

## Impedance pH Monitoring (Multi-Channel Intraluminal Impedance pH Monitoring)

This test measures the length of time it takes for your child's stomach contents (acid or non-acid) come back up into his or her esophagus (**GastroEsophageal Reflux or GER**). A small probe is put through the nose and into the esophagus (feeding tube). The probe measures how high the contents come up in the back of the throat over a 24-hour period. It can also tell if the stomach contents are acid or non-acid.

Some reflux of stomach contents into the esophagus is normal, but if this happens more often than normal or for long periods of time, it may cause discomfort, vomiting, irritation to the lining of the esophagus or weight loss. It can also cause breathing problems such as a cough, asthma or aspiration pneumonia.

### How to Prepare for the Test

Your child will not be able to eat or drink for a short period of time before the test. **Do not give your child anything to eat or drink after** (time) \_\_\_\_\_ **on** (date)\_\_\_\_\_.

Once the pH probe has been placed and the placement is correct, your child will be able to eat a routine diet.

Some patients may need to stop taking certain medicines up to several days before the test.

- Your child will not need to stop taking any medicines.
- Your child will need to stop taking the following medicines:

Medicine \_\_\_\_\_  
\_\_\_\_\_

Take last dose on this date: \_\_\_\_\_  
\_\_\_\_\_

Explain the test to your child in a way he or she can understand.

**Appointment**  
 Child's Name: \_\_\_\_\_  
 Date \_\_\_\_\_ Arrival Time \_\_\_\_\_

GI Department, 1st Floor,  
J West (G Bldg.)

Admitting Department, 1st Floor,  
(H Bldg.) (Patient Access)

Study being done as:

Inpatient

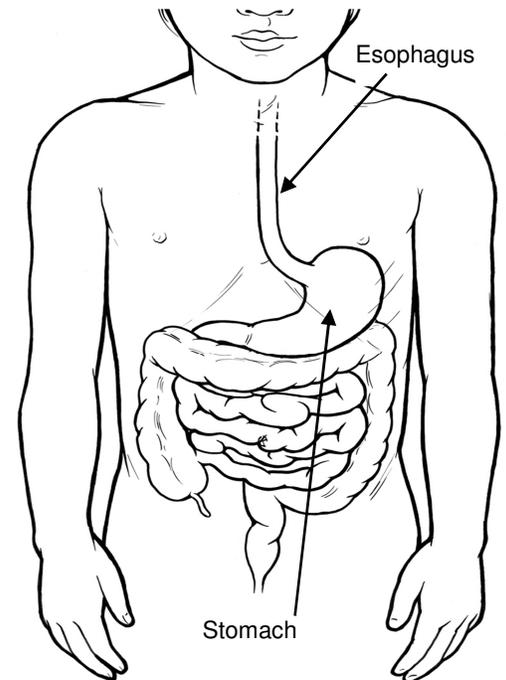
Outpatient

Impedance study with sleep study

**Parking:** You may park in the Visitor Parking Garage or Valet Park at the main entrance of the hospital.

## How the Test Is Done

- Small children will be wrapped in a blanket to keep them from struggling and pulling the probe out while it is being placed. If your child is an infant or toddler, “welcome sleeves” that keep their arms straight may be used. This is done so children can use their hands but not reach their face to pull the probe out.
- The nurse will pass a small flexible probe (about the size of a spaghetti noodle) through your child’s nose and into the esophagus (Picture 1). It will be somewhat uncomfortable as it passes through the nose. Most children gag as the probe goes down.
- Because the blood vessels of the nose are fragile, there may be a small amount of bleeding from the nose as the probe is being passed. Once the probe is down, most children do fine (Picture 2). The probe will be taped to your child’s face to keep it in place.
- A chest X-ray is done to see if the probe is in the correct position. After the chest X-ray, it will take about 30 minutes to get the results and decide if the probe needs to be adjusted. The probe rarely needs to be taken out and replaced.
- The probe is then connected to a recording device computer that will measure and record when food or stomach contents are in the esophagus.
- Your child will need to leave the probe in place and stay connected to the recording device/computer for 24 hours. (Videos, toys or books can help to pass the time.)
- In most cases, your child may eat his or her regular foods. A diary will be kept during the test to record meal times, activity, medicines and symptoms your child is having from reflux. **If your child is admitted to the hospital, a technician will be in the room to mark these events in the computer. If your child has this test done at home as an outpatient, you will be instructed on keeping the diary.**
- Sometimes, this test is done along with a sleep study. If this is the case, you will be given more information about these other tests. About 24 hours after the study started the probe will be removed. If your child is an inpatient, the nurse will come to the room to remove it. If your child is an outpatient you will return to the GI department to have the probe removed.



**Picture 1** The upper GI system inside the body.



**Picture 2** Having an impedance pH test.

## **Risks and Complications**

- Placing the probe causes gagging and can be uncomfortable. This usually goes away quickly after the probe is placed. Your child may vomit when the probe is placed.
- A small amount of bleeding may occur from the nose, throat or tonsils as the probe is placed. This bleeding is usually minor.
- Coughing may occur if the probe goes into the windpipe (trachea). This is rare and can be seen on the chest X-ray. The coughing will go away when the probe is removed. The probe may come out because of coughing, vomiting or by the child pulling it out. This means that the probe will probably have to be put back in.

## **If the Probe Comes Out**

**Please refer to the pH Flow Sheet** for instructions to follow if the probe comes out.

## **After the Test**

After the test is complete, it will be analyzed and then the doctor will review the results. These results will be available in 1 to 2 weeks.

If another doctor asked for the test, the results will be sent to that doctor's office and they will contact you.

If the impedance test was done with a sleep study, those results will be sent to your child's doctor by the Sleep Study Center. It may take up to one month to get the sleep study results.

If you have any questions, be sure to ask your child's doctor or nurse, or call the GI Department at (614) 722-3450.