

Polysomnography (PSG)

Your Consultant would like you to have a polysomnography (PSG) test. We hope that the following information will help with any questions you may have.

What is a PSG test?

This is a continuous recording taken over one or two nights, usually to look at events or episodes that you may be having during your sleep. You will be monitored by a video camera throughout.

During the test we will measure activities produced from different parts of your body such as brain waves (EEG), muscle activity (EMG), the movement of your eyes (EOG), breathing, heart rate (ECG) and the oxygen levels in your blood.

Depending on the reason your consultant has referred you, we may perform an additional test during the day following your PSG (either a multiple sleep latency test or maintenance of wakefulness test).

How do I prepare for the test?

- You will receive a letter from the hospital with all the details of your admission including date, time and directions.
- The Neurophysiology team will ring you two weeks before your admission to complete a pre-admission risk assessment. Occasionally we may need to rearrange the investigation following this assessment. A clinical member of staff will discuss the options with you, should this occur.
- The Neurophysiology team will ring you again 72 hours prior to your admission to check nothing has changed on the risk assessment and that you are still able to attend.
- You will need to undertake a COVID-19 PCR test and have a confirmed negative result 72 hours prior to admission. Following this you will need to self-isolate until your admission date.
- Try to follow your normal sleep routine during this time so you will not be too tired or too rested for your sleep test.
- You may be asked to keep a sleep diary and wear a watch which picks up your movements (actiwatch) for 1 to 2 weeks before your sleep study, if so these will be included with this letter.
- **If you are taking Modafinil, please stop taking this at least 3 days prior to your appointment.** Otherwise, continue to take any prescribed medication as normal, unless advised otherwise by your Consultant.
- **During your admission you will be able to self-administer your own medications. Please bring with you all your current medications, in the original boxes given to you by your pharmacist, and with your name on them.**
- Unless directed to do so by your Consultant, do not take any sleep medicine and do not drink alcohol or caffeinated beverages before the test as they can interfere with your sleep.
- You may find it helpful to bring something to occupy yourself during the daytime e.g. reading/puzzle books, a tablet, a personal music player.
- Please wear comfortable clothing/nightwear that can be undone and changed easily such as button-up pyjamas or shirts/blouses for daytime. Please come with clean hair and avoid using hair sprays/gels etc on the day of your test.

What will happen during the test?

For your PSG you will usually be in a single room with a TV and access to toilet and washing facilities (our main bedroom is at Mardon Rehabilitation Unit).

You will be attached to the recording equipment in the room by a cable. Once the investigation has started you are usually restricted to the VT suite until the test is finished.

A Healthcare Scientist, Healthcare science assistant, or trainee Healthcare Scientist will come to see you to set up the recording. Trainees are supervised by a qualified member of staff, the amount of supervision varies, depending on the amount of experience the trainee has. We will ask your permission if a trainee is performing the set-up.

It is necessary for us to obtain your written consent for the video recording - we do not keep your entire video recording after the test because the file is too big, instead we keep parts of the video with your EEG recording (such as those showing any of your typical episodes). The video recording does not extend to the bathroom area.

You can expect to have between 10 and 23 small discs (electrodes) applied to your head on the day of your admission.

The electrodes will be attached using special skin glue called 'Collodion'. This does not hurt but the glue has a strong odour until it is dry. We **do not** need to cut your hair or shave your head.

You will also have several extra electrodes placed around your eyes, on your chin and cheek, on your legs and on your finger. Depending on what your consultant has asked for, you may also have some bands put around your chest and abdomen to pick up your breathing, along with a sensor to pick up the airflow from your nose and mouth.

These electrodes are attached to a small box which will be on a belt/shoulder strap and a cable connects this to a computer in the room.

Once the electrodes are in place, you will be able to move freely around the room and sleep without too many problems.

What happens after the test?

Once we have enough information, the electrodes will be removed using a special solution, which dissolves the glue.

This leaves the hair feeling greasy but it does wash out easily.

Are there any risks?

If you are allergic or sensitive to cosmetics, lotions or sticky tape, please tell the Healthcare Scientist before the test starts.

If you have one of your night time episodes, there is a small chance that this might result in an injury, but this risk is no different to the risk as in your own home. **If you injure yourself often at home during night time episodes or have possibly caused injury to others, please let us know before your appointment date, so we can minimise any risk to you.**

You may develop small sore areas on the skin where the electrodes are applied, this becomes more likely during longer recordings, however this is very rare and will not cause lasting damage.

There is a small risk that the electrode wires could become entangled around you, especially if you move around frequently during sleep, or during an attack. Your Healthcare Scientist will be able to talk to you about how this risk can be reduced.

There is a small risk that the collodion remover liquid may come in contact with the eyes during electrode removal. Staff will minimise the risk of this occurring.

If you think some of the liquid has got into your eyes, please advise the member of staff immediately.

When will I get the results?

After completing the examination, the results will be analysed and a report will be sent to the doctor who referred you. This may take up to 6-8 weeks.

How will the results of this test help?

Recording your typical episodes should give the consultant more information about your sleep patterns and the nature of any night-time episodes. This will help them to know how best to treat your medical condition.

What are the consequences of not having PSG?

A PSG is a well-established method of helping doctors to diagnose and treat a wide range of medical conditions, particularly those occurring in sleep. If you do not have the test, your doctor may not have as complete a picture as required and hence your diagnosis may take longer and/or your treatment may not be the most appropriate.

Contacting Us

Staff in the department will be happy to answer any query you may have and will do their best to ensure your comfort.

Please let us know if you are unable to attend your appointment by ringing the telephone number below.

If you have any questions or concerns about the test please ring the **Neurophysiology Department** on **01392 402458**.

We welcome feedback about our service. Please tell a member of staff if you felt this service is good or otherwise.

The Trust cannot accept any responsibility for the accuracy of the information given if the leaflet is not used by RD&E staff undertaking procedures at the RD&E hospitals.

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