

PET-CT scan

Applies to: FDG, Methionine, Acetate, PIB, PSMA, Fluoride, Metomidate

In a PET/CT study, positron emission tomography (PET) and computed tomography (CT) are performed at the same visit. PET scanning examines metabolism, while CT scanning provides a detailed image of body structures.

The PET/CT scanner has a wide opening (70 cm in diameter), so it can generally be used even for claustrophobic patients.

The scanning visit takes about 3 hours in all.

How to prepare

It is important for you to have a blood glucose level below 10 mmol/L when you arrive for the study. Therefore, please follow these instructions:

- **Do not eat for at least 6 hours** before your appointment.
- While you are fasting you may drink as much water as you like, but nothing else.
- Chewing gum and pastilles are also forbidden on the day of the study.

Please also keep the following in mind:

- Avoid physical exertion (bicycling, running or going to the gym) for 24 hours before the study
- Do not drink alcohol for 24 hours before the study
- Do not smoke for at least 2 hours before the study
- All jewellery (also piercing jewellery) should be left at home

NOTE: The PET scan will be cancelled if you have eaten (you must fast for 6 hours).

Pregnant women do not normally have this procedure. If you think you may be pregnant, notify the PET Centre before you come in for the study.

Small children may not accompany you to the study visit.

For CT scanning, a contrast agent that contains iodine may need to be administered during the study. If you have previously had a reaction to a contrast agent, please notify us in advance. A tracer substance is necessary for PET scanning, but the study can be completed without the iodine-containing contrast agent

Medications

You can take your prescribed medications as usual on the day of the study

Diabetics

If your diabetes is insulin-treated, you may have your usual morning meal and insulin medication. However, **you must fast and take no more insulin for at least 4 hours** before your scanning appointment!

If your diabetes is diet-controlled or treated with oral medication, follow the standard preparation instructions.

What to expect at your appointment

You will be asked to complete an interview form. A medical technician will review the study details with you.

- An intravenous cannula (drip) will be inserted in your lower arm to administer the tracer for the scan. Except for the small prick to your arm, the study will be painless and is not associated with side effects.
- The tracer will be a radioactive substance used to measure metabolic activity in tissues.
- After the tracer is administered, there will be a waiting period allowing it to accumulate in the area to be scanned. The waiting period will be 10 to 60 minutes depending on the tracer used.
- For the scan, you will lie down on your back on the PET/CT scanner bed, which slides through the scanner opening. You will need to keep still for the study to be successful.
- The scanning takes about 30 minutes.

After the study

The PET tracer is not associated with side effects. It does remain slightly radioactive for a few hours, but protective measures against the radioactivity are generally not necessary. We recommend drinking more water than usual after the scan because the tracer will leave your body through urine.

On the day of the study avoid close contact with pregnant women and try to avoid holding or sitting next to children. The medical staff will instruct you in more detail.

Nursing mothers must not breast-feed for 10 hours after the study. Any breast milk pumped during this time should be poured down the drain.

The study results will be provided by a doctor at the ward or outpatient clinic that referred you.