



Information for  
patients and  
carers

**Lancashire Paediatric Audiology  
Service**

Balance Assessment appointment

## Information about your appointment

Our Paediatric Audiology Service is part of Lancashire Teaching Hospitals NHS Foundation Trust and specialises in the assessment and management of children's hearing loss, balance and auditory processing difficulties.

Our inner ear has two connected parts, the cochlea supporting hearing and the vestibule supporting balance. Up to 60% of children with sensorineural hearing loss may have poorly functioning balance organ. Some children with normal hearing may also have poor balance or dizziness. The purpose of the upcoming appointment will be to assess your child's balance function, along with a hearing test if needed. This will help us to understand the likely cause(s) of the hearing or balance impairment.

Some tests can be time consuming, and appointments can last up to an hour and a half. We may not be able to complete all assessments in one session and so, at times repeat appointments may be required. There is some information on the different types of testing later in this booklet. If you have any questions or concerns, do not hesitate to contact the service to speak to an Audiologist.

**Please note: If your child has a programmable ventriculo-peritoneal (PVP) shunt please make the Audiologist aware at the assessment.**

## Who will you see?

You will be seen by one or two members of the Paediatric Audiology Team who are specifically trained to test children's hearing and assess their balance.

Our team includes:

- Consultant Paediatric Audiovestibular Physicians, who are able to diagnose, offer management advice and suggest further investigations if required
- Specialist Paediatric Audiologists who are trained to carry out hearing and balance assessments

We will also liaise with any other professionals who may benefit your child's development and additional care needs.

The Hospital Trust is a teaching hospital and on occasions a trainee may also be present in a clinic. If you would prefer not to have a trainee in your child's appointment, please let us know.

## How to find us

Fulwood Clinic in Preston is situated on Lytham Road, which is off A6 Garstang Road. Car parking spaces are available on site. Please note - more detailed clinic facilities accompany all our first appointments for reassurance and information.

## Contact details

Should you require further advice or information please contact:

**Paediatric Audiology Service**  
**Fulwood Audiology Clinic**  
**4 Lytham Road**  
**Fulwood**  
**PRESTON**  
**PR2 8JB**

Tel: 01772 401310 / 401312

Email: [paediatric.audiology@lthtr.nhs.uk](mailto:paediatric.audiology@lthtr.nhs.uk)

## Pre-appointment preparation

During the assessment, we may use a variety of equipment to assess the balance of your child.

If your child's hearing has not been tested before we may complete a hearing test in this session.

In some balance tests we will ask your child to jump, hop or walk along a straight line. It would be helpful if you can show younger children these exercises if they are not familiar with them before the appointment. Depending on their age, it can be helpful to play some stop and go games to get them used to commands.

If your child becomes upset easily in new environments or with new people, please bring along with them a favourite toy / comforter or fidget toy, as this can help to relax them in the testing rooms.

The hearing and balance test needs to be carried out in a quiet room with minimal distractions, if possible, it is best to attend with only the child being tested. It is not possible to leave other children unsupervised in the waiting area, but they are welcome to wait there if they are accompanied by an adult.

It is important that your child is alert and awake for most of the tests. If they are unwell, please contact us as we may need to reschedule the appointment.

**Please contact us to tell us if your child has/had any of the following:**

- Eye surgery (within the previous 3 months)
- Blindness and Visual impairment
- Ear Surgery (within previous 6 months)
- Active ear infection
- Neck problems (stiffness, surgery, fracture)
- Brain or spinal cord disorders including VP shunt

- Mobility and posture issues (patient would need to be able to sit on a chair, lay down on a couch, walk and jump)
- History of heart problems or is undergoing cardiac investigations

## What will we do?



We have a range of ways to test balance. We may do this by asking your child to complete an action or movements whilst we watch and time them. We may use equipment, like the goggles above, with a very small camera attached, and sometimes small electrodes attached to the computer.

We appreciate that these may be new for your child and may seem scary. We try our best to administer the tests in a child friendly way and aim to complete them as quickly as possible. On occasion assessments may need to be repeated on another day.

## History

We will ask you some questions about your child's hearing, balance, other medical conditions, and relevant family history.

You may have been sent a pre appointment questionnaire. If so, please ensure you bring this fully completed to the appointment.

We appreciate that you may have been asked some or all these questions before, but it is important for us to get a full picture of your child's balance and/or hearing issues, as often not all information is in the referral letters.

It can be helpful for you to create a diary with your child as to when and where they experience issues with their listening and/or balance. This can help us to see patterns and association with things like anxiety, body position and movement, food, headaches, hormones, medications amongst others. It would be helpful for you to consider this in the 4 to six weeks before your assessment.

## Otoscopy

We will also need to look in your child's ears with a special torch (auroscope) to check the ear canals and the ear drums. Any blockage with wax may need to be removed before any further assessment.

## Tympanogram

A tympanogram (or tymp) is a measure of the flexibility of the eardrum. It helps us to check for fluid or congestion in the middle ear, which can impede your child's hearing. The test is quick. A small probe is placed in the ear, this produces a small puff of air which causes the eardrum to move and is measured by the probe.

## Pure Tone Audiogram (PTA)

We may or may not require a hearing test on the day of assessment. Depending on your child's age, we will test their hearing by asking them to respond to sound in some way.



This often includes some form of play, picture tests, moving toys from one pot to another or pressing a button to respond. It can be helpful to practice listening games with younger children such as putting a toy in a basket when they hear a sound at home before attending your appointment.

If you have noticed a gradual or sudden change in your child's hearing, it is always best to discuss this with a health care professional.

## Clinical examination

Not all tests require special equipment. We may ask your child to complete a series of tasks, to evaluate the functional connections between the brain, nerves, vestibular part of the ears, eyes and different muscles that keeps our balance. We may ask them to follow the clinician's finger with their eyes, read a chart while the head is moved from side to side, stand on a spot with their eyes closed, stand on one leg, walk along a straight line amongst others.

It is important they are wearing comfortable or sensible shoes such as trainers and clothing to complete the tasks. If their clothes restrict movement, it can impact the results.

## Blood pressure

We may need to take your child's blood pressure, laying down and then immediately after and few minutes later following standing from lying position. Please ensure they are wearing clothing that can be rolled up above the elbow.

To take the blood pressure, a cuff is placed around the arm, which tightens to monitor the blood flow and pulse. This does not hurt but can feel restrictive on the arm for a short period of time.

## Video Head Impulse Test (VHIT)



Our balance organ on each side has three semi-circular canals that tells our brain when the head turns in different directions, so that our eyes can move to compensate.

VHIT measures the head and eye movements using goggles with a small camera attached, to detect any abnormality in this system. Your child will be asked to stare at a spot on the wall while we move their head in small quick turns.

This does not take long, but things like eye makeup, hats or blinking can impact the results, so we may need to give commands such as “eyes wide open” while testing to ensure we are getting reliable results.

**Please do not use any mascara or artificial eye lashes for the balance assessment. Long hair should also please be tied back with a bobble.**



# Vestibular evoked myogenic potential (VEMP)

Unlike head turning, head movements in straight lines are sensed by other parts of the balance organ called utricle and saccule resulting in changes in tones of muscle of the body including those in the eyes and neck. The VEMP informs us if this system is working or not. VEMPS can be measured either from the neck muscles (Cervical VEMP) or the eye muscles (Ocular VEMP).



The ears are stimulated using sounds through headphones. The muscle responses to these sounds are measured with small electrodes on the face, head and neck.

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## Experience

Most children do enjoy their visit with us. We aim to make the assessment as relaxed for the child as possible, but appreciate that the environment is new, and that we may not be able to complete everything we need to do on a first appointment and so may need to reschedule a further appointment if further tests if required.

There are lots of child friendly videos available online for children attending appointments at the hospital or with doctors. It can be helpful to watch some of these with your child so they are not worried when they attend.

We will do our best to explain to you and your child at each stage what we are doing, and why. We will not complete a test without your permission and without compliance from your child.

For further information please see:

<http://www.ndcs.org.uk/information-and-support>

(Link given with kind permission of the NDCS)

## Results

The results and any management plans will be explained and discussed with you by the Consultant or Paediatric Audiologist.

A period of review may be suggested or repeat testing carried out before any management suggestions are offered. This will be explained to you and any relevant information given to you to review at home.

All the relevant professionals involved in your child's care will be informed of the findings with your consent.

## What happens if an issue is detected?

Some children with sensorineural hearing loss will have impaired balance and the brain compensates the vestibular deficits. Identification of vestibular deficits in such children may help us finding the underlying cause of the hearing and balance deficits. Some causes of balance and dizziness settles spontaneously, and other causes may need different interventions depending on the diagnoses. We may also need to refer you child to another specialist centre, such as the Alder Hey Children's Hospital.

Our main aim is to rule out a vestibular dysfunction and to advise on strategies to help. We will discuss any management options available, so you can make an informed choice on how you want to proceed if it is required.

## What to do if you cannot attend the appointment

Please contact us as soon as possible if you cannot attend so that we can offer your child's appointment to another child.

If your child has a slight cold on the day of the appointment but is generally well in themselves, then it is fine to attend.

## Communication

If English is your second language, or you sign, please contact the Audiology Office on the following number or email if you require an interpreter:

Telephone: 01772 401310 / 401312

Email: [paediatric.audiology@lthtr.nhs.uk](mailto:paediatric.audiology@lthtr.nhs.uk)

## Facilities available

Baby changing facilities and disabled toilets are available at all clinic locations.

## Views on our service

If you are satisfied that we are providing a good service please tell us. If you are dissatisfied or feel we could improve the service we would value your comments. Patient feedback forms are available in reception, or if you prefer you can contact our Audiology Service Manager on: 01772 410310 or The Patient Advice and Liaison Service (PALS) on: 01772 522972 or email: [PALS@lthtr.nhs.uk](mailto:PALS@lthtr.nhs.uk)

## Sources of further information

[www.lancsteachinghospitals.nhs.uk](http://www.lancsteachinghospitals.nhs.uk)

[www.nhs.uk](http://www.nhs.uk)

[www.patient.co.uk](http://www.patient.co.uk)

[www.accessable.co.uk](http://www.accessable.co.uk)

[www.lancsteachinghospitals.nhs.uk/paediatric-audiology-local-offer](http://www.lancsteachinghospitals.nhs.uk/paediatric-audiology-local-offer)

[www.ndcs.org.uk/family\\_support/childhood\\_deafness/hearing\\_tests/index.html](http://www.ndcs.org.uk/family_support/childhood_deafness/hearing_tests/index.html)

[www.ndcs.org.uk](http://www.ndcs.org.uk)

All our patient information leaflets are available on our website for patients to access and download:

[www.lancsteachinghospitals.nhs.uk/patient-information-leaflets](http://www.lancsteachinghospitals.nhs.uk/patient-information-leaflets)

**Lancashire Teaching Hospitals NHS Foundation Trust is not responsible for the content of external internet sites.**

Lancashire Teaching Hospitals is a smoke-free site. Smoking is not permitted anywhere on any of our premises, either inside or outside the buildings. Our staff will ask you about your smoking status when you come to hospital and will offer you support and advice about stopping smoking this will include Nicotine Replacement Therapy to help manage your symptoms of withdrawal and the opportunity to speak to a nurse or advisor from the specialist Tobacco and Alcohol Care Team.

If you want to stop smoking, you can also contact the Quit Squad Freephone 0800 328 6297.

Please ask if you would like help in understanding this information. This information can be made available in large print and in other languages.

**Gujarati:**

આ માહિતીને સમજવામાં સહાયતા જોઈતી હોય તો કૃપાકરિને પૂછો. આ માહિતી મોટા છપાણામાં અને અન્ય ભાષામાં ઉપલબ્ધ કરી શકાય છે.

**Romanian:**

Vă rugăm să întrebați dacă aveți nevoie de ajutor pentru înțelegerea acestor informații. Aceste informații pot fi puse la dispoziție în format mare și în alte limbi.”

**Polish:**

Poinformuj nas, jeśli potrzebna jest ci pomoc w zrozumieniu tych informacji. Informacje te można również udostępnić dużym drukiem oraz w innych językach

**Punjabi:**

ਜੇ ਤੁਸੀਂ ਇਹ ਜਾਣਕਾਰੀ ਸਮਝਣ ਵੱਲੋਂ ਮਦਦ ਲੈਣੀ ਚਾਹੋਗੇ ਤਾਂ ਕਰਿਪਾ ਕਰਕੇ ਇਸ ਬਾਰੇ ਪੁੱਛੋ। ਇਹ ਜਾਣਕਾਰੀ ਵੱਡੇ ਪ੍ਰਿੰਟ ਅਤੇ ਹੋਰਨਾਂ ਭਾਸ਼ਾਵਾਂ ਵੱਲੋਂ ਮੁਹੱਈਆ ਕੀਤੀ ਜਾ ਸਕਦੀ ਹੈ।

**Urdu:**

دو سر ی زبانوں او ر بڑی اگر آپ کو ہی معلومات سمجھنے کے یلے مدد یک ضرورت ہے تو ییچھیا یس ییہ ابی دست بو یسکت ہے برا ے مہر یان یو ییچھدی۔ معلومات

**Arabic:**

مطبوعة بأحرف كبيرة و بلغات إذا كنت تريد مساعدة في فهم هذه المعلومات يُرجى أن تطلب آخرى يمكن تو فير هذه المعلومات

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**Division:** Women and Children

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