

Patient Information Leaflet - Procedure PET-CT Scan

Name of patient _____ born on _____

I. INFORMED CONSENT DISCUSSION (doctor and patient and/or legal representative)

Recommended examination F-18 FDG PET-CT

Based on previous findings, you are to undergo a required special nuclear medicine examination today, called PET-CT. Radiolabeled biomolecules (tracer) will be used and their distribution in the human body can be recorded by the PET-CT scanner. Most often, fluorine-18-labeled deoxyglucose (FDG) is used to produce images of the sugar metabolism of organs and tissues.

Patient preparation and behavior on the day of the examination

- If the examination is performed in the morning, the last food intake should be the night before. For a later examination it is required that you fast for at least 6 hours.
- You are asked to drink extra fluids (unsweetened tea, mineral water, NO drinks rich in calories!).
- Your blood sugar level will be measured prior to the administration of FDG. Blood glucose (BG) should be below 120 mg / dl. Examinations with higher blood glucose levels can reduce the FDG uptake in the tissues and distort the result; in this case, the decision to perform the examination will be taken by the attending specialist in nuclear medicine. Diabetics taking insulin should have breakfast and administer their morning dose of insulin. Diabetics under drug therapy should also take their medication.
- If available, please take your xray, CT or MRI scans or PET findings with you.
- A pregnancy must be excluded!
- Contact with pregnant women and small children on the day of the examination is to be avoided.
- Nursing mothers should stop breast feeding for 24 hours after the examination.
- You are asked to drink extra fluids and empty your bladder often to help flush the tracer out of your body.

Procedure of the exam

- After an extended consultation with the specialist in nuclear medicine and / or radiology technologist (RT, on doctor's orders) the PET tracer (18F-FDG) is injected intravenously. The administration of a diuretic (Lasix) may be required in individual cases. In individual cases, Psychopax® drops are given as a relaxant.
- The waiting period until data acquisition is 60 minutes during which you are asked to avoid movement and talking.
- The data acquisition time itself is approximately 20 minutes. For better image resolution and quantification an additional low-dose computed tomography (low-dose CT for attenuation correction) is necessary, in some cases requiring a contrast agent of diagnostic quality (so-called diagnostic CT).

II. SIDE EFFECTS & COMPLICATIONS PET-CT

Radiation exposure

The most frequently used radionuclide ¹⁸F-FDG has a half-life of approximately 110 minutes. That means that already after less than two hours the quantity of radioactivity injected has fallen to half of its value (after further 2 hours, again to half, etc.). The total radiation exposure of a PET examination is about 5 – 7 mSv. In a PET / CT examination, in most cases, a computed tomography scan is done first (depending on the case and indication concerned, with or without contrast agent). Depending on absorbed energy dose and body region, the CT examination leads to an additional radiation exposure of about 2 - 13 mSv.

Interactions with other drugs are not known.

Potential side effects (very rare):

Administration of Psychopax® drops: fatigue, lack of concentration, delayed reaction. Therefore, the patient is advised not to drive a car or perform hazardous activities for 24 hours.

Potential consequences resulting from the refusal of the recommended examination or procedures:

Insufficient and delayed diagnosis and therefore possible progression of the disease, delayed treatment and restriction of treatment options.

III. ADMINISTRATION OF CONTRAST AGENTS:

In some cases it will be advisable to administer an x-Ray contrast medium. In this respect, you are kindly requested to bring your current blood values of thyroid function (**TSH**) and renal function (**creatinine**) (not older than 2 weeks). Please inform us if you know about any hypersensitivity to contrast agents, in that case you do not need a blood test.

Potential side effects and complications:

- Redness and any minor bruising at the injection site are non-specific and usually irrelevant.
- A sensation of warmth in the body and a bitter taste in the mouth are common, harmless and disappear quickly.
- Very rarely a vein may rupture during the injection or the tube may be positioned incorrectly. In this case the contrast agents may enter the tissue. This is perceived immediately as a sensation of pain. Please report this immediately, even if imaging has already started so that further injection can be stopped. The contrast agent having leaked into the tissue is eliminated through the lymphatic system. No serious consequences are to be expected.
- Hypersensitivity reactions (allergies) to the contrast agent are basically possible. They are mainly limited to skin rashes which disappear rapidly.
- Occasionally, a throat irritation may be experienced, hypersensitive persons may experience breathing difficulties in rare cases.
- Please report immediately any symptoms you consider unusual during the investigation. The attending doctor / physician will be consulted.
- As with almost all drugs, serious incidents including anaphylactic shock and cardiovascular arrest are possible. In several million cases of contrast medium administration such events are extremely rarely reported and have been practically eliminated in the past few years with the use of new contrast agents.
- If any side effects occur, medical help will be immediately available.

Thus, in relation to its benefit, the contrast agent is considered a safe drug, however, restrictions apply to some persons.

In order to ensure that contrast medium administration is safe for you, you are kindly requested to answer the following questions (on the reverse side of the information leaflet).

Of course, you have the right to refuse contrast agent administration without stating reasons. If you wish, the doctor will inform you about any disadvantageous aspects.