Cardiac PET/CT Scan for Cardiac Inflammation

How to prepare for your scan

This handout gives special instructions for patients who are having a cardiac PET/CT scan to look for cardiac inflammation such as sarcoidosis. You must follow these instructions for us to be able to do your scan.

What is a PET/CT scan?

You are scheduled for a positron emission tomography/computed tomography (PET/CT) scan of your heart. This scan will check the blood supply to your heart and show if there is any inflammation.

A PET/CT camera takes 2 types of pictures:

- The **PET scan** shows where the radioactive tracer has collected in your body (see “What to Expect” on page 3).
- The **CT scan** provides detailed pictures of your heart tissues and structures.

The PET/CT scan will show if areas of your heart are inflamed. One of the many things that can cause inflammation in the heart is sarcoidosis.

How should I prepare for the scan?

- You may take all your normal medicines.
- Call the Nuclear Medicine Clinic at 206-598-4240 if it is hard to place an intravenous (IV) line in your arm.
- **You will need to lie flat on your back for 2 hours for this scan.** If you feel that you cannot do this, please tell your health care provider or call the Nuclear Medicine Clinic at 206-598-4240 before the day of your scan.
Food and Drink Restrictions

To have this scan, you must strictly follow the diet restrictions in the boxes at the bottom of this page. If you do not or cannot follow the diet, your scan results will not be accurate and you will be asked to return on another day.

The reasons for the diet restrictions are:

- All cells in your body need energy to work correctly. Healthy heart muscle cells use glucose (sugar) as their main source of energy. When you do not eat foods that provide your body with glucose, healthy heart muscle cells start to use fat as their fuel supply instead of glucose. But, inflamed heart muscle cells cannot use fat for fuel. Inflamed cells can only use glucose as their main source of energy.

- When you follow the diet restrictions below, you are depriving your body of glucose. When you do this, your healthy heart muscles cells will start to use fat for energy. Your inflamed heart cells will still look for glucose to use.

- For this scan, radioactive glucose is injected into your vein. Only the inflamed areas of your heart will take up this radioactive glucose. The pictures of your heart we take on the PET/CT camera will show where the radioactive glucose is.

The Entire Day Before Your Scan

You MUST follow important food and drink restrictions starting the day before your scan. The boxes below give the restrictions to follow:

- The entire day before your scan (Step 1)
- Starting 12 hours before your scan (Step 2)

Call us at 206-598-4240 if you have questions about what you can and cannot do before your scan.

DIET STEP 1:
The ENTIRE DAY Before Your Scan
You must eat a high-fat, high-protein, NO-carbohydrate diet before this scan. If you do not follow this diet, your test results will be incorrect.

The entire day before your scan:

You May Have:
- Meat and fish (beef, steak, pork, bacon, chicken, fish of any kind, hot dogs, sausages, lamb)
- Eggs
- Nuts
- Green vegetables (less than 1 cup)
- Water, plain coffee, or tea

Do NOT Have:
- Any foods that contain carbohydrates (sugar, starch, fruit, fruit juice, alcohol, milk) the entire day before your scan.

DIET STEP 2:
For 12 HOURS Before Your Scan

- Do not eat anything.
- You may drink water or plain coffee or tea (no milk, cream, sugar, or anything else added).
- If you have diabetes, please talk with your health care provider who manages your diabetes about how to adjust your diabetes medicines before your scan. This includes pills and insulin injections.
These food and drink restrictions are VERY important to follow to get a good-quality scan. If you eat or drink any of the not-allowed foods within the timeframes in Step 1 and Step 2 on page 2, call us at 206-598-4240 to reschedule your scan.

The Day of Your Scan

- **Please arrive on time.** The exact timing of this scan is very important. If you are more than 20 minutes late, we may need to reschedule your scan.
- Wear comfortable clothes.

How to Find Us

The Nuclear Medicine Clinic is on the 2nd floor of UWMC. From the main lobby on the 3rd floor (main level), take the Pacific elevators down to the 2nd floor. Follow the signs to Radiology and check in at the Radiology front desk.

What to Expect

When you arrive at the Nuclear Medicine Clinic, a technologist will talk with you about what you can expect during your scan. **Plan to be at the hospital for up to 5 hours for this procedure.**

Briefly, here is what you can expect:

- An *intravenous* (IV) line will be started in your arm.
- The nuclear medicine technologist will inject a small amount of radioactive tracer. This substance shows the blood flow to your heart muscle and allows us to take clear pictures of your heart. It is very rare to have allergic reactions to this tracer.
- The technologist will use a PET/CT scanner to take pictures of your heart. This will take about 20 minutes. These images will show us how much blood reaches your heart.
- During this first set of images, a small amount of an *anticoagulant* (blood-thinning) drug called *heparin* will be injected into your IV. This makes it easier to see if there is any inflamed tissue in or around your heart.
- After these first images are taken, you will be injected with another radioactive tracer. You will need to remain lying on your back during this time between scans.
- More images of your heart will be taken 1 hour later. These images will take about 35 minutes.
• Before you leave, a blood test will be done to make sure your blood is clotting normally. This blood test may need to be done more than once. Allow 1 hour for blood testing after your PET scan.

Who reads the scan and when will I get the results?

A nuclear medicine doctor and/or nuclear cardiologist will read your PET/CT scan. Within 3 days, this doctor will send your results to your health care provider who referred you for this scan. Your provider will then share your scan results with you.