

Full-body metabolism PET-CT

Purpose of the study

The purpose of the study is to determine whether there are areas in the body where sugar metabolism is increased. The study uses a radioactive sugar analogue, ^{18}F -FDG, which accumulates in tissues that use sugar in the body. The study can help locate, among other things, inflammatory changes and cancerous tumors and their metastases.

The PET-CT study includes both a positron emission tomography (PET) and a computed tomography (CT) scan. PET is used to study the body's metabolism, and CT provides a detailed image of the body's structure.

Preparations

When you come for the study, it is important that your blood sugar level is below 10 mmol/l, so please follow these instructions:

- do not eat for at least 6 hours before the study
- you can drink water freely during the fasting period, but no other beverages
- chewing gum and candies or lozenges are not allowed before the study

Please also note the following:

- avoid physical exertion (gym, cycling or jogging) for 24 hours before the study
- do not drink alcohol 24 hours before the study
- do not smoke for at least 2 hours before the study

NOTE! PET imaging cannot be performed if you have eaten (6-hour fasting).

The study is not usually performed on pregnant women. If you suspect you may be pregnant, please inform the staff before coming for the study. The study can be performed on a nursing mother, but a breastfeeding break (12 hours) is necessary after the study.

Small children should not accompany you for the study.

A CT scan may require iodine-containing contrast agents, which are administered during the scan. If you have previously had an allergic reaction to contrast agents, please inform the staff before the study. The PET study agent is essential for the scan, but the scan can be performed without iodine-containing contrast agents.

Medication

On the day of the study, you can take your regular prescribed medication.

Diabetics

If you have insulin-dependent diabetes, you can eat a normal breakfast and take your insulin medication. However, you must fast for at least 4 hours before the study and you cannot take insulin anymore!

If you have diabetes that is treated with diet or tablets, follow the normal preparation instructions.

Study protocol

You will be given a questionnaire to fill out. The nurse will go over the details of the study with you.

A cannula (drip) will be inserted into your elbow vein for the administration of the radiopharmaceutical. You will be directed to a resting room for bed rest. The waiting time is ½ - 2 hours before administration of the radiopharmaceutical. Except for the injection, the study is painless and there are no side effects.

The radiopharmaceutical used is a radioactive tracer that measures tissue metabolism.

After administering the radiopharmaceutical, you will wait approximately 50 minutes for the tracer to accumulate in the imaging target. The waiting time is still spent in the resting room.

The scan is done lying on your back on the PET-CT camera bed, which moves through the camera opening. You can wear your own clothing as long as they don't have metal in them. The success of the study requires staying still.

The scan takes about 30 minutes. The total duration of the study visit, including the waiting time, is about 3-4 hours.

After the study

A physician will provide a statement on the study, which will be directed to the clinic or department that made the referral. The referring unit will take care of any further actions.

Notice

The PET radiopharmaceutical has no side effects, but it emits mild radiation for a few hours. However, no radiation protection measures are generally required. After the study, it is advisable to drink more water than usual, as the radiopharmaceutical is eliminated from the body through urine.

Avoid close contact with pregnant women and holding children in your lap or beside you on the day of the study, if possible, for about 8 hours.

Please do not wear any perfume when coming to the department as it may cause severe symptoms to patients with asthma or allergy!

Contact information

Department of nuclear medicine and PET
Satasairaala, Building A, floor 0
Phone number 02 627 7361
from Monday to Friday between 7.00–14.30

SataDiag
[SataDiag website www.satadiag.fi](http://www.satadiag.fi)

Pre-study questionnaire for PET imaging

Please fill out the form the day before the examination and bring it with you when you come for the study.

Name: _____ **Weight:** _____

Personal identity code: _____ **Height:** _____

Have you experienced any hypersensitivity reactions to contrast agents during previous imaging procedures?

- No Yes

Have you undergone any surgeries, endoscopies, or biopsies within the past six months?

- No Yes Which, when? _____

Have you received the following medications within the past 2 weeks?

- Cortisone
 blood cell growth factor
 cytostatic agent

Have you received radiation therapy within the past 3 months?

When? _____

to which area? _____

Do you have or have you had...

- Diabetes. Current diabetes medication in use: _____
 Myocardial infarction
 Renal disease
 Tuberculosis
 Gastroenteritis
 Other inflammatory disease, which? _____
 Other chronic disease, which? _____
 Trauma (fracture, injury), which? _____

Have you received the COVID-19 vaccine?

- No Yes, when? _____
 Left arm
 Right arm

Question for women: Is it possible that you could be pregnant?

- No Yes

Start date of your previous menstrual period? _____