



PET/CT Scan



What is a PET scan?

A positron emission tomography (PET) scan is a safe and non-painful way to take special images of the human body. PET scans show how the cells in your child's body are working and using energy. Since changes in the way cells work often happen before changes in the way they look, a PET scan can help with early diagnosis of cancer, as well as diseases of the brain and heart. A CT (computed tomography) scan is done at the same time as the PET. The CT shows the location of the cells imaged on the PET.

What are some common uses of the PET/CT scan?

PET/CT scans are used most often to detect cancer and to check the effects of cancer treatments on the cancer. PET/CT scans of the brain are used to evaluate patients who have tumors or who have seizure problems that do not respond to medical treatment and may need surgery.

How do I prepare my child?

If we will be giving your child anesthesia, follow the instructions that the nurse practitioner gives you.

If your child has diabetes or needs to take insulin, please tell the technologist the night before the PET/CT scan.

For all other children:

24 hours before the scan

Your child should avoid exercise in the 24 hours before their PET/CT scan because exercise may interfere with the images.

Between 24 hours and 6 hours before the scan, your child needs to drink 6 to 8 glasses of water. For example, if your child is having the scan at 10 a.m. on Tuesday, they need to drink 6 to 8 glasses of water between 10 a.m. on Monday and 4 a.m. on Tuesday.

12 hours before

Your child should not eat or drink any form of caffeine, (including soda, coffee, tea and chocolate) nicotine or alcohol. The last meal before your child begins their fast should be a low carbohydrate meal. That means they should avoid bread, pasta, beans, potatoes, bran, rice and cereal because they are high in carbohydrates.

6 hours before

No solid food, fluids, gum or candy 6 hours before the scan, with the exception of water. Your child may take medicines that they normally take the morning of the scan. The only exception is steroids (prednisone, dexamethasone, methylprednisone) — they should not take those the morning of the test.

Inhaled steroids are okay. Your child should continue drinking many glasses of water the day of the exam to stay hydrated.

4 hours before

If your child has diabetes or needs insulin, they should take the diabetes medicine or insulin 4 hours before their PET/CT scan with a small amount of juice and dry toast or plain crackers.

Please do not allow your child to eat or chew gum until after the PET/CT is done and you are allowed to go.

How do we check in for the appointment?

Arrive 30 minutes before your scheduled appointment. Being late can affect other appointments and can delay your appointment.

Check in at the 4th floor registration desk inside the Whale entrance. After you complete registration, you will be directed to the Radiology reception area.

Upon arrival, females 12 years and older will be required to provide a urine sample for pregnancy screening.

If you will be late or have questions about testing, please call Radiology at 206-987-2089.

To Learn More

- Radiology
206-987-2089
- Ask your child's nurse or doctor
- www.seattlechildrens.org

Free Interpreter Services

- In the hospital, ask your child's nurse.
- From outside the hospital, call the toll-free Family Interpreting Line 1-866-583-1527. Tell the interpreter the name or extension you need.
- For Deaf and hard of hearing callers 206-987-2280 (TTY)

What happens during the PET/CT scan?

A technologist or nurse will place an IV in your child for the tracer (radiopharmaceutical) injection. They will also check your child's blood sugar (glucose) level. Your child will only feel a little discomfort, like a mild pinch. If your child already has a port or a Hickman, we can use that.

The technologist will inject a radioactive tracer (typically 18FDG) into the IV line. The tracer will need to be absorbed into your child's body before pictures are taken. This takes about an hour.

Your child will wait in a warm, dark and private room while the radiopharmaceutical circulates through their body. **It is extremely important for your child to be very quiet and still.** That means no talking, gum chewing, reading or playing. These activities can make the tracer go to the wrong places in your child's body. It is OK to read to your child or listen to soothing music.

After the waiting period, we will ask your child to go to the bathroom to empty their bladder. Then we will bring your child into the PET/CT scan area and ask them to lie on the imaging table and remain still while the pictures are taken. The PET/CT scanner does not touch your child. They will remain in the scanner for about 1 hour.

You can stay with your child in the injection room unless you are pregnant. **Please make other arrangements for siblings.**

We can schedule anesthesia for children 6 years and under and for those unable to hold still for 2 hours. We may give you different instructions to follow during the break time if your child is being given anesthesia.

What happens after the test?

Encourage your child to drink fluids after the PET/CT scan.

The results will be available to the doctor who ordered the scan in 24 to 72 hours.