

What is a respiratory muscle strength assessment?

Respiratory

Introduction

This leaflet has been written to provide information about what a respiratory muscle strength assessment is. We hope it answers some of the questions or concerns you may have. It is not intended to replace talking to a healthcare professional.

Why have I been sent for this test?

Your consultant or specialist nurse has requested this test to help him / her diagnose any respiratory muscle weakness, they may also be used to monitor an existing breathing problem.

What are the benefits of having the test?

Respiratory muscle tests measure how strong your breathing muscles are when you breathe in or out. Your doctor will be able to identify if muscle weakness is a cause for your breathlessness.

What will happen when I arrive in the department?

You will be asked to remove your coat and shoes in order to measure your height and weight. If you are unable to stand, your arm span will be measured instead. You will be asked to take a seat in the testing room. We will ask a couple of questions about your medical history, smoking status and which medication (inhalers) you are taking.

What will happen during the test?

You will have a number of different breathing tests, some seated and some lying flat. These tests include:

- Maximal Inspiratory Pressures (MIP)
- Maximal Expiratory Pressures (MEP)
- Sniff Nasal Inspiratory Pressure or 'SNIP' test
- Spirometry test.

The healthcare professional will talk you through each breathing test, giving clear instructions and providing lots of encouragement.

The prevention of infection is a major priority in all healthcare and everyone has a part to play.

- Please decontaminate your hands frequently for 20 seconds using soap and water or alcohol gel if available
- If you have symptoms of diarrhoea and/or vomiting, cough or other respiratory symptoms, a temperature or any loss of taste or smell please do not visit the hospital or any other care facility and seek advice from 111
- Keep the environment clean and tidy
- Let's work together to keep infections out of our hospitals and care homes.

What are respiratory muscle strength assessments?

These tests measure the strength of muscles used for breathing. A respiratory muscle strength assessment is usually comprised of three different tests: Maximal Inspiratory Pressure (MIP), Sniff Nasal Inspiratory Pressure (SNIP) and Maximal Expiratory Pressure (MEP).

These tests are performed in a similar way to the lung function tests with you being seated and breathing into specialist, handheld and portable equipment via a filter and mouthpiece (see picture in the 'What is MEP test?' section of this leaflet).

What is a MIP test?

This measures the strength of your inspiratory muscles such as the diaphragm. For this test you will be asked to take a sharp forceful breath in through the mouth piece against a tiny opening. We will ask you to imagine that you are sucking a really thick milkshake up through a narrow straw.

What is a SNIP test?

It measures the strength of your 'breathing in' muscle such as the diaphragm. For this test we will place a small nasal device or probe into one nostril and you will be asked to take a short and sharp sniff in through the nose.

What is an MEP test?

It measures the strength of your expiratory muscles such as the chest muscles. For this test you will be asked to take a sharp breath out through the mouthpiece against a tiny opening.



What is erect and supine Spirometry?

This is an additional test to assess the strength of your major breathing muscle called the diaphragm. For this test you will be asked to perform spirometry (a separate leaflet entitled Spirometry is available) in both a seated (erect / upright) and a lying (supine) position.

In people with diaphragmatic weakness, the amount of air that you can breathe out is significantly reduced in the lying or supine position compared to the sitting position.

Will I feel any pain or discomfort?

MIP / MEP / SNIP and Spirometry tests are classed as low risk tests. In most cases the main risks are perhaps some dizziness following blowing out hard and fast. In very rare occasions sometimes patients can feel faint after performing the measurement. It is painless but does require you to blow out as hard and as fast as you can with maximum effort.

Some of the tests are tiring, but you will be given time to recover between tests. However, if you find the tests too difficult or uncomfortable, they can be stopped at any time. During testing some patients may experience some respiratory symptoms, for example cough or shortness of breath, but you will be monitored carefully throughout.

How long will the test take to complete?

You should allow up to 30 minutes for this test.

What are the risks involved with performing the test?

The test is performed in large numbers at this hospital and is a low risk test.

When is the test not suitable?

There are some medical problems that will prevent us from testing patients, these are listed below.

- Recent heart attack-within 1 week
- Severe blood pressure problems
- Heart arrhythmias or an abnormal heart rhythm
- Heart failure
- Pulmonary embolism or a blood clot on the lungs
- Cerebral aneurysm or a weakening of the wall of a brain artery or blood vessel causing a blister like swelling
- Recent brain surgery - within 4 weeks
- Recent concussion
- Recent eye surgery - within 1 week
- Pneumothorax or collapsed lung
- Thoracic or abdominal surgery - within 4 weeks
- Late term pregnancy
- Active or transmissible infection, including TB
- Haemoptysis (coughing up blood)
- Oral lesions or bleeding or significant secretions or an ulcer, swelling or sore that occurs on the lining of the mouth.

You should contact the Respiratory Centre or tell the physiologist undertaking your test if you have any of the above conditions. We may have to postpone or cancel your test.

How should I prepare for my muscle assessment?

Do continue to take all of your medications as normal, including any inhalers.

- Please do not smoke in the 24hrs before the test
- Please do not drink alcohol on the day of the test
- Please avoid eating a large meal two hours prior to your test
- Please wear non-restrictive comfortable clothing.

If on the date of your test you have a chest infection for which you are taking antibiotics, please ring the **Respiratory Centre on 01902 695061** to change your appointment. A chest infection will affect the test results and give your doctor invalid results.

What can I expect after the test and when can I resume normal activities?

After the respiratory muscle assessment is over you can go home and resume your normal daily activities. You should continue taking all of your medication as normal.

What happens to my results?

Once the test is completed your results will be interpreted and a report generated. A copy of this report will be sent back to the referrer which may be your GP or consultant. An electronic copy of the report will also be sent onto your electronic patient case notes.

When do I get my results?

The results will not be available on the day of your test. The results will be discussed with you at your next clinic appointment with your consultant or GP.

What should I do if I no longer wish to have the muscle assessment performed?

Please contact the department as soon as possible so that the appointment slot can be allocated to another patient. If you have any questions or require further information please contact:

The Respiratory Centre (B1)

New Cross Hospital
Wolverhampton Road
Wolverhampton
WV10 0QP

01902 695061

Monday to Friday 9:00 - 5:00.

English

If you need information in another way like easy read or a different language please let us know.

If you need an interpreter or assistance please let us know.

Lithuanian

Jeigu norėtumėte, kad informacija jums būtų pateikta kitu būdu, pavyzdžiui, supaprastinta forma ar kita kalba, prašome mums apie tai pranešti.

Jeigu jums reikia vertėjo ar kitos pagalbos, prašome mums apie tai pranešti.

Polish

Jeżeli chcieliby Państwo otrzymać te informacje w innej postaci, na przykład w wersji łatwej do czytania lub w innym języku, prosimy powiedzieć nam o tym.

Prosimy poinformować nas również, jeżeli potrzebowaliby Państwo usługi tłumaczenia ustnego lub innej pomocy.

Punjabi

ਜੇ ਤੁਹਾਨੂੰ ਇਹ ਜਾਣਕਾਰੀ ਕਿਸੇ ਹੋਰ ਰੂਪ ਵਿਚ, ਜਿਵੇਂ ਪੜ੍ਹਨ ਵਿਚ ਆਸਾਨ ਰੂਪ ਜਾਂ ਕਿਸੇ ਦੂਜੀ ਭਾਸ਼ਾ ਵਿਚ, ਚਾਹੀਦੀ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

ਜੇ ਤੁਹਾਨੂੰ ਦੁਭਾਸ਼ੀਏ ਦੀ ਜਾਂ ਸਹਾਇਤਾ ਦੀ ਲੋੜ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

Romanian

Dacă aveți nevoie de informații în alt format, ca de exemplu caractere ușor de citit sau altă limbă, vă rugăm să ne informați.

Dacă aveți nevoie de un interpret sau de asistență, vă rugăm să ne informați.

Traditional Chinese

如果您需要以其他方式了解信息，如易读或其他语种，请告诉我们。

如果您需要口译人员或帮助，请告诉我们。