What you should know about your **PET/CT Brain Scan.**

**Purpose:**
PET/CT uses a small amount of a radioactive glucose product to evaluate neurological disorders, i.e.: Alzheimer’s disease and dementia, the reoccurrence of tumors, the localization of seizures and more. A low dose CT provides anatomical reference while the PET scan is able to detect cellular changes. The combination of PET/CT enables a more accurate detection of disease. It can help determine the extent of disease and location of seizure for surgery and treatment planning. Physicians can evaluate radiation therapy treatment response or effectiveness. PET is also used to assess abnormal findings and to avoid invasive procedures.

**Preparation:**
- 48 hours before your test:
  - Avoid strenuous activity or exercise until after the scan.
- 6 hours before your test:
  - Do not eat anything, chew gum, use mints or lozenges or smoke.
  - Do not take any diabetic medications. Other medications, especially for seizures, should be taken as directed by the ordering physician - take with water ONLY – no food.
  - You may drink water anytime.

**Procedure: What to Expect**
- Please bring a copy of your doctor’s order with you the day of your exam.
- Please bring a full medication list, seizure history and any MRI or CT films not performed by WellSpan.
- Please wear comfortable clothes. Jewelry will be removed for the scan.
- You or your caretaker will be asked to verify your name, date of birth and exam you will be having done.
- We will take a medical history, including biopsy and surgical dates, radiation therapy dates and seizure history.
- An IV will be placed in the arm. A blood sample will be taken to test your glucose level. A level below 200 is needed to proceed with the radioactive injection through the IV.
- There are no reactions or side effects to this material.
- You will lie on a stretcher for about 10-15 minutes in a dim, quiet room. You are not allowed to read text or talk during this time. Any stimulation will decrease uptake and image quality. After 10-15 minutes, the technologist will come in and inject the radioactive glucose in the IV. You will then rest another 30-45 minutes.
- After the rest time, a technologist will ask you to empty your bladder. All removable metal and jewelry must be taken off.
• You will lie down for your exam using a head holder on the PET/CT bed. There will be two scanners with a one foot space between the CT scanner and PET scanner. You will be made as comfortable as possible and asked to lie still during the exam. The scan time is approximately 15 minutes.

• The bed will move three times in and out of the scanners. Images will be taken of the brain. An additional image may be taken at the discretion of the radiologist.

**After the Test:**

• No reactions or special precautions.

• Your exam will be evaluated by a radiologist and the report will be sent to your physician.

**Risks and Benefits:**

PET/CT injections are eliminated quickly. The CT exam is not of diagnostic intensity so the radiation exposure is diminished. Side effects to Nuclear Medicine PET procedures are very rare. A PET exam is generally not recommended for women who are pregnant. Breastfeeding women will be asked to cease feedings for 18 hours.

**Imaging Department Phone Number:**

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