

Respiratory medicine

Nebulised hypertonic saline assessment

Information for patients, relatives and carers

Introduction

This leaflet has been designed to give you information about **nebulised hypertonic saline assessment** and answers some of the questions that you or those who care for you may have. It is not meant to replace the discussion between you and your medical team but aims to help you understand more about what is discussed. If you have any questions about the information below, please contact us.

Nebulised hypertonic saline assessment

Patients with conditions such as bronchiectasis will often present with very thick, sticky mucus that can be very difficult for patients to clear. Not only can this be very uncomfortable for the patient but can also have a negative impact on their oxygen levels, by mucus blocking some of the smaller airways; this can lead to acute hospital admissions. The hypertonic saline used for this test/treatment is nebulised, turning it into a mist, which patients inhale. This vapour will help make your mucus less thick, which will in turn make it easier to cough up. By making it easier to clear mucus, the frequency of hospital admissions and symptom flare-ups may be reduced.

This test is designed to ensure you will be safe, should your doctor wish to start you on nebulised saline treatment. When in the lung function department, we can check for any negative side effects in a controlled environment, with qualified clinical staff.

Sometimes, inhaling the hypertonic saline can cause some chest tightness or other side effects, which is why we will trial you with saline in our department before your clinician begins you on long term treatment. If you get chest tightness or have a history of chest tightness when receiving nebulised treatment previously, we can give you another nebulised medication, called Salbutamol, before administering the saline. This will help open up your airways before the test, minimising the chance of any chest tightness or other side effects, during/after the test. Some clinicians will automatically ask that we administer Salbutamol first, so if you have had any adverse reactions to this in the past, please inform a member of staff on arrival.

The duration of the test will be about **90 minutes**.

Stage one – spirometry

This test looks at the volume of air you are able to exhale and the speed at which you can exhale. The respiratory physiologist will ask you to blow as fast and as long as possible into a device called a Spirometer. This test usually takes up to fifteen (15) minutes.

It is important to obtain accurate and reliable readings. If we are unable to get good repeatable measurements or if your values are below a set point, we will not be able to move on to the next stage.

Stage two – inhaling medication solution

Once we have repeatable spirometry measurements in stage one, we will have a good baseline in order to start the main part of the nebuliser assessment.

If you regularly require Salbutamol nebulisers at home, we will give you a dose of this first. Immediately after this, we will give you a hypertonic saline solution to inhale using the same nebuliser, until the full dose has finished.

Once the nebuliser has finished, you will wait for 15 minutes, before repeating the spirometry manoeuvres, so we can monitor any changes in the values you achieve. We will then wait a further 15 minutes and make the measurements for a final time. During this period, you may experience some symptoms such as wheezing and a productive cough; this is to be expected as the mucus in your chest becomes more mobile and will usually resolve spontaneously.

There may be an improvement in the spirometry readings, but not all patients will see a change in their spirometry values. This does not mean that the treatment isn't working – we are doing the test to make sure there are no side effects. As long as your spirometry values are similar to those measured at the start of testing, and you feel well, the test is over and you are free to go.

If spirometry values have dropped, or you are still experiencing symptoms, we may give you some more Salbutamol via the nebuliser in order to improve these symptoms. We will then wait a further 20 minutes and repeat the spirometry manoeuvres to check that the results have returned to baseline, after which you will be free to go.

We will pass your results to your doctor, where they will make a decision regarding your treatment. If they deem it appropriate for you to start Nebulised Hypertonic Saline, you will be invited back to the department, where a member of our physiology team will show you how to use the nebuliser.

Preparation for the test

Please check your appointment letter to ensure you know which hospital to attend.

To get the best possible results we ask that you do:

- not smoke for at least six hours before to the test
- not drink alcohol for at least four hours prior to the test
- not do heavy exercise on the day of the test
- wear loose and comfortable clothing on the day of the test

If you take inhalers, we are happy for you to continue taking these as you would normally, as this will better mimic your situation at home. However, if you use Salbutamol nebulisers already, could you please avoid using these the day of the test if you are able to do so.

If you are unsure about your medications, please contact the lung function laboratory for further advice, prior to your appointment.

If your doctor has given you a prescription or any medication specifically for this test, **please bring these with you.**

Side effects

These tests are very safe and there are rarely any issues after testing. As mentioned previously, you may get some chest tightness from the inhaled antibiotic. You may also get some light-headedness from the Spirometry test itself. These side effects will only usually last as long you are with us and should not affect you after testing is over.

Information and support

Lung Function Laboratory:

St Mary's Hospital 020 3312 6022

Charing Cross Hospital 020 3311 7180

Hammersmith Hospital 020 3313 2352

Monday to Friday, 09:00 to 17:00.

If you smoke and would like help to quit smoking contact:

Smokefree – support and advice for those looking to stop smoking: www.nhs.uk/smokefree

How do I make a comment about my visit?

We aim to provide the best possible service and staff will be happy to answer any of the questions you may have. If you have any **suggestions** or **comments** about your visit, please either speak to a member of staff or contact the patient advice and liaison service (**PALS**) on **020 3313 0088** (Charing Cross, Hammersmith and Queen Charlotte's & Chelsea hospitals), or **020 3312 7777** (St Mary's and Western Eye hospitals). You can also email PALS at imperial.pals@nhs.net The PALS team will listen to your concerns, suggestions or queries and is often able to help solve problems on your behalf.

Alternatively, you may wish to complain by contacting our complaints department:

Complaints department, fourth floor, Salton House, St Mary's Hospital, Praed Street
London W2 1NY

Email: ICHC-tr.Complaints@nhs.net

Telephone: **020 3312 1337 / 1349**

Alternative formats

This leaflet can be provided on request in large print or easy read, as a sound recording, in Braille or in alternative languages. Please email the communications team:
imperial.communications@nhs.net

Wi-fi

Wi-fi is available at our Trust. For more information visit our website: www.imperial.nhs.uk

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