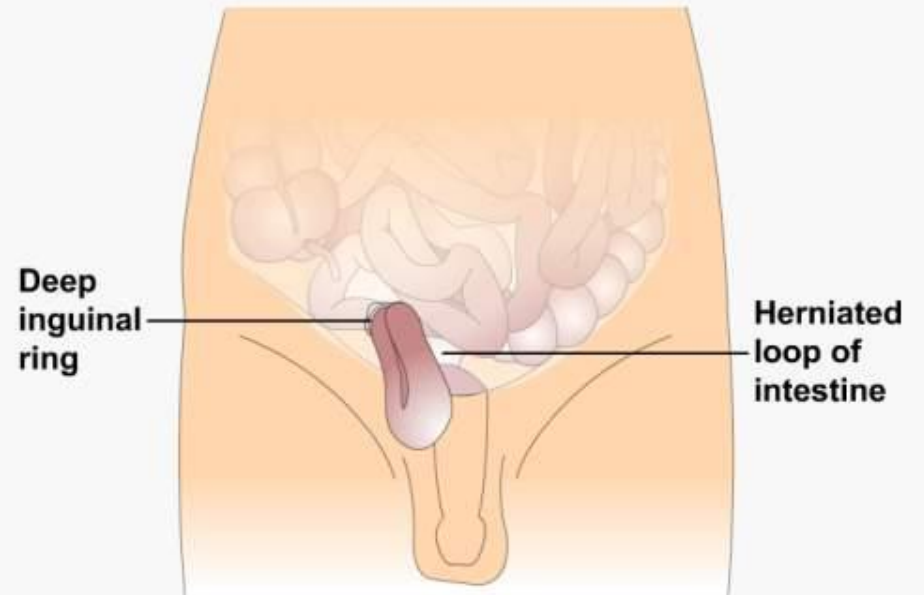
Examine for herniae

- ▶ **Types of herniae:**
 - Umbilical
 - Abdominal
 - Linea alba
 - Femoral
 - Direct and Indirect inguinal herniae
- ▶ **Observe the patient supine and standing**
- ▶ **Visualise the inguinal folds and testicles**

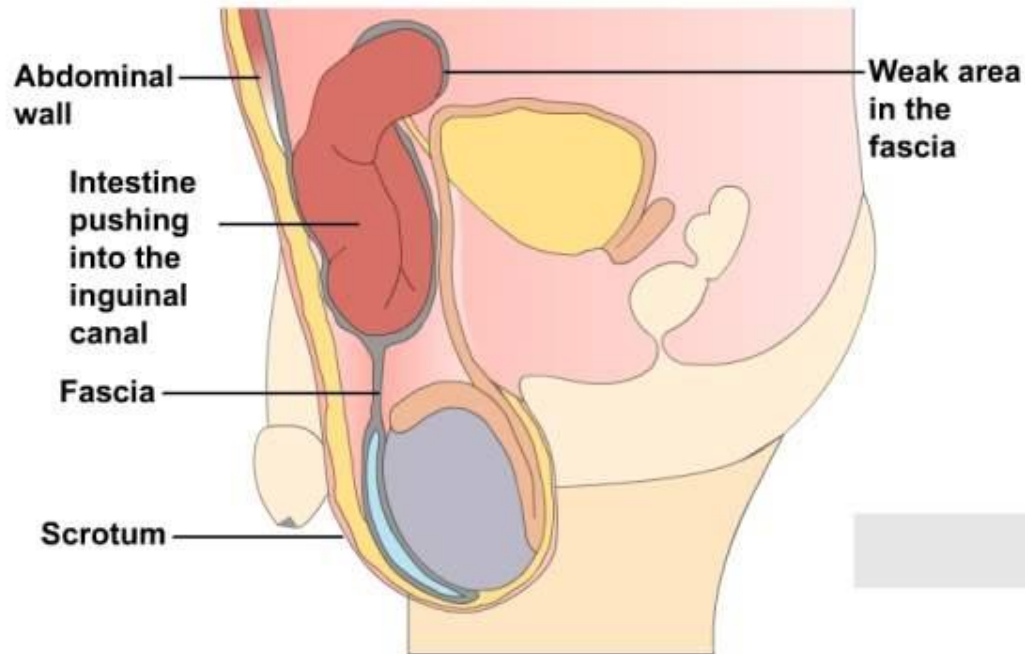
Abdominal hernia



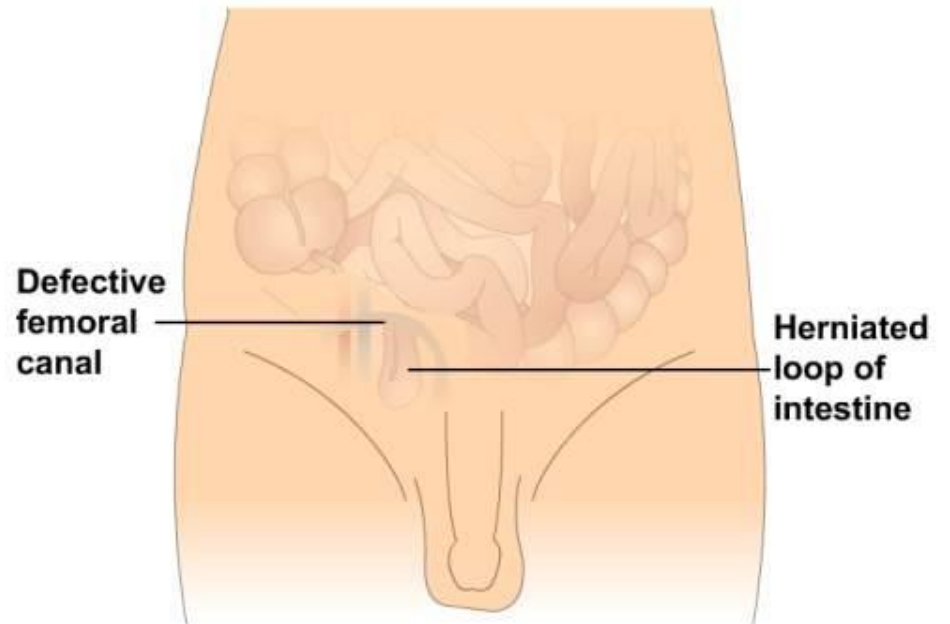
Indirect inguinal hernia



Inguinal hernia



Femoral hernia



REVIEW OF GASTROINTESTINAL EXAMINATION PROCEDURE

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END