

Dix-Hallpike and Epley manoeuvres for BPPV

This leaflet is for patients with symptoms of dizziness. It explains one of the procedures we use for a condition called Benign Paroxysmal Positional Vertigo, or BPPV, and what you can expect during the test and treatment.

What is the purpose of this procedure?

The Dix-Hallpike manoeuvre is designed to assess for one of the most common causes of dizziness arising from the ear – called Benign Paroxysmal Positional Vertigo (BPPV). BPPV causes short bursts of intense dizziness when the head is placed in certain positions, such as lying on one side in bed or looking up at the sky. It is caused by small calcium carbonate crystals floating from one part of the inner ear where they should be, to other parts of the inner ear where they shouldn't be.

The Dix-Hallpike manoeuvre tests for BPPV by getting you to go from sitting upright on an examination couch to lying down with your head turned at 45 degrees, to either the left or right. We are then able to tell if you have got BPPV by looking at your eyes to see if they move in a certain way.

Are there precautions for performing the Dix-Hallpike procedure?

There are times where the Dix-Hallpike procedure should not be performed. In particular, it may not be suitable to perform in patients with some types of neck, back or blood circulation problems, those who have had a recent stroke or who are pregnant. In addition to asking about these conditions, you will be asked if you are able to adopt the positions required for testing without difficulty, in order to check your suitability.

How is the procedure performed?

The procedure to perform the Dix-Hallpike manoeuvre involves several stages:

1. You will first be asked to sit upright on an examination couch.
2. We will ask you to turn your head 45 degrees, either to the right or left. You will also be asked at this point to keep your eyes open throughout the whole procedure as it is *very important for us to see your eyes*.
3. We will then hold both sides of your head and ask you to lie down backwards on the couch, while keeping your head turned at 45 degrees, so that your head will be extended beyond the end of the couch when you are in the lying position. We will support the weight of your head with our hands while you are in this position.
4. You will be instructed to maintain this position for at least 30 seconds (and possibly up to 2 minutes) while we look at your eyes.
You may or may not feel dizzy at this point but remember to keep your eyes open so we can see how they are moving.

5. You will then be asked to sit back upright but still keep your head at 45 degrees. The picture below illustrates the different positions involved in the procedure:



If I do have BPPV, can it be treated?

BPPV can often clear up by itself after a few weeks or months without any treatment. However, for some people, BPPV may not clear up by itself and so treatment is needed. To remove dizziness we have to remove the crystals from the wrong parts of the inner ear. This can be achieved by a number of different treatment manoeuvres, which take you through a sequence of controlled movements that make the crystals float out of the wrong inner ear compartments.

The exact treatment manoeuvre depends on which parts of the inner ear the crystals are in and whether they are floating freely or attached to sensitive parts. Treatment is safe, simple and quick and, for most patients, the dizziness is eliminated after one treatment.

If you are having the Dix-Hallpike manoeuvre performed and we confirm that you have BPPV, we will then offer to perform an Epley treatment manoeuvre. This is performed in several stages:

1. While you are in the Dix-Hallpike lying down position, we will keep you in this position with head-extended (below left) and then turn your head by 90 degrees to the opposite side (e.g. from right to left or vice-versa; below right). We will keep your head in this position for up to one minute.



2. We will then ask you to turn your whole body onto the side that your head is turned, while still maintaining your head at 45 degrees, (below left) so that you will now be lying on your side with your nose pointing down towards the floor. We will keep you in this position for a further minute.

3. With your head still at 45 degrees, we will then ask you to sit yourself back upright. This concludes the Epley manoeuvre (below right).



There are YouTube videos of how the Dix-Hallpike and Epley manoeuvres are performed. Visit <https://www.youtube.com/watch?v=8RYB2QIO1N4> (Dix-Hallpike) and <https://www.youtube.com/watch?v=jBzID5nVQjk> (Epley)

However, you should only perform these manoeuvres under the supervision of your clinician.

How will I feel afterwards?

It is not unusual to feel slightly unwell for up to 48 hours after the Epley treatment manoeuvre. When this goes, if the treatment has been successful, you should be able to move without any problems into positions that used to make you dizzy. However, sometimes a patient will need more than one appointment to successfully treat the BPPV. If you are concerned about feeling dizzy or nauseous during the procedure and you have medicine to reduce this, you may take this in advance but you should let your clinician know you have taken it.

Are there any potential risks?

As with any procedure, there can be some small risks to performing the Epley (and Dix-Hallpike) manoeuvres. These risks include a possibility of:

- **Canal conversion** – crystals get from one wrong part of the inner ear to another wrong part. It is thought to represent 5% of cases (1 out of every 20).

These risks are rarer but still possible:

- **Canal jam** – crystals may get stuck in a place that can make your symptoms worse and more persistent. Why this happens is not well understood and the way to treat this is less certain.

- **Stroke/ischemic event** – disruption of the blood supply to your head/brain, causing permanent injury.

Although there is a possibility of these risks occurring in principle, the likelihood of them happening is very low and only a few cases have ever been reported. Therefore these risks should be balanced against the fact that the Epley manoeuvre is an effective procedure which is used routinely every day around the world to manage the negative impacts of BPPV.

If you have any questions, contact your clinician to discuss them before you attend the clinic, so we are able to use the time effectively in clinic to perform the testing.

Can I decline to have the side-lying procedure performed?

If you do not want to go ahead or have any questions about the Dix-Hallpike and Epley manoeuvres, please contact the clinician before attending your appointment, to reduce the time taken in the clinic.

Contacting us

Audiology Department, Tel: 0118 322 7238

Email: audiology.royalberkshire@nhs.net

Visit: <http://www.royalberkshire.nhs.uk/wards-and-services/audiology.htm>

To find out more about our Trust visit www.royalberkshire.nhs.uk

Please ask if you need this information in another language or format.

Audiology Department, August 2022.

Next review due: August 2024