



Antroduodenal manometry (ADM)

This leaflet explains about the antroduodenal manometry (ADM) test and what to expect when your child comes to Great Ormond Street Hospital (GOSH) to have one.

What is antroduodenal manometry?

This is a test to measure how well the muscles and nerves in the stomach and small intestine work. These move rhythmically to push food and drink through this part of your child's digestive system and into the colon (large intestine).

For the test, a catheter (flexible plastic tube) is put through your child's nose, down their oesophagus into their stomach and then into the small intestine.

If your child has a gastrostomy button, the catheter may be passed through the gastrostomy site and a smaller naso-gastric tube passed into their nose while your child is under anaesthetic. If your child has a gastrostomy button, please bring a spare device of the same size with you. These options will be discussed with you before the procedure.

Any movement in your child's stomach and small intestine is detected by sensors contained in the catheter, and recorded by a machine.

Why is this test needed?

This test is carried out for children who have problems tolerating food and drink. Your child needs this test for the doctors to assess how well the muscles and nerves are working in the stomach and small intestine.

What happens before the test?

You will already have received information about how to prepare your child for the test in your admission letter. Your child must not eat or drink anything from the midnight before the test. This is important, otherwise the test may need to be delayed or cancelled. You will need to stay in hospital the night before the test.

The doctors will explain about the test in more detail, discuss any worries you may have and ask you to sign a consent form, giving permission for your child to have the test. If your child has any sensitivities or allergies to any tapes please remember to tell the team placing the catheter. This will normally be done in interventional radiology.

Please also bring in any medications your child is currently taking. If your child is taking anti-sickness medicines, erythromycin, domperidone, azithromycin, nifedipine or buscopan, these will need to be stopped at least 48 hours before the test starts. Please discuss this with your doctor before stopping any medicines.

Your child will need to have a cannula (thin, plastic tube) inserted into a vein so that the anaesthetic medicine can be given easily. A blood test to check your child's salt levels will need to be done when this cannula is put in before the test. If your child has had problems with needles in the past or is scared, please tell the pre-admission nurse.



What does the test involve?

While your child is under general anaesthetic, the doctor will pass the catheter through one of your child's nostrils and down the back of their throat until it reaches their stomach. The doctor will use X-ray and guide wires to help them move the tip of the tube from the stomach into the small intestine. The other end of the catheter will be taped to your child's cheek to keep it in the correct place. Once your child has woken up you will be able to join them in recovery.

They will be ready to start the test when they have recovered fully from the anaesthetic. If your child is very distressed by the tube, we will assess whether they need to be lightly sedated during the test. The end of the catheter outside the body is attached to a machine which measures how well the muscles and nerves are working.

The test will be performed by your child's bed space on the ward and will last for approximately 24 hours. Your child will need to have regular blood tests during the test to check the sugar and salt levels in their blood. A nurse will be caring for your child throughout the test. The doctor will need to assess what happens when your child is fasting and has food. Your child will be fasting for most of the test. Towards the end of the test your child will need to have something to eat and drink. If your child does not usually feed by mouth or into their stomach, a member of the Motility team will discuss this part of the test with you.

What happens after the test?

The nurse will remove the catheter once the test is complete. If the catheter was placed via the gastrostomy site, a new gastrostomy button will be placed as soon as the manometry catheter is removed. If your child has a transgastric jejunal feeding tube, an X-ray will be done to check the position of the jejunal tube. You should be able to go home that day.

Are there any risks of the test?

Your child could have a nosebleed when the catheter is inserted into the nostril, as the guide wires used may cause a small scratch inside of the nose.

There is a very small risk that the catheter could cause damage to the digestive system as it is inserted. However, this is very unlikely as the catheter is flexible and the doctors and nurses who carry out this test are very experienced.

There is a very small chance that the salt levels in your child's blood may be affected. This will be closely monitored throughout the test. If your child's salt levels fall below the normal ranges, the test will be stopped.

If your child has a transgastric jejunal feeding tube, the jejunal tube may be displaced into the stomach when the manometry catheter is removed. An X-ray will be done once the test is finished and if the jejunal tube is in the wrong place, it will be replaced before you go home.

If your child receives light sedation for the test, their sleep pattern may become disrupted. The time this effect lasts varies. Encourage your child to rest if they are still sleepy the day after the test, and give them the day off school if you or they think that they need it to recover. Keep a close watch on your child until you feel happy that they are fully recovered. Contact staff on the ward if you are worried.



How long will it take to get the results?

Your child's test results will be given to you at your next outpatient appointment at the hospital. The analysis of this test is complicated so it may take some time to get the results. However if there is a need to start on new treatment before the appointment, the hospital will contact both you and your family doctor (GP) with details.

When you go home, you should call the ward or your GP if your child becomes unwell.

If you have any questions, please telephone the Gastroenterology Investigations Unit on 020 7405 9200 ext. 0212 or 7916 between 8 am and 6pm Tuesday to Friday.

Compiled by the Gastroenterology Investigation Suite in collaboration with the Child and Family Information Group
Great Ormond Street Hospital for Children NHS Foundation Trust, Great Ormond Street, London WC1N 3JH
www.gosh.nhs.uk