Persantin myocardial perfusion scan

What is a Persantin myocardial perfusion scan?
This is a test to assess the blood supply to your heart muscle and to compare the
difference between rest and exercise.

The procedure is undertaken in 2 parts - normally on 2 separate days, 2 - 10 days apart.
Each visit will last between 2 - 3 hours.

As this is an expensive procedure, please inform us as soon as possible if you are unable
to attend for either appointment.

If you are taking the drug Dipyridamole or Persantin,
please contact the department immediately.

First appointment - Persantin stress test

Preparation
Please do not have anything to eat for 4 hours before your appointment time, and drink
only water or fruit juice.

DO NOT eat or drink anything that has caffeine in it for 24 hours before your first
appointment time. Otherwise, your scan will not work and your appointment will have to be
cancelled.

Caffeine containing foods and medicines include:

- TEA and COFFEE (including decaffeinated tea and coffee)
- Lucozade, cola, chocolate, cocoa, hot chocolate, energy drinks such as Red Bull
- Any other decaffeinated drinks and foods
- Medicines containing caffeine available over the counter include: Anadin maximum,
  Beechams powder, Coldrex tablets, Lemsip capsules, Solpadine. Please see
  attached list for more details.

This is not a complete list. If in doubt, check the label or contact the department before the
scan.

If you are taking any of the medication listed below, please STOP taking them 48 hours
before your first appointment time. IF YOUR MEDICATION IS NOT ON THE LIST,
CONTINUE TAKING IT. Please bring your medication with you.
On the day of your test it is advisable to wear loose, comfortable clothing.

You will receive an injection to stimulate the blood flow to your heart and an ECG recording will be made of your heart.

After 8 minutes, you will be given a small injection of a radioisotope through the same needle in the vein in your arm.

After this, you must have something to eat and drink (you may provide your own food or restaurant facilities are available).

You will then be asked to return to the Nuclear Medicine Department at a given time (usually approximately 1 hour later).

Your heart will then be scanned using the gamma camera. This involves lying flat on your back on a couch, with your arms above or behind your head. The gamma camera will rotate slowly around your chest for 25 minutes as it scans your heart.

**Second appointment - rest test**
(usually 2 - 10 days later)

**Preparation**
Please do not have anything to eat for 4 hours before your appointment time, and drink only water or fruit juice.

You will be given a small injection of a radioisotope in a vein in your arm whilst at rest (eg. sitting in a chair).

After this, you must have something to eat and drink (you may provide your own food or restaurant facilities are available).

You will then be asked to return to the Nuclear Medicine Department at a given time (usually approximately 1 hour later).

Your heart will then be scanned using the gamma camera. This involves lying flat on your back on a couch, with your arms above or behind your head. The gamma camera will rotate slowly around your chest for 25 minutes as it scans your heart.

**Are there any risks involved with this test?**
There are a few adverse reactions to the injections used for this scan.

As with any injection there is a risk, eg. bruising.

There is only one serious reported adverse reaction every 2 - 3 years in the UK, from the ¾ million radioactive injections per year.

A few patients experience a warm feeling or a transient metallic taste.

The risk of serious complication during the “Persantin” test is 1 in 4,000 (0.05%), but all necessary precautions and back-up procedures are always in place.

A number of patients experience headache or dizziness during this injection.
**Radiation risks**
This scan involves using radioactive materials and possibly x-rays, and so has the usual risks associated with ionising radiation.

The amount of radiation used is roughly equivalent to that which you receive from natural background radiation in about 3 years.

This adds very slightly to the risk of, for example, developing a cancer. However, as one in three of us will develop a cancer at some stage during our lives, the added risk is very small. Indeed, the risks from missing a serious disorder by **not** having the scan are considerably greater.

Female patients who are or might be pregnant, or who are breastfeeding, must inform a member of staff **before** the procedure.

If possible, please avoid close and prolonged contact with pregnant mothers, babies and children for 12 hours after the procedure. This helps to avoid exposing them to any unnecessary radiation. The possible radiation dose to them is very small, but it is sensible to reduce this to a minimum.

**Are there any alternative treatment options?**
Your consultant has recommended this procedure/treatment as being the best option. However, the alternatives to this procedure are cardiac angiogram or CT angiogram.

There is also the option of not receiving any treatment at all. The consequences of not having this investigation are that your consultant may not have a full understanding of the cause of your symptoms and hence may not be able to offer you the best appropriate management.

If you would like more information, please speak to your consultant or a member of staff caring for you.

**References**
EANM/ESC procedural guidelines for myocardial perfusion imaging in nuclear cardiology (2005)
(last accessed Aug 2016)

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If you have any queries, or require further information please contact the Nuclear Medicine Department, Royal Derby Hospital
01332 788196 or 01332 788197