



# Functional MRI (fMRI) test

## Patient and Family Education

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### What is a Functional MRI (fMRI)?

A fMRI test measures brain activity. It makes a “map” of which parts of the brain are used for different tasks. A fMRI:

- Takes pictures of the brain as it works, doing such things as reading, thinking or moving a body part.
- Checks both brain structure and brain function.
- Helps doctors learn where problems occur in the brain.
- Is usually used for patients with epilepsy or who have brain masses that need surgery.

### What needs to be done before the test?

A few things that need done before the test include:

- **Schedule a Neuropsychology appointment for your child before having the fMRI test.**
  - During your child’s appointment, he will be given something to read.
  - This helps us to know about his usual reading level.
- **In the Radiology department the day of the test:**
  - You will need to complete a few “Safety Screening Forms” before your child’s test.
  - The MRI scanner uses a very strong magnet to make pictures of the brain. If your child wears anything made of metal, it can cause harm. Your child will need to remove all jewelry and other metal-containing objects. This includes things like braces and other dental hardware.
  - Your child will also need to change into a hospital gown.
- **Practice time with a nurse or technologist.**
  - Our staff will explain the fMRI test to you and your child.
  - During the test, our staff will ask your child to do certain things like tapping his finger. He will have time to practice these commands before the test.

**NOTE:** Your child must be awake and able to follow directions during the test. If he is not able to cooperate with the test while he is awake, he will not be able to have it done.

### What will the test be like?

- The test will last about 30-60 minutes. The time depends on how many things your child needs to do during the test.
- The scanner looks like a large tube with an opening in the middle. The opening is about 6 feet long and 25 inches wide.
- During the test, your child will:
  - Lie on a narrow table that slides into the MRI scanner. He will stay inside until the test is done.
  - Hear loud noises as the scanner takes pictures of the brain. He can wear earphones during the test to help decrease the noise level.
  - Listen to commands through the earphones.
  - Lie still during the test and follow these commands.
  - Press buttons on a small box when doing some reading and thinking tests.
  - Do finger-tapping exercises when asked.

### **In case of an urgent concern or emergency, call 911 or go to the nearest emergency room right away.**

This is general information and is not specific medical advice for your child. Always consult your child’s doctor or other healthcare provider if you have any questions or concerns about the care or health of your child. A Children’s Healthcare of Atlanta pediatric advice nurse is available 24 hours a day at 404-250-KIDS.

# Functional MRI (fMRI) test, continued

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- Some people have a fear of tight spaces when inside the scanner. If this upsets your child, we will take him out of the scanner and stop the test.

## Are there any risks?

- The fMRI test is generally safe. You and your child must follow the routine safety guidelines that our staff give you.
- fMRI does not use “X-rays” so your child will not be exposed to radiation.
- Your child may feel some discomfort from a fear of tight spaces, feel nervous or anxious, or feel dizzy due to the magnetic field.
- If your child has any signs of being uncomfortable, we will stop the test **right away**.

## What happens after the test?

Our doctors will read the test results. In about 3 days, they will give the results to the doctor who referred you.

- If your child has epilepsy, the test results may help your doctor find out more about the epilepsy and how to treat it.
- If your child has a brain mass, the test results may help your doctor find out more about the mass and how to remove it during surgery.

## When do I get the results?

Three days after the test, call the doctor who referred you to get the results.

## How should I prepare my child?

School-age children have good imaginations and may frighten themselves by imagining something much worse than the actual test.

- One or two days before the test, tell your child that he is going to the hospital to have some “pictures” taken of his body.
- Use simple words. Be honest with your child and explain exactly what will happen.
- Let your child know that you will stay with him as much as possible during the test.
- When you come to the hospital, bring along a favorite videotape, book, toy or game.
- You may also bring along a snack for **after** the test.

**Please note: If there is a chance the patient may be pregnant, tell us before the test, so we can contact her doctor to see if the test still needs to be done.**

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