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Your appointment for an overnight polysomnography (PSG) and daytime multiple sleep latency tests (MSLT)

Sleep Disorders

Information for Patients

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Introduction

We are a small department with 4 bedrooms. These are used for doing 2 types of sleep tests:

1. Polysomnography (PSG) test.
2. Daytime Multiple Sleep Latency Tests (MSLT).

Your consultant has referred you for a PSG or PSG/MSLT test:

- **PSG test**: The overnight polysomnography tests are done on a Tuesday. If there is a backlog of patients waiting sometimes, we test Thursday nights.
- **PSG/MSLT test:** These are done only on Tuesday nights. Patients who need the daytime test stay the next day (Wednesday).

You will be given a time to arrive at the department so that you can be set up for the overnight test. **If you are late for your appointment you may not be seen.**

The Hanning Sleep Laboratory is on the lower ground floor of the Leicester General Hospital near Ward 28/29.

What is a PSG?

A polysomnography is a sleep study. Polysomnograph machine records:

- brain waves (EEG),
- the oxygen level in your blood,
- eye movements (EOG),
- muscle activity (EMG),
- heart rate and rhythm (ECG),
- your breathing during your sleep,

Why do I need this test?

A PSG is done to diagnose, or rule out a sleep disorder. We do this in patients who complain of daytime tiredness or sleepiness that may be caused by interrupted sleep. PSG tests help us to look at the changes in your body and brain during sleep. This test monitors your sleep stages and cycles. It may help us find out if your sleep is disturbed and why you are having sleep problems. The results of the overnight test may help your doctor with a treatment plan that would work best for you.

What are the risks?

There is very little risk, the recording itself is painless. The most common side effect is skin irritation. There are no after effects.

What is a MSLT?

A MSLT is done to see how quickly you fall asleep, and what type of sleep stages and cycles you have in a quiet environment during the day. Polysomnograph machine records:

- brain waves (EEG),
- the oxygen level in your blood,
- eye movements (EOG),
- muscle activity (EMG),
- heart rate and rhythm (ECG) during a daytime nap.

The MSLT helps to look at the changes in your body and brain. It monitors your sleep stages and cycles during daytime naps. Did you sleep? How long it took you to get to sleep? What type stages of sleep did you have?

Why do I need this test?

A MSLT helps your doctor diagnose excessive daytime sleepiness and a sleep disorder called narcolepsy.

What happens during the day?

The MSLT is a full-day test. It consists of 3 to 5 scheduled naps. These are separated by 2 hour breaks. During each nap trial, you will lie quietly in the dark and try to go to sleep.

Once the lights go off, the test will measure how long it takes for you to fall asleep. If you sleep it will measure the sleep stages.

The test will end after 20 minutes if you have not fallen asleep.

The greatest time period a nap test would last is 35 minutes.

What are the risks?

There is very little risk, the recording itself is painless. The most common side effect is skin irritation. There are no after effects.

How to prepare for the overnight study

- Please arrive at least 15 minutes before your appointment time.
- Try not to nap in the afternoon on the day of your sleep study. This is to make sure you sleep as much as possible during your stay.
- Avoid alcohol and caffeine/stimulants (coffee, tea, chocolate, cola, Lucozade) after 2 p.m. on the day of your appointment.
- For the best possible signals and results we advise washing your body and scalp before arriving to make sure we have the best skin contact possible. Do not come with wet hair.
- Do not wear any make up, skin creams, hair gels or oils. This causes interference in the signals. It can make it harder for us to attach the electrodes to your skin. We may have to rebook your study.
- If you wear a weave/wig and/or hair extensions, please contact us before the appointment. We need to be able to get to your scalp.
- Please take off nail varnish, false or gel nails before arrival. We need to measure your oxygen level.
- If possible, to help with the attachment of the chin electrodes, men need to be cleanly shaven under their chin and neck area in order to attach reference leads. (Please remember this is a medical procedure and we need clear access to your skin.)
- Please wear loose fitting night wear, pyjamas or shorts. There will be both male and female patients coming in for their tests. Bring an over garment such as a dressing gown for dignity purposes.
- Do not wear leggings. You will have leads attached to each leg. You may also need leads attached to your forearms.
- Do not wear hoodies. These tend to push, shift and/ or dislodge the electrodes. If there are no clear signals due to electrodes moving or loss of contact, you may need to do the test again at a later date.
- Please bring your own toiletries if you would like to use the patient shower facilities.
- We will provide a pillow. You may bring your own if you choose.
- Once you are set up for the evening you will be allowed to move around the department, communal lounge area, and visit the bathroom.
- We do not provide evening meals or snacks. There is a kitchen with a microwave, kettle and fridge for you to use.
- There will be decaffeinated drinks, juice and cereals available.

As we stagger the appointment slots, we advise you to eat your main meal before your arrival. There is a kitchen and a microwave available for patient use.

What to expect when you arrive

- You will be greeted by one of our technicians. They will show you the lab area and show your bedroom for the night.
- You will be asked to change into your night clothes. The technician will do some measurements:
    - height,
    - weight,
    - blood pressure,
    - heart rate,
    - oxygen level.
- The technician will set you up for the overnight PSG test. They will put 4 removable pads with leads attached on your chest and waist area. These will measure your heart rate and rhythm.
- You will have 2 bands placed around your chest and tummy (abdominal) area to measure your breathing effort (Figure 1).

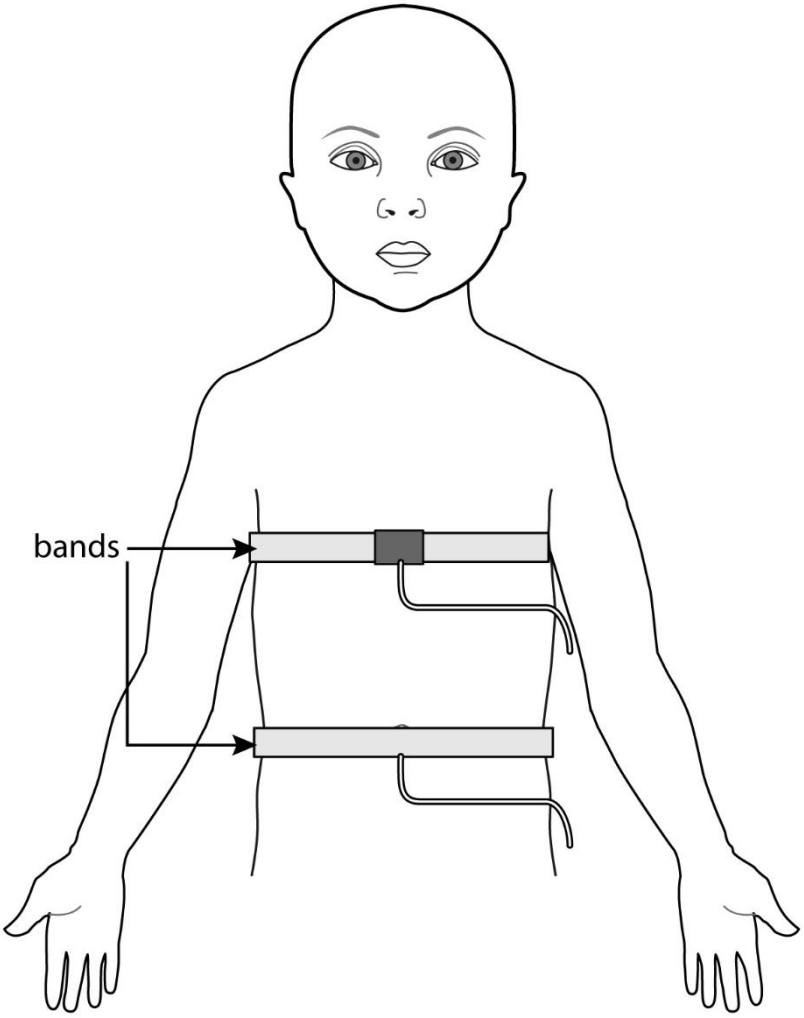


Figure 1

- The technician will measure and mark points on your scalp for electrode placement (Figure 2).
- Each of these points will be cleaned and prepped to make sure of the best possible attachment of the electrode and signals.
- The electrodes measure brain activity/waves. These signals are recorded overnight and help us score the different stages of sleep.
- We may use gauze and tape to fix the electrodes, so please let us know if you have any sensitivities or allergies. You may have a slight redness or skin irritation due to the electrode paste and/or tape adhesive.
- You will have an electrode placed near the left and right eye as these will measure eye movements, which are used to stage your sleep. For example: Rapid Eye Movement (REM) which is linked with dreaming can be measured in this way.
- You will have 2 electrodes placed under your chin (Figure 2). These look at muscle tone. As you drift off to sleep your chin muscles will relax.

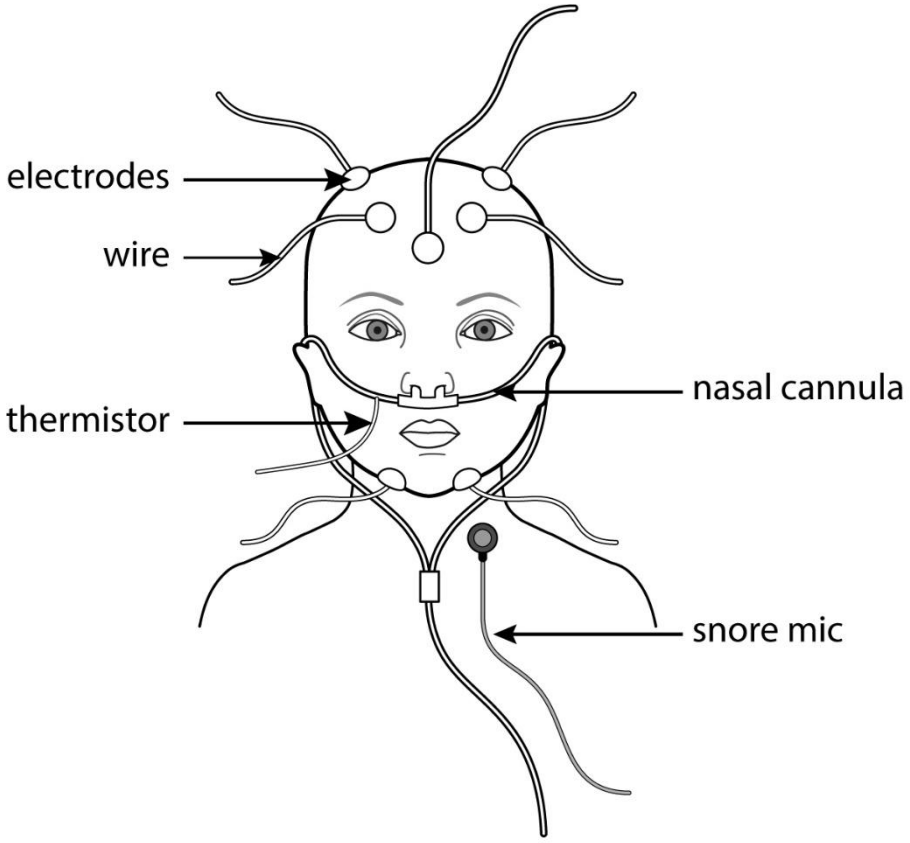


Figure 2

- To find out if you are moving your legs while you are asleep you will have 2 electrodes placed on your lower legs.

- Once all your electrodes are in place there are just a few more things we need to measure overnight. You will have a snore sensor taped onto your neck, and a probe on 1 finger that will measure your heart rate and oxygen level.
- Lastly you will have a nasal tube (cannula) placed in your nostrils, and a thin wire (thermistor) to measure airflow when you breathe.
- The technician will check all the electrodes to make sure that everything is readable and useable. Once this is done the leads will be gathered together to stop tangles and taped to your right shoulder.
- The nasal cannula, thermistor and saturation probe will be removed for comfort until you are ready to go to bed and sleep.
- There is a television in the kitchen for patient use.

If you normally use a CPAP device, please bring yours with you. We cannot give you a "spare" for the overnight study.

It is important we know you can attend. One of our staff will try and call you before your appointment. If you are sick or cannot come in, please let us know. Our number is Leicester 0116 258 8106 / 0116 258 8262 or e-mail us: uhl-tr.sleepservicemailbox@nhs.net

In the morning

If you are up and are ready to have the equipment taken off, and are not staying for a daytime test, just let the overnight Health Care Assistant (HCA) know and they will have you on your way.

If you are not up by 6:45 a.m. the HCAs will gently wake you and then remove the equipment.

A basic hospital breakfast is provided for you.

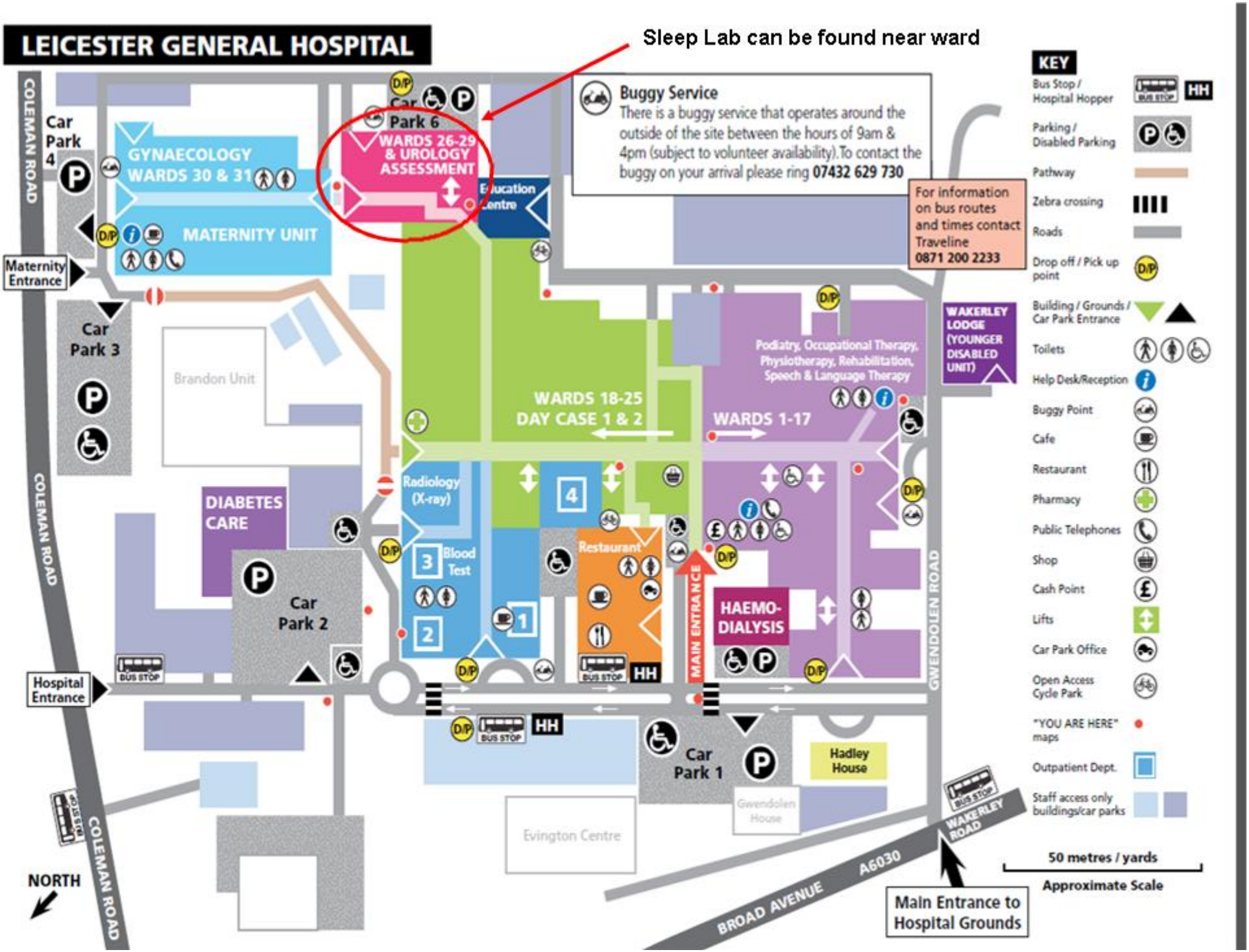
If you are staying for a daytime MSLT, not all the equipment will be removed. You will be asked to dress into your daytime clothes.

Patients that have been referred for the daytime MLST test must have slept enough, 5 hours, and not have another sleep disorder, such as:

- Obstructive sleep apnoea (OSA): This when there are pauses in your breathing and drops in your oxygen level when you are asleep.
- Periodic limb movement (PLMS): This is when you move your legs while you are asleep.

We will order you a lunch, sandwich, fruit, juice and a snack. If you have special diet needs just let us know.

The Sleep staff cannot talk about the study results with the you. A report will be sent to your consultant. You will get an appointment in the post for you to come in for your results.


LEICESTER GENERAL HOSPITAL
Sleep Lab can be found near ward
Buggy Service
There is a buggy service that operates around the outside of the site between the hours of 9am & 4pm (subject to volunteer availability).To contact the buggy on your arrival please ring 07432 629 730
For information on bus routes and times contact Traveline 0871 200 2233
KEY
Bus Stop / Hospital Hopper
Parking / Disabled Parking
Pathway
Zebra crossing
Roads
Drop off / Pick up point
Building / Grounds / Car Park Entrance
Toilets
Help Desk/Reception
Buggy Point
Cafe
Restaurant
Pharmacy
Public Telephones
Shop
Cash Point
Lifts
Car Park Office
Open Access Cycle Park
"YOU ARE HERE" maps
Outpatient Dept.
Staff access only buildings/car parks
Car Park 4
Car Park 6
GYNAECOLOGY WARDS 30 & 31
MATERNITY UNIT
WARDS 26-29 & UROLOGY ASSESSMENT
Education Centre
Maternity Entrance
Car Park 3
Brandon Unit
WARDS 18-25 DAY CASE 1 & 2
WARDS 1-17
Podiatry, Occupational Therapy, Physiotherapy, Rehabilitation, Speech & Language Therapy
WAKERLEY LODGE (YOUNGER DISABLED UNIT)
DIABETES CARE
Radiology (X-ray)
Blood Test
Restaurant
MAIN ENTRANCE
HAEMO-DIALYSIS
Car Park 2
Hospital Entrance
Car Park 1
Hadley House
Gwendolen House
Evington Centre
COLEMAN ROAD
GWENDOLEN ROAD
BROAD AVENUE
A6030
WAKERLEY ROAD
NORTH
Main Entrance to Hospital Grounds
50 metres / yards
Approximate Scale

Contact details

Call us on **0116 258 8106** / **0116 258 8262**

Email: uhl-tr.sleepservicemailbox@nhs.net

If you have any questions, write them down here to remind you what to ask when you speak to your nurse/consultant.

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Health information and support is available at www.nhs.uk or call 111 for non-emergency medical advice
Visit www.uhleicester.nhs.uk for maps and information about visiting Leicester's Hospitals.
To give feedback about this information sheet, contact uhl-tr.informationforpatientsmailbox@nhs.net

اگر آپ کو یہ معلومات کسی اور زبان میں درکار ہیں، تو براہِ کرم مندرجہ ذیل نمبر پر ٹیلی فون کریں۔
ਜੇ ਤੁਸੀਂ ਇਹ ਜਾਣਕਾਰੀ ਕਿਸੇ ਹੋਰ ਭਾਸ਼ਾ ਵਿਚ ਚਾਹੁੰਦੇ ਹੋ, ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਹੇਠਾਂ ਦਿੱਤੇ ਗਏ ਨੰਬਰ 'ਤੇ ਟੈਲੀਫੋਨ ਕਰੋ।
إذا كنت ترغب في الحصول على هذه المعلومات بلغةٍ أُخرى، الرجاء الاتصال على رقم الهاتف الذي يظهر في الأسفل
Aby uzyskać informacje w innym języku, proszę zadzwonić pod podany niżej numer telefonu
જો તમને અન્ય ભાષામાં આ માહિતી જોઈતી હોય, તો નીચે આપેલ નંબર પર કૃપા કરી ટેલિફોન કરો.

If you would like this information in another language or format such as EasyRead or Braille, please telephone 0116 250 2959 or email uhl-tr.equalitymailbox@nhs.net

We are a research hospital and you may be asked to take part in research

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