

Rectal Examination

Study Guide:

With respect to skills:

Level 1 = should have confidence in performing the task and can recognize normal signs;

Level 2 = should have performed the task;

Level 3 = should have observed the task performed in real life or on video.

With respect to knowledge:

Level 1 = should understand the subject matter and can apply it to practice;

Level 2 = should have a sound understanding of the subject matter;

Level 3 = should be aware of the importance of the subject matter.

Level of Achievement	1	2	3
• Inspection of the anus and perineum	•	-	-
• Palpation of the anal canal and rectum	•	-	-
• Palpation of the prostate	•	-	-
• Inspection of the gloved examination finger	-	-	•
• Occult blood testing (knowledge)	•	-	-
• Occult blood testing (procedure)	-	•	-

N.B. This session is dedicated to rectal examination of the male adult patient. *Year 1 & 2 students are expected to recognize normal findings only*, although abnormal findings are also included for students in their senior years.

Although a well-performed rectal examination causes little discomfort, some patient may consider the procedure undignified and object to it. Therefore full disclosure of the reason and the steps of the procedure should be made beforehand in order to gain the patient's consent, confidence, and cooperation.

Rectal examination is a combination of 4 separate procedures: (1) examination of the anus and perineum, (2) digital palpation of the anal canal and rectum, (3) digital palpation of the prostate, (4) examination of bowel contents adhered to the gloved examination finger.

- Rectal examination is indicated in the following conditions:

1. Complaints attributable to both the upper GI tract (e.g., bleeding peptic ulcer) and the lower GI tract (e.g., change in bowel habits, rectal bleeding, anal or rectal irritation and pain);
2. Suspected pathology in lower abdominal or pelvic organs (e.g., appendicitis, neoplasm);
3. Complaints attributable to the lower genitourinary tract (e.g., difficulty in passing urine, bladder habit changes in older patients, blood in the urine, pain on passing urine);
4. During annual checkup in patients over 50 years of age because of the increased risks of rectal and prostatic neoplasm.

- The most popular method of rectal examination at the bedside is to lay the patient in the lateral decubitus position with legs and knees flexed on to the abdomen.

• Three other positions may be used and you should be aware of these alternatives:

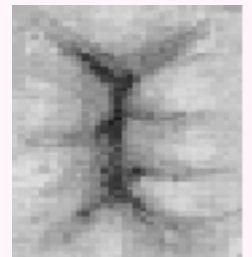
1. Although favored by some doctors, the knee chest position is rather awkward and uncomfortable for the patient.
2. Patient standing but bent forward with upper body resting on the examination couch. This position is often used in the outpatient setting.
3. Patient lying supine with hips and knees drawn up and knees spread apart. This position is reserved for patients who are less mobile.

Examination of anus and perineum

NB: Warn the patient on what you are doing and on any potential discomfort that he may experience as you proceed. In the absence of painful lesions like anal fissure or fistula or ischiorectal abscess, inspection alone should not cause any discomfort.

Exercise

1. Put on disposable gloves.
2. Hold the buttocks with both hands and spread them apart to inspect the anal verge (margin) and the surrounding perineum.
3. Complete the inspection by asking the patient to bear down as if to defecate.



Normal findings

- Anal skin is coarser and more pigmented like scrotal skin. It forms small folds that radiate away from the anal verge (margin).
- No prolapsed rectal mucosa or internal hemorrhoids should be seen during bearing down.

Abnormal findings

- Skin rash (e.g., pruritis ani), skin tags, external hemorrhoids, and warts.
- Anal fistula (fistula-in-ano) opening, appearing as an inflamed perianal dimple oozing pus.
- Anal fissure, a tear in the skin at or within the anal margin posteriorly is difficult to see; a skin tag at the base called a sentinel pile is pathognomonic of a chronic fissure.
- An inflamed fluctuant swelling close to and deforming the anal margin points to a perianal abscess.
- Tenderness and swelling midway between the anus and the ischial tuberosity points to ischiorectal abscess.
- When the patient is bearing down, prolapsed rectal mucosa or internal hemorrhoids may be seen.

Palpation of the anal canal and rectum

NB: Should avoid rectal examination in the presence of painful lesions like anal fissure or fistula or ischiorectal abscess. Otherwise rectal examination will cause mild discomfort like the urge to defecate only. Warn the patient on what you are doing and on any potential discomfort that he may experience as you proceed.

Exercise

1. Apply a generous portion of water-soluble lubricant to the index finger of your gloved examining finger.

2. Spread the patient's buttock with your other gloved hand and apply some lubricant from the index finger to the anus.

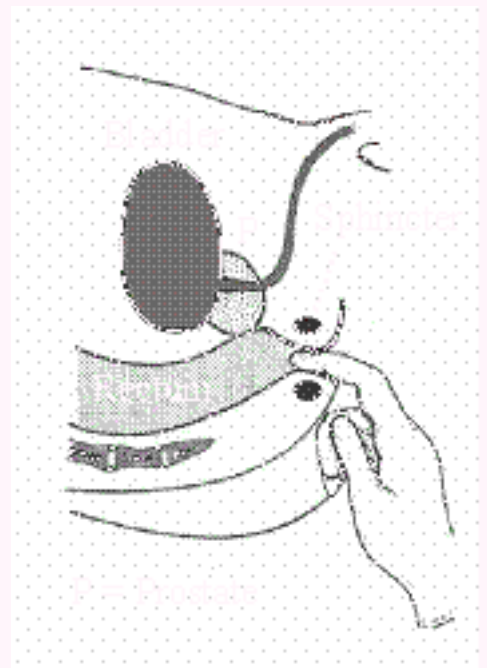
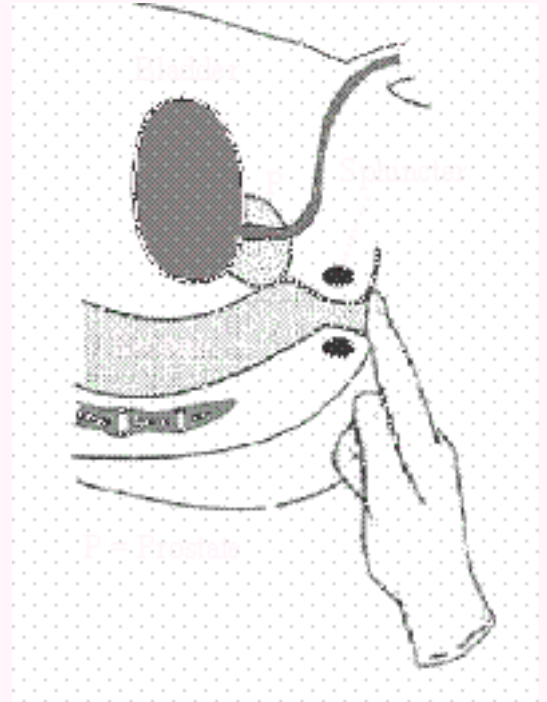
3. Place the pulp of the examining finger flat on the anus and apply gentle pressure in the direction of the anal canal. The anal sphincter can be felt to relax, admitting the examining finger. Ask the patient to relax and gain his cooperation is important at this point. Asking the patient to bear down as if to defecate may also facilitate relaxation of the sphincter. Do not try to penetrate the anus with the tip of the finger end on.

4. Once the tip of the finger is admitted, change its direction and point it cephalad.

5. As the finger enters the anal canal, rotate it 360°, palpate the annular sphincter muscle and feel its tone. At the same time feel the smoothness of the anal canal wall. Also ask the patient to tighten the sphincter against the exploring finger.

6. Next advance the examining finger into the rectum for as high as it can go and feel the rectal wall and adjacent pelvic structures by sweeping the exploring finger through 360°. Ask the patient to bear down as if to defecate during a subsequent sweep can bring rectal lesions up to 10 cm higher within reach of your finger, although this can increase the discomfort to the patient.

7. Record all abnormal findings and estimate its distance from the anal margin. A common way is to describe distance against the reach of your finger:



e.g., at the tip of finger, can reach beyond the lesion or well beyond the lesion with finger, and etc. Be honest in recording your findings. If you cannot reach beyond the lesion, say so.

Normal findings

- The sphincter muscle should form a complete ring.
- With normal tone, the sphincter should grip the exploring finger firmly; it should also contract on the finger when the patient is asked to tighten the sphincter.
- Both the wall of the anal canal and that of the rectum should feel smooth to palpation.
- In a male patient, the prostate is palpable through the anterior rectal wall but not the vas deferens, the seminal vesicles, or the recto-vesical pouch. (In a female patient, the cervix can be palpated through the anterior wall of the rectum at a site similar to where the prostate is in a male patient.)
- The coccyx is palpable through the posterior rectal wall. No other organ extrinsic to the rectum can be felt.
- The patient should feel no discomfort during the examination other than the urge to defecate and a vague visceral feeling.

Abnormal findings

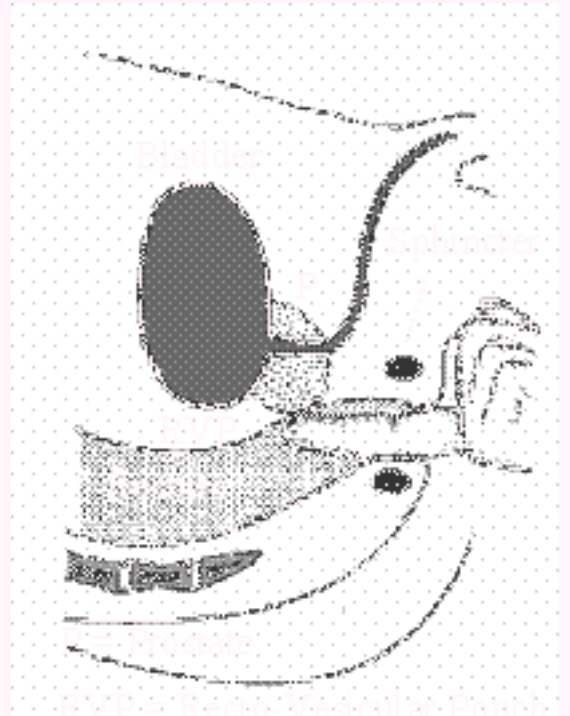
- Laxity of or inability to tighten the anal sphincter is found in patients who have myelopathy or neuropathy or in very old or debilitate patients.
- Effort should be made to distinguish between abnormal growth that is intrinsic on the wall of the anal canal or rectum and growth that is extrinsic to the lumen of the anal canal and rectum. If possible, describe the characteristics of the growth in the following terms: distance from anal margin, shape & size, consistency & surface texture, pedunculated (attached to the bowel wall by a stalk) or sessile (attached to the bowel wall with a broad base), mobility (fixed to or free from adjacent structures).
- Feces may be confused with tumor but feces can be indented, broken up, or even extracted.

Palpation of the Prostate

NB: The patient may feel an urge to urinate during this procedure. Warn him on what you are doing and on potential discomfort that he may experience as you proceed.

Exercise

1. Turn your attention to the prostate after palpation of the anal canal and rectum.
2. Using the pulp of the exploring finger and firm pressure, palpate the prostate through the anterior rectal wall by sweeping the finger from side to side across the posterior surface of the gland to determine its size and shape, consistency, surface texture, presence of nodules or tenderness, and mobility.
3. At the conclusion of the examination, wipe off excess lubricant or feces on the perineum with tissue paper. Offering the patient tissue to do it himself is an alternative.



Normal findings

- The gland is about the size of a large chestnut.
- The posterior surface is broader at its top-end where it meets the bladder. On either side are the lateral lobes; the median lobe is not palpable through the rectum.
- Other than the median groove down the middle, the normal gland is smooth to palpation.
- The consistency is rubbery, firm but not hard.
- It is moderately mobile.
- The vas deferens and seminal vesicles are normally not palpable.
- Palpation of the gland may cause some vague discomfort but should not cause pain.

Abnormal findings

- Enlargement of the lateral lobes is palpable but enlargement of the median lobe is not. An enlarged prostate may be, but not always, associated with prostatism. An enlarged prostate that is benign should remain rubbery in consistency and retain its smooth texture and mobility.
- A non-tender, hard nodule with distinct border should be regarded as malignant until proven otherwise. In advanced carcinoma, the entire gland may be hard and immobile.
- Tenderness and boggy (softening) of the gland may be due to infection.

Inspection of the gloved examination finger

- Rectal examination is not complete without this step.

Exercise

1. Visually examine the glove covering the exploring finger for mucus, blood, or pus.
2. Test feces clinging to the glove for occult (not grossly visible) blood.

Normal findings: Feces often clings to the glove.

Abnormal findings:

- The presence of mucus, blood or pus is abnormal.
- If blood is from the upper GI tract, the stool is black and has a consistency like tar (so called tarry stool). If blood is from the lower GI tract, stool mixed with unchanged blood will appear red.

- If the amount of blood in the stool is only small, its presence may be occult (not grossly visible). There are tool kits available to check for this occult blood.

Testing stool for occult blood

- Although the patient may have had an unrestricted diet (see importance below), some authorities recommend routine testing of stool clinging to the gloved examination finger for occult blood. Testing of stool sample from a bowel movement for occult blood is also used to screen patients for asymptomatic GI bleed.
- Haemoglobin has peroxidase activity, which can catalyse the oxidation of a colour reagent by a peroxide reagent. Hence colour change can be used to indicate the presence of haemoglobin in a stool sample. Herein lies the chemical principle of testing stool for occult blood.
- In patients on an unrestricted diet falsely positive results can be high. Causes of falsely positive results are:
 - ingestion of meat that has not been cooked sufficiently to inactivate the peroxidase activity in animal haemoglobin.
 - Plant material may contain peroxidase also.
- Testing stool for occult blood can also yield falsely negative results. Causes of falsely negative results are:
 - Oral vitamin C intake, particularly when the dose is over 500 mg/day.
 - GI bleed is only intermittent and stool sampling done on non-bleeding days.
 - Incomplete mixing of blood with stool and sampling done at site not mixed with blood.

• Precautions that will minimize the chance of falsely positive or falsely negative results:

- Instruct patient to have meat-free high-residue diet for 24 hours before stool sampling.
- Instruct patient to avoid vitamin C intake for 48 hours.
- Although weakly positive results are often associated with an unrestricted diet, do not regard a weakly positive result as negative. Re-examine the stool after a restricted diet.
- Test at least 3 stool samples collected on 3 consecutive days. The chance of falsely negative results increases when the stool samples are collected days apart in intermittent bleeding.
- Sample at 2 distinct sites to reduce the chance of falsely negative results due to incomplete mixing of stool and blood.
- Test stool samples within 48 hours of collection.