



PET/CT Scan Procedure

At the beginning of the PET scan procedure, you will sit in a chair and receive an injection of a small amount of radioactive material called FDG in a vein in your arm. This will not make you feel differently at all.

You will be asked to sit quietly for a period of time, usually about 30-60 minutes. During this time you must sit and relax and will not be able to get up and walk around, talk to friends, or read. This allows the tracer to travel throughout your body while it is in a relaxed state.

You will be asked to lie down on a table which will move you through the PET/CT scanner. The machine has a larger opening than an MRI, and it does not make any sound. A PET scan procedure takes about 30 minutes.



The day before your scan:

1. Avoid eating carbohydrates and sugar beginning at **noon** on the day before your scan.
(Please see the attached diet instructions.)
2. If you are diabetic, please see the attached detailed instructions.
3. Do not exercise or participate in strenuous physical activity i.e. jogging, gym, swim, gardening, carrying heavy objects.
4. Do not chew gum.
5. No caffeine, alcohol, dagga, nicotine or herbal products are allowed 12 hours prior to the scan.
6. Keep warm for at least 24 hours before your scan. Stay in a warm environment or wear warm clothing. This helps the quality of the PET images.

The day of your scan:

1. You may eat a **light** breakfast the day of your scan (continue to avoid carbohydrates and sugars). Follow attached diet please.
2. Breakfast must be **finished 6 hours** before your exam time.
3. Unless your doctor has told you to limit your fluid intake, you should drink plenty of water the day of your exam. It is important that you are well hydrated for your scan.
4. If you are taking any sedation for your exam, follow the instructions given to you by your doctor. Please bring the bottle of pills to your appointment. If you are scheduled to take a pill after arriving at the PET center, the radiographer will tell you when to take it.
5. If you were asked to bring prior scans to be compared to your PET/CT scan, please make sure to do so.
6. **DRESS WARMLY** – even in summer months. Please do not wear clothes with zippers, metal studs or containing any shiny prints. Tracksuits are best. Bring a sweatshirt/sweater. To get the best scan results, you must **not** be chilled prior to or during the preparation for your scan.

Pre PET/CT Diet Plan & Meal Ideas

Following this diet is important for normal distribution of the radioactive glucose (F18-FDG) in your body. 24 hours prior to your exam, you will need to follow a low carbohydrate/high protein diet. The food items listed below are only suggestions. **It is not necessary to consume all food items listed.** If you wish, you can substitute other low carbohydrate foods for the ones recommended below. Most importantly, avoid sugar and other high carbohydrate foods such as white rice, white breads, fruits, pastries, and cookies.

On the day of your scan, you must fast for 6 hours prior to the exam (Diabetic patients must fast for 6 hours prior to exam). Use the diet suggestions for breakfast if your exam is scheduled for the afternoon. Although you are asked to fast, you may drink as much water as you wish.

Suggested Foods

Protein	Non-breaded beef, chicken, turkey, fish, pork, lamb or ham (without honey); hot dogs; lunch meats; fish, shellfish or crab; peanut butter (1-2 servings total), most nuts or sunflower seeds (120g total); and eggs.
Dairy	Low-fat cottage cheese, light yogurt, sour cream or butter.
Vegetables	Green beans, asparagus, broccoli, cabbage, cauliflower, celery, cucumber, lettuce, mushrooms, radishes, spinach or zucchini.
Condiments	Mayonnaise, salad dressing, oil, vinegar, mustard, hot sauce, tartar sauce, olives, dill pickles.

Meal Suggestions

Breakfast	Bacon/sausage & eggs; ham & cheese omelette; light yogurt; veggie & cheese omelette.
Lunch	Egg salad; chef salad with no tomatoes or croutons; ham & cheese wrapped in lettuce leaves; cottage cheese; turkey, chicken, tuna, ham or other luncheon meat.
Dinner	Veggie or meat soup with canned broth; cheeseburger without the bun; grilled chicken with barbeque sauce; green beans.

Foods to AVOID

All foods containing sugar and most processed foods. Even “low-carb” versions of the items listed below.

Potatoes	Tomatoes	Bread- all types of grains	“Veggie” burger	Mieliepap/Oats
Peas/Corn	Breaded foods	Soybeans (Edamame)	Carrots	Fruit
Rice (brown & white)	Syrups and Jams	Legumes	Juices	Pastas/Noodles
Crackers	Squash	Milk	Sauces & Gravies	Breath Mints
Ketchup/Tomato sauce	Chips/Pretzels	Ice Cream	Candy/Gum	Rice Cakes
Alcohol of any kind	Flavored water	Coffee, tea or any caffeine	Cereals	

IMPORTANT REMINDERS FOR ALL PATIENTS:

1. Tell the radiographer if you are pregnant, a nursing mother, claustrophobic, diabetic, or if you have any special needs.
2. Wear comfortable clothes to your appointment. Dress warmly and bring a sweater/sweatshirt.
3. Wear clothes without metal, ie. zippers, studs, bra with underwire. If necessary, a gown will be provided.
4. Please leave all jewelry at home or you will be asked to remove the jewelry.
5. Your visit will last approximately 2-4½ hours including check-in, uptake and scan time. Unfortunately, family / friends cannot accompany you.
6. You can bring music to listen to during the imaging phase of your exam.
7. Some patients will receive several cups of oral contrast to drink prior to the scan. This helps to outline the bowel on the scan. Tell the technologist if you have had any previous problems with oral or IV contrast.
8. Accurate interpretation of your scan requires knowing a number of details about your condition and your medical history. **PET-CT scans can only be done 2 weeks after the last chemotherapy, 6-8 weeks after surgery and 12 weeks after radiation.** Before the exam, the technologist will need to obtain a fairly detailed history. It will make this process easier and more accurate if you bring a list of the following to your appointment:
 - a. All medications you are taking
 - b. All surgeries or other major medical procedures you have had, including dates
 - c. Chemotherapy treatments you have had, including date of the last therapy
 - d. Radiation therapy treatments, including dates and what part of the body was treated
 - e. Any other types of cancer treatments you have been given
 - f. Any bone marrow stimulant medications you are on, and last date given
 - g. Any recent imaging studies (CT, PET/CT, MRI, etc.) you have had
9. If you will not be able to make your PET/CT scan appointment or if you have any questions about your exam, please contact BAYRADIOLOGY at least 24 hours before your exam on **041 3939160**

ADDITIONAL PET/CT INSTRUCTIONS FOR DIABETIC PATIENTS

The PET scan uses a small amount of a radioactive compound called **FDG** that is very similar to glucose. This allows us to make images of the metabolic activity within your body's tissues and any possible tumors that might be present. Because FDG is so similar to glucose, the balance between blood sugar levels and insulin levels can have a big effect on the quality of the PET images, which can have a big effect on the ability to detect tumors on the images. This can be a tricky process, because **either** a high blood sugar level or a high insulin level can lead to very poor image quality and false information on the scans. The goal is to plan your food intake and medication dosage so that your insulin level is fairly low, but your blood sugar level is not too high. This is usually accomplished by making sure that you have not eaten and have not taken your medications shortly before your PET/CT scan. Please check your blood glucose every morning while fasting for 3 days before the PET-CT to confirm your blood sugar level is between 8.3 - 11.1 mmol/L.

The radiographer will check your blood sugar before the PET/CT exam can begin. Your blood sugar must be under **11.1 mmol/L**. **If not, please contact the Department immediately to prevent rescheduling.** Always test your blood sugar before taking insulin or oral diabetic medications. You may need less than your usual dosage because of the low-carbohydrate diet and fasting.

As a general rule, diabetic patients must be **fasting** (meaning you can only drink water) for at least **six hours** prior to the PET/CT scan. You must **not** have taken **insulin** within **four hours** prior to the scan. There is no single approach to managing food intake and medication dosages that works in every patient. It sometimes requires several attempts to get your blood sugar in the appropriate range for the PET/CT scan. In general, there are two scheduling plans that seem to work best in most patients.

For many patients, simply **fasting after midnight**, drinking only water, and **not** taking **insulin** prior to an early-morning PET/CT scan appointment works well. If you take oral medications to control your blood sugar, please take your medication unless this causes your blood sugar to drop too low. If you think it may drop too low, take half your usual medication dose. However, if you already know that your blood sugar runs over 150 mg/dL in the morning after you wake up and before you take your medications, make sure to let the person scheduling your PET/CT appointment know. This approach may not work well for you and your scan may have to be scheduled differently. This is especially likely if you are on insulin.

The other common approach is to schedule your PET/CT appointment for early in the afternoon. In this case, you must get up early enough to eat a light breakfast at least **six hours** before your scheduled PET/CT scan time. It is preferred that you take your insulin and/or oral medications at least **six hours** (minimum **four hours**) before your scan. You can then have only water until your PET/CT scan.

Patients using insulin pumps will be asked to turn them off or set them to the "fasting" or "overnight" setting for four hours prior to the PET/CT. If this is not possible, you must tell the radiographer how much insulin your pump delivered during the four hours.

Remember that you may need to decrease your medication dosages, especially your insulin dosage, because of the low-carbohydrate diet and the necessary fasting, especially if you are prone to having problems with low blood sugars. If you sometimes need to take glucose paste or oral glucose solution because of low blood sugar, bring some to your appointment, in case you need it. Once you arrive at the PET center, tell the technologist **immediately** if you begin to feel like your blood sugar is too low.

Appointment Information

APPOINTMENT DATE:

ARRIVAL TIME:

PLACE: **Bayradiology**
1 Mangold St, Newton Park, Port Elizabeth, 6001
041 363 0759

GPS coordinates: [33°56'50.1"S 25°34'29.8"E](https://goo.gl/maps/eYf8g1ch2jw)
<https://goo.gl/maps/eYf8g1ch2jw>

