

# POSITRON EMISSION TOMOGRAPHY (PET) FACT SHEET

MEMORY & AGING PROJECT (MAP), WASHINGTON UNIVERSITY

## WHAT IS PET?

**PET stands for positron emission tomography, which is an imaging study that uses small quantities of radioactive material to examine tissue function.** A PET scan is often coupled with a computed tomography scan (CT) or a magnetic resonance imaging (MRI) scan so that a structural image can be generated. PET/CT and PET/MRI scans conducted at the Knight ADRC focus on target lesions in the brain such as beta amyloid plaques, that are linked to Alzheimer disease. The location of the radioactive material, which binds to these targets, is shown in the PET image. The PET image is then combined with the structural image, to allow researchers to see exactly where the findings are located in the brain.

## WHAT WILL HAPPEN BEFORE MY PET APPOINTMENT?

Before scheduling an appointment, a research coordinator will call to ensure that you are eligible for the specific study for which you are being recruited. For your safety, we will ask screening questions about your health history. Then the coordinator will help book an appointment that fits your schedule. We will also provide detailed instructions on how to get to the Center for Clinical Imaging Research (CCIR), located in Barnes-Jewish Hospital main (South) campus.



*Image from www.phillips.com*

The machine looks like a large doughnut. The hole in the center of the machine, called the bore, is comparable to the size of a small hula-hoop.

## WHAT SHOULD I EXPECT DURING MY PET APPOINTMENT?

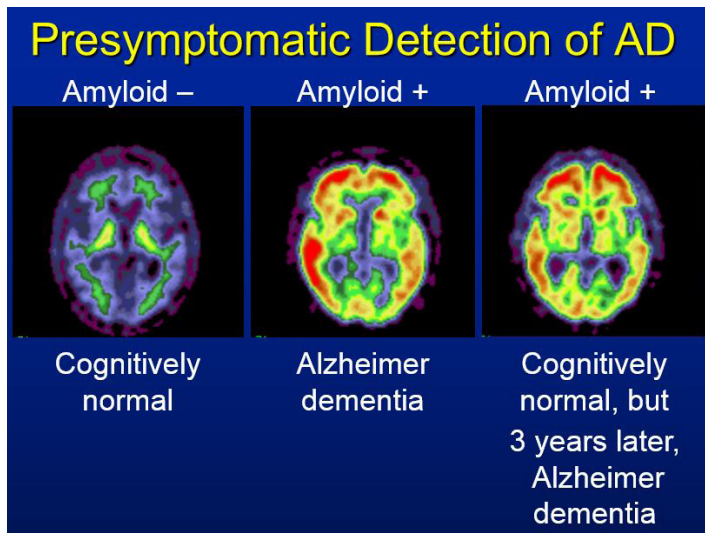
First, the research coordinator will give you a final overview of the study and accompanying consent forms. After all questions are answered and the consent form is signed, an intravenous (IV) line will be inserted into your arm. You will then be brought to the scanner, where you will lay flat on your back. You will be provided with things such as a blanket, a padded headrest, and pillows beneath your legs to ensure comfort. A plastic mask (with large eye holes) may be placed over your face to ensure that your head stays still. You will receive an intravenous injection of radioactive material via the IV catheter, either in the scanner, or in an exam room. The PET portion of the scan may last up to two hours. Shorter protocols are also available, and you can take a break if you need to.

## WILL I FEEL ANYTHING DURING THE SCAN?

The scan itself will be completely painless. Although the research coordinators and physicians will do everything that they can to make the scan as comfortable as possible, you may still experience some discomfort from lying still for a long period of time. Some patients experience claustrophobia while in the scanner. If this is a concern for you, be sure to discuss it with the research coordinators.

## HOW MUCH RADIATION WILL I BE EXPOSED TO DURING THE SCAN?

You will be exposed to a small amount of radiation during the scan. Radiation exposure comes from the injection and also the CT scan. Each research study carefully monitors the specific radiation exposure for each participant to ensure that safe limits are not exceeded. If you have more questions please contact the study coordinator for more information regarding the study for which you are enrolled.



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## WHERE CAN I FIND MORE INFORMATION?

**THE RADIOLOGICAL SOCIETY OF NORTH AMERICA:**

<http://www.radiologyinfo.org/en/info.cfm?pg=pet>

If you have any further questions, contact Dr. Benzinger and the Knight ADRC Research Imaging Team at Phone: (314) 362-1558

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