Handout 7.2 (PATIENT VERSION)

Common tests used in Gastroenterology

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Test and indications:	*Time involved:*	*Typical preparation:*	*Procedure:*	*Side effects:*	*Patient concerns and solution:*
Gastroscopy: to investigate and manage oesophageal, stomach and duodenal disorders.	2 hours	1. Fasting 6–8 hours. 2. Withhold blood thinner. 3. Modify diabetic medications. 4. Need relatives to pick up.	1. Greeted by doctors and nursing staffs. 2. Taken to procedure room. 3. Identification and consent checked. 4. Throat spray and anti-bubble drink. 5. Lie on the left side. 6. Mouth guard. 7. Sedated. 8. Procedure lasts 10–15 minutes.	1. Sedation-related side effects. 2. Procedure-related side effects: bleeding, infection, perforation, sore throat and bloating.	1. Fear of gagging and difficulty with breathing: ➢ A spray of medication to the throat helps to numb it. Sedative medications make the test more comfortable. ➢ Wind pipe and food pipe are separated. The wind pipe is protected by a strong cartilage to keep it open and therefore breathing is not an issue during the test.
Colonoscopy: to investigate large bowels disorders and bowel cancer screening.	3 hours	1. Fasting 6–8 hours. 2. Withhold blood thinner. 3. Modify diabetic medications. 4. Need relatives to pick up. 5. Clear fluid diet one day prior to the test. 6. Drink bowel solution the night before the test.	1. Greeted by doctors and nursing staffs. 2. Taken to procedure room. 3. Identification and consent checked. 4. Lie on the left side. 5. Sedated. 6. Procedure lasts 30–45 minutes.	1. Sedation-related side effects. 2. Procedure-related side effects: bleeding, infection, perforation, and bloating.	1. Worry about tolerating bowel preparation: ➢ Mixing it with cordial and serving chilled makes it more pleasant. 2. Risk of dehydration: ➢ To drink more fluids whilst doing the bowel prep. 3. Pain and discomfort during the test: ➢ Sedative and pain medications are given during the test. 4. Awkward and embarrassed to have a flexible camera inserted into anus: ➢ In patients with previous sexual assault and PTSD as a result, deep sedation can be requested.

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Oesophageal manometry: to investigate oesophageal function.	1 hour	1. Fasting 6–8 hours.	1. Greeted by technicians. 2. Taken to procedure room. 3. Identification and consent checked. 4. Sitting up. 5. Nose spray. 6. Insertion of pressure probe. 7. Swallowing liquid and solid food.	1. Sore throat. 2. Nasal congestion. 3. Epistaxis. 4. Tracheal (wind pipe) intubation.	1. Gagging: ➢ The probe is very small and flexible. ➢ A numbing medication is sprayed to the throat prior to insertion of the probe.
Ano-rectal manometry; to investigate defaecation function.	1 hour	1. Fleet enema.	1. Greeted by technicians. 2. Taken to procedure room. 3. Identification and consent checked. 4. Lie on left side. 5. Insertion of pressure probe.	1. Anal discomfort. 2. Bleeding. 3. Perforation (very rare).	1. Awkward and embarrassed to have a flexible probe inserted into anus: ➢ Please inform a technician prior to the test if there is history of sexual assault and/or post-traumatic stress disorder.
CT colonography: to be performed in patients who cannot have a colonoscopy.	1 hour	1. Bowel preparation as per colonoscopy.	1. Greeted by technicians. 2. Taken to procedure room. 3. Identification and consent checked. 4. Insufflation of bowels with carbon dioxide. 5. CT images taken with different positions.	1. Radiation exposure. 2. Abdominal bloating and discomfort. 3. Perforation (very rare). 4. Contraindicated in pregnancy.	1. Bloating: ➢ The bloating experience will resolve quickly because the gas will be absorbed into the blood stream and dissipated in your breaths. 2. Radiation concern: ➢ If you have concern about radiation exposure, please discuss with your doctor prior to the test. Your doctor always thinks about risk and benefit when an examination is ordered. This benefit always outweighs the risk if your doctor asks you to undergo a procedure.

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Test and indications:	*Time involved:*	*Typical preparation:*	*Procedure:*	*Side effects:*	*Patient concerns and solution:*
Capsule endoscopy: to investigate small bowel disorders.	12 hours	1. Fasting for 12 hours.	1. Greeted by technicians. 2. Taken to procedure room. 3. Identification and consent checked. 4. Swallow an encapsulated camera. 5. Wear a sensing system. 6. Fasting for 2 hours after swallowing the capsule, then clear fluid for 2 hours. 7. Light diet after 4 hours after swallowing the capsule. 8. Dissolvable capsule first if suspected stricture.	1. Capsule retention. 2. Rare case report of perforation.	1. Capsule retention: ➢ A dissolvable capsule can be used prior to the actual capsule if there is clinical suspicion of small bowel stricture, which can cause capsule retention.
Hydrogen breath test: to investigate carbohydrate malabsorption and small bowel bacterial overgrowth.	4 hours	1. Fasting for 6–8 hours. 2. No complex carbohydrate or high fibre diet the night before. 3. Stop smoking and no exercise at least 2 hours before the test. 4. Stop certain medications 1 week prior.	1. Greeted by technicians. 2. Taken to procedure room. 3. Identification and consent checked. 4. Ingest a small amount of test sugar. 5. Breath analyser every 15 minutes for up to 4 hours.	1. May cause bloating.	1. The test will take a long time: ➢ Bring a book or crossword.

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C13, C14 breath test for H.Pylori.	1 hour	1. Fasting for 6–8 hours. 2. Stop antibiotics 4 weeks prior, proton pump inhibitor 2 weeks and no antacid 1 day prior to the test.	1. Greeted by technicians. 2. Taken to procedure room. 3. Identification and consent checked. 4. Ingest urea capsule/tablet. 5. Breath analyser 30 minutes after ingestion of capsule.	1. C14 is radioactive (minute radiation exposure). Well tolerated.	1. Radiation exposure: ➢ The radiation dose from C14 is a lot smaller than that from everyday exposure to background radiation.
C13 breath test for gastric emptying study.	4 hours	1. Fasting for 6–8 hours. 2. Stop certain medications that change the rate of gastric emptying. 3. Control blood sugar and stop smoking.	1. Greeted by technicians. 2. Taken to procedure room. 3. Identification and consent checked. 4. Ingest egg yolk meal containing C13. 5. Breath analyser every 15 minutes for up to 4 hours.	Well tolerated.	1. The test will take a long time: ➢ Bring a book or crossword.
Gastric emptying scintigraphy for gastric emptying study.	4 hours	1. Fasting for 6–8 hours. 2. Stop certain medications that change the rate of gastric emptying. 3. Control blood sugar and stop smoking.	1. Greeted by technicians. 2. Taken to procedure room. 3. Identification and consent checked. 4. Ingest egg yolk sandwich containing radioactive isotope Tc99. 5. Gastric radioactivity measurement every 1 hour for up to 4 hours.	1. Radiation exposure. 2. Contraindicated for pregnancy.	1. May harm a foetus: ➢ Please inform a technician if it is possible that you are pregnant prior to the test. 1. The test will take a long time: ➢ Bring a book or crossword.

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Test and indications:	*Time involved:*	*Typical preparation:*	*Procedure:*	*Side effects:*	*Patient concerns and solution:*
Barium swallow: to investigate swallowing problem.	1 hour	1. Fasting for 6–8 hours.	1. Greeted by technicians. 2. Taken to procedure room. 3. Identification and consent checked. 4. Drink liquid barium. 5. Serial x-rays/videos taken during swallowing.	1. Constipation. 2. Aspiration. 3. Radiation exposure. 4. Contraindicated in pregnancy.	1. Discomfort: ➢ The test is well tolerated. However, it requires you to change positions a few times. Please inform a technician if you have issue with mobility/joint pain. 2. Constipation: ➢ Try to have a diet rich in fibres to reduce the risk of constipation.
Colonic transit study: to investigate constipation.	5 days	1. Stop medications that change gastrointestinal motility. 2. No fasting required.	1. Greeted by technicians. 2. Taken to procedure room. 3. Identification and consent checked. 4. Ingest radio-opaque markers once or once daily for 3 days. 5. Abdomen x-ray taken at day 4–5. 6. Normal test of <20% markers in the colon.	1. Radiation exposure (very small dose). 2. Contraindicated in pregnancy. The test is well tolerated.	1. Radiation exposure: ➢ The dose of radiation is very small, which is unlikely to have significant effect on your health.

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PH oesophageal monitoring: to investigate reflex disease.	24 hours	1. Like oesophageal manometry. 2. Medications (reflux medications) stopped 3 days prior to the test.	1. Greeted by technicians. 2. Taken to procedure room. 3. Identification and consent checked. 4. Sitting up. 5. Nose spray. 6. Insertion of pH measuring probe. 7. The probe connected to a device that patients carry for 24 hours. 8. Recording daily activities-eating/drinking/sleeping and when experience symptoms.	1. Sore throat. 2. Nasal congestion. 3. Epistaxis. 4. Tracheal (wind pipe) intubation.	Gagging: ➢ The probe is very small and flexible. ➢ A numbing medication is sprayed to the throat prior to insertion of the probe.
Blood test	30 minutes	May need to be fasting.	1. Greeted by technicians. 2. Taken to procedure room. 3. Identification checked. 4. Blood taken.	1. Pain (for a few seconds). 2. Giddy/faint/black-out.	1. Pain: ➢ When a technician is about to insert the needle, try to distract yourself by wiggling your toes, which helps to reduce the pain. 2. Giddiness: ➢ If you feel giddy, remain seated until you feel ready to get up.
Stool test			Self-collection of stool.	None.	1. Feeling disgust: ➢ Apply some Vick VapoRub under your nose.

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