

## PET/CT Scan Information

Your doctor has referred you for a PET/CT scan to our centre based on a prior arrangement with us. Please be aware, that you are likely to spend approximately 4-6 hours in our Center.

The examinations are performed following the booking schedule, so it is particularly important for you to arrive exactly on the time pre-arranged with you.

If you are disabled, please bring an attendant to help you during the procedure. Pregnant woman and children can not be attend.

Please indicate at least 24 hours prior to your scheduled appointment if you realise that you will not be able to arrive at the specified time or are unable to attend the examination for any reason

*What should I bring with me to my examination?*

- medical reports of surgeries, therapies
- CD's and reports of recent imaging studies (CT, MRI, Ultrasound, PET/CT, PET/MRI, etc.)
- result of laboratory blood test
- information, reports of any implanted metallic object
- any medication that you would normally take during the day

*Please contact us:*

- if a fever or diarrhoea has developed on the day of the examination or 1 day prior to it
- if any changes related to your health condition, such as accident, fracture, allergic reaction, surgical procedure have occurred during the time period of the date of having your appointment arranged and the scheduled examination
- if your transport is not feasible

### **What is PET/CT?**

PET stands for Positron Emission Tomography, CT stands for Computerized Tomography.

**PET/CT scan:** prior to the scan you will be given an intravenous injection of a radioactive form of sugar/glucose, called FDG. The PET scan alone measures the cellular uptake and the distribution of the FDG in various tissues of the body.

Abnormal cellular uptake may be indicative of disease. The radiopharmaceuticals used in PET/CT have a short half life (about 2 hours) and are eliminated from the body in a few hours following the injection

**CT scan:** the CT scan alone is a way to acquire an accurate view of the internal structure of the body. Depending on your medical history you may be asked to drink 1 liter of flavoured oral contrast mixture before the scan, or you may be given an intravenous contrast agent (a dye) during the scan.

**PET/CT scan:** The fusion of these two state-of-the art imaging techniques acquired in one 30-40 minute scan session creates a precise image of the localization and malignancy of abnormalities. These capabilities can provide information that enables your doctor to make an early diagnosis and possibly provide faster initiation of treatment while avoiding invasive examinations or exploratory surgery.

The scan and injection will give you the equivalent to 'few years' natural background radiation. The injected radiation decays within the first 6 hours after the scan.

### **Preparation before PET/CT examination:**

- You must not eat anything within 6 hours before the scan appointment time
- You must not drink any meal supplements, liquid food, tea or coffee, flavoured water within 6 hours before your appointment time
- You must drink plenty of pure water
- You must continue to take your usual medication, with the exception of insulin if you are diabetic (see below)

#### ***diabetic patient:***

- it is important to keep the blood glucose level between 4-11 mmol/L (high blood sugar level changes the glucose uptake and usage of organs, tissues and cells)
- **IDDM (insulin dependent diabetes mellitus)** – you should take your usual insulin dose 3 hours before the scheduled appointment time together with reduced carbohydrate meal (i.e. half the amount of carbohydrate). You must bring sufficient food and drink, as well as your insulin with you.
- **NIDDM (non-insulin dependent diabetes mellitus)** – you should take your medication in the usual way.

#### ***During the 72 hours before your PET/CT scan appointment:***

- you should avoid strenuous physical activity such as exercising in the gym, gardening, horseback riding, sports, skiing, physical work, etc.
- you should avoid consuming high carbohydrate content foods and drinks (do NOT eat bread, pastries, flavoured soft drinks, sweets, candy and avoid chewing gum)

#### ***On the day of your PET/CT examination:***

- It is recommended to wear warm clothing – a feeling of cold may affect the outcome
- Normally you will be scanned in your own clothes. So please try not to wear clothes with metal zips, pins, fasteners or an under-wired bra. Female patients will be asked to remove an under-wired bra just prior to the scan. A tracksuit and trainers are ideal.
- Please leave jewellery at home (including piercing if you have)
- Removable dentures must be taken out, so please do not use denture fixative material
- If possible try not to smoke
- If you are claustrophobic bring a sedative that you can take before the scan
- If you are pregnant or think that you might be pregnant, and in case having the menstrual period the scan can not be performed
- If you are breastfeeding, you will be instructed not to breast feed for 24 hours following the injection for the PET or PET/CT scan. Nursing mothers are encouraged to pump and store milk in anticipation of exposure to the radioactive tracer
- Patients with a colostomy bag are requested to bring a spare one
- Patients with urinary retention problem are requested to change diapers and underpads, so please bring spare ones with you

### **During PET/CT appointment:**

On your arrival, a radiographer will greet you and register you at the reception and will inform you of the procedure.

After reviewing your case history and the results of any prior examinations, a radiographer will take a short medical history from you and make a copy of all your final reports to assist the doctor who will report your scan.

Then a radiographer will check your blood glucose level, if its value is greater than 11 mmol/L the scan can not be performed. After completing a questionnaire about your medical state, the radioactive tracer will be injected into a vein in your arm.

If you have any questions, please let us know before the administration of the radiopharmaceutical agent.

After the injection you will rest for approximately 45-60 minutes prior to your scan. During this rest period you will be asked to refrain from physical activity and not to move, talk or read, as these may affect the quality of the scan. Depending on your illness you may be asked to drink approximately 1 liter of a flavoured oral contrast drink.

Following the resting period you will be asked to visit the toilet to empty your bladder before your scan. This is to ensure that the bladder is empty allowing for a good view of the pelvic region. Please make sure that you do not contaminate yourself or the environment, this is important for radiation safety purposes as well as for the correct image evaluation.

Then you will be taken to the scanner room. You will be asked to lie still flat on your back on a narrow scanning table that moves slowly through the PET/CT scanner during the scan. You will be asked to lie very still to get the best possible image. The scan itself is completely non-invasive and takes approximately 30-40 minutes.

### **After PET/CT examination:**

#### **During the first 24 hours after your PET/CT scan:**

Try to avoid close interaction with other people. Be very careful not to get too close to an infant or anyone who's pregnant.

If you are breastfeeding, you will be instructed not to breastfeed for 24 hours after the injection for the PET or PET/CT scan, the expressed breast milk should be discarded. Nursing mothers are encouraged to pump and store milk in anticipation of exposure to the radioactive tracer.

We recommend that you drink plenty of fluids for the remainder of the day to help flush any remaining radiopharmaceutical agent from your system.

Please make sure that you do not contaminate the environment and yourself with the course of using the toilet.

### **Result of PET/CT examination:**

A radiologist and a radiopharmacologist will read your scan. The completed and signed report and a DVD containing the images of your examination will be sent to your doctor or if requested, it can be posted to your address. Upon request, the result can be collected personally by you or your legal representative. In all other cases your authorization is needed to collect the result.

We appreciate your collaboration!