

Respiratory

Polysomnography

What is polysomnography?

Polysomnography (PSG) is a complex sleep study. It is a comprehensive recording of the changes that occur in sleep. It monitors many body functions including brain (EEG), eye movements (EOG), muscle activity (EMG) and heart rhythm (ECG). Breathing signals are also measured, for example; air flow at the nose, movement of the chest and abdomen and oxygen saturation levels.

Why do I need this test?

PSG is used to diagnose, or rule out many types of sleep disorders including narcolepsy, periodic limb movement disorder (PLMD), behaviour disorders, insomnia, parasomnias and sleep apnoea. It is often carried out for patients who complain of daytime tiredness or sleepiness that may be caused by interrupted sleep. PSG investigations allow us to analyse the changes in your body and brain during sleep. This may help us find out the cause of your sleep problem and help your physician to decide what treatment would work best for you. The test records ongoing brain, muscle and breathing activity that you produce naturally; there is very little risk, the recording itself is painless and there are no after effects.

Why do I need to stay overnight in hospital?

This is because PSG is a more complex test than you may have had before and there will be more equipment needed to measure your sleep. To make sure the equipment is attached correctly a trained physiologist will be needed to help you. Your test will be video recorded, providing you give your consent to do so. This can help when analysing the data recorded.



What should I do before the test?

In order to make sure that we get the best possible results please do the following:

- Read the accompanying patient information leaflet “**Attending The Complex Sleep Unit**”. There you will find information such as what medication you will need to stop before attending and what to bring with you.
- On receipt of your appointment letter please ring to confirm your attendance on **024 7696 6734**. Please tell the member of staff when you call if you are unable to care for yourself or have any disabilities or any mobility issues as further consideration may need to be taken for your care.
- If you are unable to attend your sleep study you must cancel as early as possible. Please be considerate as your appointment could be given to another patient. Failure to attend will result in your discharge from the service.
- The unit has the facility to provide tea and coffee (decaffeinated) refreshments during your stay. There is no facility for providing hot food during your stay so please make sure you have had your evening meal before attending the unit.

What will happen during my hospital stay?

1. On your arrival to the Complex Sleep Unit, we will ask you to change into your nightwear. This allows the healthcare scientist to start attaching the electrodes as it will be impossible to undress or shower once the equipment is in place.
2. Once you are ready, basic health observations will be made such as blood pressure, temperature to check you are well.
3. Then your head will be measured and little marks made on your scalp with a soft skin-marking crayon. These marks will tell us where to stick the electrodes.
4. EEG electrodes will be placed on your head, behind your ears and near your eyes; they will be attached using a water-based paste and gauze. This stops any electrodes falling off when you move around during the night.
5. Please make sure any washed hair is completely dry before you attend the unit, as wet hair will prevent the electrodes from attaching securely.

Patient Information

6. In addition to the electrodes on your head, behind your ears and near your eyes, you will also have electrodes placed on your chin. In order to make sure these chin electrodes attach well, where possible. Absence of facial hair will make sure successful electrode placement.
7. You will also have bands wrapped around your chest and stomach to monitor your breathing and a nasal tube (cannula) placed under your nose to check airflow. A probe will be placed on your finger to monitor your oxygen levels and heart rate. Finally the physiologist will place electrodes on your legs to check muscle activity and on to your chest to measure your heart.
8. Once all the electrodes have been secured they are plugged into a small recorder box you will wear pinned to your nightwear. This box will send the measured signals to a computer next to your room and store information ready to be analysed.
9. The healthcare scientist will then check to make sure all the equipment is working correctly by asking you to move your eyes, tense your chin and move your legs. This set up process will take around 60 minutes and if at any time during the preparation you would like to ask the healthcare scientist any questions, feel free to do so.
10. Between 10-11pm the healthcare scientist will ask you to settle down to bed and the equipment and camera will start recording. The equipment is wireless so you will be able to get out of bed if needed.

In the morning you are free to leave whenever you are ready (ideally between 07.00-07.30am) and a light breakfast will be provided. Once the sleep equipment is removed you can then have a shower if you would like. You will be asked about the quality of sleep you have had and any feedback about your stay is always useful.

Your results will be analysed by either a sleep consultant or specialist healthcare scientist and you will be notified by letter or sent an appointment to discuss your results.

If you have any concerns or questions about this test before you attend, please call the Respiratory Physiology Department on **024 7696 6734** where we will be happy to answer any queries

Patient Information

Useful Information

For further information on polysomnography contact:

GMBSleep@uhcw.nhs.uk

Sleep Apnoea Trust

www.sleep-apnoea-trust.org

The Trust has access to interpreting and translation services. If you need this information in another language or format please contact 024 7696 6734 and we will do our best to meet your needs.

The Trust operates a smoke free policy.

To give feedback on this leaflet please email feedback@uhcw.nhs.uk

Document History

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