PET/CT FDG Scan for Patients with Diabetes

This handout gives special instructions for patients with diabetes who are having a PET/CT FDG scan at University of Washington Medical Center, Harborview Medical Center, or Seattle Cancer Care Alliance. Please see phone numbers for each facility on page 4.

Your doctor has ordered an exam for you called a PET/CT FDG scan. Please ask for the handout called “PET/CT FDG Scan” if you do not already have it.

PET stands for positron emission tomography. A PET/CT camera takes 2 types of pictures:

• The PET scan shows where the radioactive tracer has collected in your body.

• The CT scan provides pictures of your body structures.

The PET and CT scan together provide the images your doctor needs to look for changes in your cells.

FDG stands for 2-Deoxy-2-[18F]fluoro-D-Glucose. This type of imaging uses Fluorine-18 FDG, a radioactive tracer that acts like glucose in the body.

People with diabetes have trouble processing glucose. This means you need to follow special instructions for your PET/CT FDG.

Carefully follow all instructions in this handout. Keeping your blood sugars under control provides the best information possible from this exam.

Instructions

1. Call your health care provider who manages your diabetes 2 weeks before your scan to talk about the best way to prepare for your scan. Review the instructions in this handout with this provider.

2. You will need to start your fast 12 hours before your appointment time. Your PET/CT FDG scan will be early in the morning to reduce the amount of time you will need to fast.

Talk with your health care provider who manages your diabetes 2 weeks before your scan.
If your appointment is not set for early morning, please call the Radiology/Nuclear Medicine staff where your scan is scheduled. (See phone numbers on page 4.)

3. Make sure your blood glucose (blood sugar) can be between 80 and 150 mg/dL by 8 a.m. on the morning of your scan, after your 12-hour overnight fast. If you are not sure that you can do this, try a “practice run” 3 days before your appointment (see instructions on pages 2 and 3). Please call the Radiology/Nuclear Medicine staff where your scan is scheduled if you have any problems reaching a blood glucose level between 80 and 150 mg/dL in the morning after your fast. (See phone numbers on page 4.)

4. If your blood glucose level is above 150 mg/dL on the day of your scan, we may need to reschedule your scan.

5. If you have a blood glucose level lower than 70 mg/dL or symptoms of hypoglycemia (low blood glucose) while fasting for the PET/CT FDG scan, treat your low blood sugar in your usual way. Then call us to reschedule your scan. **Do not let your blood sugars go so low that you are unsafe!**

6. Do not exercise for 48 hours before your scan appointment.

**How to Do a “Practice Run”**

Check your blood glucose levels for at least 3 days before your PET FDG scan appointment.

1. Evening meal before your overnight fast:
   - If you take insulin, take your usual evening insulin dose with your evening meal.
   - If you take oral diabetes medicine or a diabetes medicine besides insulin that you inject (with brand names Victoza or Byetta), take your usual dose of these the evening before your practice run.
   - Fast for 12 hours overnight.
   - During your fast you may drink plain water only. No gum or mints.

2. Check your blood glucose level in the morning after your 12-hour fast.

3. Please call the Radiology/Nuclear Medicine staff where your scan is scheduled to let them know what your blood glucose level was after your 12-hour practice-run fast. (See phone numbers on page 4.)

4. If your morning blood glucose level after your practice run was higher than 150 mg/dL, we need to know this well before your scan appointment so we can ask the health care provider who manages your diabetes for instructions.

**A morning blood glucose level between 80 and 150 mg/dL is a safe range for your PET/CT FDG scan appointment.**
5. In the morning after your practice run, you may return to your normal routines of eating and taking medicine until the evening before your scan.

**On the Day of Your Scan**

1. Fast overnight for 12 hours before your scan. **See the instructions on pages 3 and 4 for taking insulin, oral diabetes drugs, and other diabetes drugs besides insulin that are injected.**
   - You may drink plain water only during your fast – **no other drinks.**
   - You may **not** have gum, mints, or candy.
   - Do **not** take any vitamins, chewable tablets, or syrup-based medicines such as cough syrup.

2. You may take your **non-diabetes medicines** with water on the morning of your exam if you do not need to take them with food.

3. Check your blood glucose level in the morning after your 12-hour fast. If your blood glucose is:
   - 80 to 150 mg/dL, go to your appointment as scheduled.
   - Below 70 mg/dL or you have symptoms of hypoglycemia, treat your low blood glucose in your usual way. **Do not let low blood glucose go untreated.** Call the facility to reschedule your scan (see phone numbers on page 4).
   - Above 150 mg/dL, call us. We may need to reschedule your scan.

4. On the day of your appointment, you will have to keep fasting until your scan is over, unless you have a blood glucose level lower than 70 mg/dL or symptoms of hypoglycemia. Your scan will last about 3 hours.

**Instructions for Diabetes Medicines**

If you are taking diabetes medicines (insulin, oral drugs, or diabetes drugs besides insulin that you inject), follow the instructions below and on page 4.

**Oral or Diabetes Drugs Besides Insulin That You Inject**

<table>
<thead>
<tr>
<th>The day before your PET/CT scan</th>
<th>Take your usual oral diabetes drugs or diabetes drugs besides insulin that you inject (with brand names Victoza or Byetta). Eat regular meals the day and evening before your PET/CT scan. Fast for 12 hours overnight before your scan. Do <strong>not</strong> chew gum, eat mints or candy, or take vitamins during your fast.</th>
</tr>
</thead>
<tbody>
<tr>
<td>On the morning of your PET/CT scan</td>
<td>Do <strong>not</strong> take your morning oral diabetes drugs. Do <strong>not</strong> inject Victoza or Byetta.</td>
</tr>
</tbody>
</table>
### After your PET/CT scan

#### For Metformin (example brand names: Glucophage, Glucophage XR, Fortamet, Glumetza, Riomet):
- If you have a contrast CT scan done, you may be instructed **not** to resume any drugs that contain Metformin until your kidney function is tested and is normal. You will receive instructions about this on the day of your scan.

#### For oral diabetes drugs other than Metformin (see above for Metformin brand names):
- **At lunch:** Take your usual morning oral diabetes drug. Inject your usual Victoza or Byetta. After this, return to your usual doses.

Check with your health care provider you see for your diabetes if you have any questions.

### Insulin

#### The day before your PET/CT scan

Take your usual insulin doses with your usual meals the day before your PET/CT scan. If you take a bedtime dose of insulin, you may take this as ordered, but please be sure to have a high protein snack before your 12-hour fast.

Fast for 12 hours before your appointment.

#### On the morning of your PET/CT scan

You **cannot** inject insulin on the morning of your scan. If you normally inject long-acting (basal) insulin such as Lantus or Levement in the morning, you may need to take it the evening before your scan. Your health care provider who manages your diabetes will help you adjust your insulin schedule before your scan.

**Remember:** Ask your diabetes health care provider about your morning insulin doses 2 weeks before your scan. **Tell this provider you cannot inject insulin the morning of your scan.** (Exceptions may be made for patients on an insulin pump.)

You will be fasting for a total of about 15 hours, including scan time.

If you have any questions, please call the Radiology/Nuclear Medicine staff where your scan is scheduled. (See phone numbers in the “Questions?” box on the left.)

#### After your PET/CT scan

Check with your health care provider you see for your diabetes if you have any questions about resuming your insulin after your scan.

### Questions?

Your questions are important. Call your doctor or health care provider if you have questions or concerns.

- University of Washington Medical Center Imaging Services: 206-598-6200
- Harborview Imaging Services: 206-744-3105
- Seattle Cancer Care Alliance: 206-288-7200