

Brain SPECT scan (single photo emission computed tomography)



Please note: If there is a chance your child may be pregnant, tell a member of the care team before the scan, so we can contact their doctor to see if the scan still needs to be done.

What is a brain SPECT scan?

A brain SPECT scan is a type of nuclear imaging of the brain.

- SPECT stands for single photo emission computed tomography.
- The word “nuclear” means that a small amount of a radioactive substance (called a tracer) is used to help doctors see how blood flows to the body’s organs.
- The word “imaging” means that a special camera takes pictures of the tracer traveling through the blood.

A brain SPECT scan is done in Radiology. The scan shows how blood flows to the brain. It helps doctors to know when there is a problem with how the brain is working.

What do I do before the scan?

- Do not give your child anything to eat or drink for 6 hours before the scan.
 - They must have an empty stomach.
 - If their stomach is not empty, we may need to delay or reschedule for another day.
- Make sure your child wears comfortable clothes.
- Talk with your child’s doctor **before** the scan about foods and medicines your child takes.
 - Some may affect blood flow to the brain during the scan.
 - For this reason, you may need to stop giving them to your child before the scan.
- Be prepared to stay 1 to 2 hours.

What will the scan be like?

- A member of the care team will place an I.V. (intravenous) in your child’s hand or arm.
 - An I.V. is a way to give your child medicine and fluids.
 - The letters “I.V.” stand for intravenous, meaning “in the vein.”
 - Medicines or fluids are carried through a thin, plastic tube into a vein. From there, it is carried by the blood to the rest of your child’s body.
- A nuclear medicine technologist will give your child a small amount of the tracer through the I.V..
- Your child will rest for about 10 to 20 minutes until the tracer has time to reach the brain.
- When ready, your child must lie flat and still on a special table. If your child is unable to lie still, they will get medicine to help them relax, sleep and be still. This is needed to get good pictures during the scan.

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

Brain SPECT scan, continued

- A large camera called a gamma camera will start to take pictures.
 - It does not touch or hurt your child.
 - It rotates around your child as they lie on the table, taking pictures of your child's brain and sending them to a computer. The computer creates the pictures.
 - The scan takes about 1 hour.

NOTE: If your child is already staying in the hospital and is having a brain SPECT scan to check for seizures:

- A technologist will give the tracer within 10 seconds after a seizure.
- A member of the care team will:
 - Take your child to Radiology within 2 hours of getting the tracer. Your child will get the scan at that time.
 - Take your child back to their hospital room after the scan.

Are there any risks?

- SPECT scans are NOT safe for women who are pregnant or breastfeeding. The tracer can be passed to a baby in the womb or in the breast milk.
- Bleeding, pain or swelling can happen where the I.V. is placed.

What happens after the scan?

- If your child is not staying in the hospital, you will be able to take them home after the scan.
- If your child received medicine to help them sleep, they will need to be fully awake before going home.
- Most of the tracer leaves your child's body through the urine within a few hours of the scan.
 - The doctor may tell you to have your child drink more fluids, such as water or juice, after the scan.
 - This helps to flush the tracer out of the body.

How should I prepare my child?

Babies

- Bring a special blanket, toy or pacifier.
- Comfort your baby with your presence and voice.
- Bring along a bottle of juice or formula to feed them **after** the scan.

Toddlers and preschoolers

- Young children remember things for only a short time. The best time to talk about the scan is right before it is time to leave for the hospital.

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Brain SPECT scan, continued

- Tell your child they will have some special “pictures” taken, so the doctor can help them feel better.
- Use simple words, and be honest with them.
- Tell your child that you will stay with them as much as possible during the scan.
- Bring a favorite book, toy or blanket.
- You may also bring along a snack for **after** the scan.

School-age children

- It is important to be honest with school-age children. They may think something worse than what is really going to happen.
- One or 2 days before the scan, tell your child they are going to have some special “pictures” taken of their body.
- Use simple words, and be honest with your child. Try to tell them exactly what will happen.
- Tell your child know that you will stay with them as much as possible during the scan.
- Bring along a favorite book, toy or game.
- You may also bring along a snack for **after** the scan.

This teaching sheet contains general information only. Talk with your child’s doctor or a member of your child’s healthcare team about specific care of your child.

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