**Gastrointestinal Examination**

Please note: as with other examinations, different clinicians will perform these examinations in slightly different ways – and different resources (Macleod’s Clinical Examination, [www.geekymedics.com](http://www.geekymedics.com) etc) may describe the examination slightly differently. Students need to establish their own routine for performing these examination and this Guide is intended to help them do this. Students do NOT fail ISCEs/OSCEs if they do the examination slightly differently to as described here.

Feedback is welcome – please send to Paul Kinnersley ([kinnersley@cf.ac.uk](mailto:kinnersley@cf.ac.uk))

This guide was written with the help of Dr John Green

**At the start of every examination**

Clean hands
Introduce yourself to the patient
Explain what you are going to do and check if patient in any pain
Expose the patient appropriately preserving dignity

**Outline of Gastrointestinal Examination**

**Observe the patient’s general condition** – In pain, jaundiced, scars, nutritional state, dehydrated, bruising, fever, stoma, abdominal distension?

Position the patient (lying flat, one pillow) and expose patient appropriately – while preserving modesty (use sheet to cover genitalia)

**Examine hands and nails** – palmar erythema, clubbing, dupuytren's contracture, koilonychia, leuconychia
Liver flap (encephalopathy due to liver failure)
Assess pulse for rate, rhythm
Examine skin of arms - scratch marks (cholestasis), bruising (coagulopathy, liver disease), needle track marks or tattoos (risks for viral hepatitis)

**Examine eyes** – anaemia, jaundice, xanthelasma, corneal arcus, Kaiser Fleisher rings (v rare)

**Mouth** – ulcers? Tongue - glossitis - B12/folate deficiency? Angular stomatitis - iron deficiency

**Neck** – lymphadenopathy (may be easier to feel from behind patient)

**Inspect chest, face, arms and back** for spider naevi - more than 5 abnormal, gynaecomastia - liver disease

**Inspect Abdomen** - shape/distension, local swellings, scars, striae, veins, herniae (may need to get patient to sit up to see umbilical/paraumbilical), visible peristalsis, stomas

**Palpation** - check if any pain and start away from that area, so aim to have your arm at the patient's level (kneel or raise the couch), observe patient's face for pain during the exam
Start gently/softly palpating the abdomen - thinking of there being 9 regions/areas - check for tenderness, guarding, masses, rebound tenderness – guarding is a sense that the abdominal
muscles are tensing as you press to ‘protect’ a tender area; rebound tenderness is pain experienced by the pain when, after pressing down on part of the abdomen you release the pressure – and usually indicates intra-abdominal pathology.

**Palpation of the liver** – draw an imaginary outline of the liver on the patient’s abdomen – the normal liver may be just palpable below the costal margin – the liver enlarges towards the right iliac fossa and moves down as the patient takes a breath in (as it is attached to the diaphragm).

So – the technique is to start moderately deep palpation in the right iliac fossa and gradually work upwards towards the costal margin. Position your hand either with your fingertips pointing upwards towards the costal margin or across the abdomen at right angles to the rectus sheath. Position your hand and ask the patient to breath in – an enlarged liver will descend and push against your fingers. If you feel nothing move your hand one cm towards the costal margin and repeat, and so on until you either reach the costal margin or feel the liver edge.

Percuss downwards from the fifth intercostal space as a check of the size of the liver.

**Palpation of the spleen** – the normal spleen is not palpable since it is underneath the left costal margin. When it is enlarged the spleen enlarges towards the umbilicus and – in gross enlargement – towards the right iliac fossa. The spleen also moves down with breathing in (as it is also attached to the diaphragm).

So – start from the right iliac fossa/umbilicus with moderately deep palpation. Ask the patient to breath in – an enlarged spleen will push against your fingers. Move your hand progressively (1 cm at a time) towards the left costal margin.

**Palpation of the kidneys** – in gross enlargement the kidney may be felt during routine palpation of the abdomen. As it is a retroperitoneal organ, to feel lesser degrees of enlargement needs a particular technique. Place your left hand behind the patient, below the ribs and ‘push’ the kidney upwards. With your right hand, palpate the abdomen as the patient breathes out - this is known as ‘balloting’ the kidney. An enlarged kidney is felt as a mass between your two hands.

**Percussion of abdomen** – since the abdomen is usually full of air-filled organs (the bowels) it is normally resonant to percussion apart from the liver and the spleen. An enlarged bladder may be felt and percussed rising up centrally from the pelvis. If there is free fluid in the abdomen – ascites – it may be appropriate to test for ‘shifting dullness’. With the patient flat on their back, percuss from the umbilicus out to the flanks on each side and note where the tone becomes dull. Then ask the patient to lie on one side for about 15 secs and repeat the exercise. If there is free fluid the dullness on the flank which is now upper most should have shifted (as the fluid moves down) and this area should now be resonant.

**Auscultation of bowel sounds** – bowel sounds are ‘gurgles’ that are heard normally every 5-10 seconds. Listen for up to 2 minutes (2 minutes excessive in an exam but tell the examiner you would listen for this time) before concluding that bowel sounds are absent (peritonitis, paralytic ileus). In intestinal obstruction bowel sounds are sometimes described as tinkling. Finally - check the patient's back for other scars, spider naevi, bruises etc (if not done already) and check the ankles for swelling (hypoalbuminaemia).
Examining hernia orifices (not needed for Year 1 students)

Explain to patient what you are about to do and ensure you have their consent
Consider the need for a chaperone (students must be supervised)
There are normally no visible or palpable lumps or swellings in the inguinal region. If there are they most commonly are lymph nodes or herniae.
Ask the patient if they have noticed any lumps or swellings
With the patient standing observe the inguinal region and scrotum for lumps/swellings. Ask the patient to cough and observe if an impulse. Try to localise the site of the swelling.
An indirect inguinal hernia (commonest generally and particularly in younger men) bulges through the internal inguinal ring and can extend down and into the scrotum
A direct inguinal hernia bulges ‘directly’ out through the abdominal wall and rarely goes to the scrotum (commoner in older men and women)
A femoral hernia bulges through the femoral ring and into the femoral canal and is therefore lower (below the inguinal ligament)