

# PET Scan without Sedation—Seizures

Positron Emission Tomography

## What is a PET Scan?

**Note: Child-friendly language in Green.**

- A PET scan is used along with a CT scan (computed tomography) to give detailed 3D pictures of inside your child's brain.
- Our PET scanner (**camera**) looks the same as the CT scanner. It has a small tunnel with a bed that moves in and out. Some kids say it looks like a spaceship or doughnut.



Patient in PET Waiting Room

## Why is it done?

- A PET scan uses a radioactive isotope (**picture medicine**) to show how certain parts of the body create and use energy.
- A PET scan can show pictures of how your child's organs and tissues are functioning that CT and MRI do not.
- Pictures from a PET scan help doctors diagnose a problem, choose the best treatment for your child, and/or evaluate how treatment is working.



PET Scanner Camera

## What can I do to help my child?

- Parents/caregivers are strongly encouraged to stay with their child throughout the entire procedure whenever possible. Women who may be pregnant cannot be with their child during all phases of the PET Scan. In these cases, another trusted adult is encouraged to stay with the child during this time.



# What should I expect during the procedure?

**A PET Scan is done in 3 stages. The entire process takes about 2 hours. Results will be sent to your doctor in 1-2 business days.**

## **Stage One: Getting Ready**

- Radiology staff will bring you and your child into a private room to get ready for the pictures, called the Prep Room. Here, a nurse will ask general questions about your child's health.
- Then nurse will then place a topical numbing cream on your child's hands and/or arms to help make placement of an IV (tiny, soft straw placed into a vein using a small needle) more comfortable.
- Next, a nurse will gently place the IV, which will help get fluids into your child's body throughout the exam. At this time the nurse will take a small sample of blood from the IV to test your child's blood sugar level.
  - \* Your child may feel a little discomfort, like a quick, mild poke when the IV is placed.
  - \* Encourage your child to hold his or her arm very still and to take deep breaths.

## **Stage Two: Warming and Soaking Room**

- After your child has his or her IV, a nurse will walk you and your child back to the warming room. Your child will be provided warm blankets and a comfortable chair to sit or lay back in.
  - \* It's important for your child to be warm because being cold can create blurry pictures.
  - \* Encourage your child to relax and not to talk because movement can affect the scan. We will dim the lights to help improve the environment.
  - \* Your child will be asked to wear an eye mask because light and eye movement can make the pictures blurry. Bringing sunglasses or a night time mask from home can help make this part easier.
- When your child is in the warming room, an EEG technologist will come and place EEG electrodes (colorful wires) on your child's head.
- After 40 minutes, a nuclear medicine technologist will inject the radioactive isotope (special medicine) through your child's IV. Your child will now be in the "soaking phase," and will need to stay still for about 20 more minutes. You will be asked to move behind a lead barrier to help protect you from the radiation.
  - \* Talk with your child about what they think will help them stay still such as taking a nap, or thinking of their favorite place, experience, memory, etc.

## **Stage Three: Pictures**

- Next, your child will be asked to use the bathroom, and then will be walked to the scanner (camera) and helped onto the bed. They will need to lie completely still for the scan (about 10 minutes).
  - \* Encourage your child to look at the ceiling and see the trees and clouds when they first lie down.
  - \* Let your child know that there will be a red light in the camera. This light is just there to help the camera take the pictures. The camera also makes funny noises, but it doesn't touch or hurt kids.
  - \* A parent or guardian may stay in the scanner room with their child as long as there is no chance of pregnancy.
- When the pictures are complete the PET scan staff will let you know.



# Tips for preparing your child for a PET Scan without Sedation

## Toddlers (1-3 years old):

- Begin preparing your child the day before.
- Use simple words to describe what your child may experience.
- Tell your child they will have some pictures taken so the doctor can learn more about his or her body.
- Reassure your child that you will be close and that the special, big camera will not touch him or her.
- Bring comfort items with you that help your child feel safe, such as a favorite toy or blanket.
- Toddlers are learning to be independent and make their own choices; offer them realistic choices. For example, “What stuffed animal should we bring?”

## Preschoolers (3-5 years old):

- Begin preparing your child about 1-3 days in advance.
- Talk to your child about why they are having pictures taken. For example, “The doctor wants to take special pictures of your body to learn more about how your body works.”
- Use simple words to describe what your child may experience.
- Let your child know that their job is to stay very still throughout the whole process—especially during the actual PET scan, to help get clear pictures. For example, “Holding still and staying quiet is really important to get clear pictures for the doctors to see.”
- Talk with your child about what they think can help them stay calm and still during these times.
- Let your child know they will need to wear an eye mask to cover their eyes from light.
- Encourage your child to ask questions.

## School Age (5-12 years old):

- Prepare your child at least a few days in advance.
- Talk to your child about why the doctor wants to take special pictures of inside his or her body. For example, “So the doctor can learn more about how your body works.”
- Explain to your child what he or she might, see, hear and feel, in the order things will occur, using child-friendly and/or real terms depending on your child’s age and/or preference.
- Let your child know that they will need to stay very still during the warming and soaking periods, and especially the actual PET scan to help get clear pictures. Discuss what might help them stay relaxed and still during these times.
- Let your child know they will need to wear an eye mask to cover their eyes from light.
- Encourage your child to ask questions.

## Adolescents (13 years old and up):

- Prepare your teen at least several days in advance.
- Explain to your teen what they will experience using real terms.
- Talk to your teen about why they need a PET Scan. For example, “So the doctor can help find out more about your diagnosis and treatment.”
- Let your teen know that their job is to stay very still throughout the process—during the “warming” and “soaking” phases, and especially during the actual PET scan, to help get clear pictures.
- Talk with your teen about what they think will help them stay still, such as taking a nap, thinking about a favorite place or activity.
- Encourage your teen to ask questions.



Patient in PET Warming Room

## My questions for the Radiology staff ...

- 1.
- 2.
- 3.
- 4.
- 5.

### Child Life

Children's National Medical Center Department of Radiology is staffed with two full-time Child Life Specialists at Children's National Medical Center Main Campus, and one full-time Child Life Specialist at Children's National Imaging Montgomery County Regional Outpatient Center. Child Life Specialists are trained to address the emotional and developmental needs of children and their families during healthcare experiences, and can provide procedural preparation and support before and during your child's exam.

### Phone Numbers

- If you would like to speak to a Child Life Specialist before your child's Radiology appointment at Children's National Medical Center Main Campus, please call **202-476-3338**.
- If you would like to speak to a Child Life Specialist before your child's Radiology appointment at Children's National Imaging Montgomery County Regional Outpatient Center, please call \_\_\_\_\_.
- For more information about hospital-wide Child Life Services at Children's National Medical Center, please call **202-476-3070**.

*Children's National Medical Center supports the Image Gently campaign and strives to keep radiation exposure to our patients as low as possible. For more information on this campaign, please visit [www.imagegently.org](http://www.imagegently.org)*