

### Brain's magnetic fields

When your brain is active, each part of the brain gives off a different magnetic field. MEG is a scan that looks at the different magnetic fields in the brain.

The MEG can show us what areas of the brain are working well and what areas may be causing a seizure.

- MEG scan does not hurt.
- It is very quiet.
- MEG may take up to 2 ½ hours. While the scanner is recording, your child will need to be as still as possible.
- If your child has a vagus nerve stimulator (VNS), pacemaker or other implanted devices, we may not be able to do a MEG scan.

### Getting ready for the MEG

We cannot take any metal into the MEG scanner room. This means:

- No metal zippers or metal snaps on clothes
- No metallic fingernail polish
- No jewelry
- No make-up or hair products
- No metal braces
- No hearing aids or removable dental work
- No graphic or metallic t-shirts

If needed, we may ask your child to change into a hospital gown.

### Sound and movement interfere with the MEG.

During the MEG your child:

- Cannot listen to music
- Cannot watch movies
- Cannot play games

### Room outside of MEG scanner

1. We place the leads for an EEG in the room outside of the MEG,
2. After we place the EEG leads, we touch each lead with a wand.
  - This helps the computer create a picture of the head.
  - Touching the leads looks a little silly and does not hurt.
3. Once the test begins, parents may wait in the radiology waiting room. Special arrangements can be made for children needing a family member during the procedure.

### MEG scanner room: 3 parts

**Dim lights:** The lights are dim in the MEG scanner room. Staff can see inside the room and talk to your child through an intercom system.

**Cool room:** We keep the room cool to protect the special equipment. We have warm blankets if the room feels too chilly.

We have a special chair and bed for the MEG scanner.

### Part 1

We place your child in the MEG scanner. The scanner covers the head.



It is similar to a helmet coming down over the ears but does not cover the face.



### Part 2

The second part may include different activities that take about 5 to 10 minutes for each activity. For this, we will ask your child to do some of the following:

- Tap their finger after a dot flashes.
- Tell us if they feel a tingle in their hand or foot.
- Focus on a screen.
- Listen to words

### Part 3

The third part of the test is a regular EEG. We will ask your child to lie still on their back and to sleep during the scan. This part of the test will last about 45 to 90 minutes.

## Helping your child understand

Child life specialists explain procedures to children. They use special words, toys, and games developed for each age group. This can help children better understand what happens during the MEG scan.

Child Life also helps children to relax and cope by using comforting stories and calming exercises.

Please let us know if you or your family, would like to visit with a child life specialist.

Please call the Child life Department if you have any questions or concerns at:  
682-885-2677.

## Questions

If you have any questions or concerns, call us at **682-885-2500** or email [neuro@cookchildrens.org](mailto:neuro@cookchildrens.org).

Please visit our website at:  
[www.cookchildrens.org/neuro](http://www.cookchildrens.org/neuro) to learn more about our Comprehensive Epilepsy Program.

## My notes

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These instructions are only general guidelines. Your health care providers may give you special instructions. If you have any questions or concerns, please call your health care providers.