

**Patient
Information**

Mannitol Challenge Test (Osmohale®)

Introduction

This leaflet gives you information about having a Mannitol Challenge Test (Osmohale®), including the preparation needed.

Why am I having a Mannitol Challenge Test (Osmohale®)?

A Mannitol Challenge Test (Osmohale®) assesses whether your airways are more sensitive than normal. Assessing the sensitivity of your airways can help your doctor to understand the type of conditions that may be affecting your lungs.

Osmohale® contains the active substance mannitol. This is a type of sugar used as a sweetener or as a medication.

Airways sensitivity may be caused by inflammation of the airways, making it difficult to breathe sometimes. People with airways sensitivity are often very susceptible to exercise and factors in the environment such as dust, smoke and other irritants.

What does the test involve?

The mannitol challenge test involves performing a spirometry breathing test to assess your baseline lung function. More information about the spirometry test is included in the next section.

The next step will involve inhaling an amount of dry powdered mannitol (Osmohale®), from an inhaler.

You will then be asked to repeat the breathing test. The test will be repeated a number of times with increasing doses of the mannitol powder.

If your airways are sensitive, there may be a decline in your lung function which may cause you to cough and/or feel tight chested. The test will be stopped if you have a decline of more than 15% from your baseline recording.

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Department

Lung Function

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After the test has been completed, the physiologist will give you 5mg of salbutamol via a nebuliser then repeat the breathing test. The salbutamol will relax and open up your airways and is given to make sure that you leave the department with the same lung function as when you arrived.

The test usually takes up to 1 hour 30 minutes.

What is spirometry?

This test measures the volumes and speed of the air you can blow out from your lungs. It will give an indication of the capacity of your lungs and how clear your airways are. For example, the airways may be narrower in conditions such as COPD (chronic obstructive pulmonary disease) or asthma.

Preparation for your appointment

You must stop taking any antihistamines for 7 days before your appointment and all inhaled medication for at least 12 hours.

If you feel you are unable to do this, please contact the consultant who referred you for the investigation for further advice. If you are unsure who this is, please contact the Lung Function Team, the contact details are at the end of this leaflet.

Please avoid:

- Smoking for 6 hours before the test.
- Eating or drinking caffeinated products on the day of test.
- Performing vigorous exercise on the day of test.

The Mannitol Challenge Test (Osmohale[®]) is contraindicated (should not be used) in certain patient groups. Please contact the Lung Function Team if any of the following apply to you.

- Under the age of 18 years.
- You have aortic or cerebral aneurysm (swollen or weakened blood vessel).
- You have high blood pressure which is not controlled by medicine.
- You have had a heart attack in the last 6 months.
- You have had a stroke in the last 6 months.
- You are pregnant (the test can be performed while you are breast feeding).

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Common side effects

Inhaling the mannitol may result in following:

- If your lung airways are sensitive, the mannitol will cause them to narrow this may lead to:
 - Coughing more often than is usual during the test.
 - An increase in wheezing.
 - Increased shortness of breath.
 - Chest tightness.

The nebuliser given at the end of the test should help to resolve these issues.

Other possible side effects include:

- Headache
- Sore throat
- Light-headedness
- Nausea
- Runny nose
- Vomiting
- Dizziness

Please be aware that although very rare, all medications carry a risk of an allergic reaction.

If you cannot attend your appointment

If you need to rearrange your appointment or no longer need an appointment, please contact the Lung Function Team at the earliest opportunity. Reallocating appointments helps us to reduce waiting times.

What if I am unwell before the appointment date?

If you are unwell, please let the Lung Function Team know at the earliest opportunity. If you are unwell on the day of the appointment, please still call and let us know as this will allow us to rearrange your appointment for a more suitable time.

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Please advise the Lung Function Team, before your appointment date, if any of the following apply to you as it may be unsuitable to perform the test at this time:

- You have had a recent chest infection (within the 2 weeks before your appointment date).
- You are currently taking or have just finished a course of antibiotics for a chest infection (4 weeks).
- You are coughing up blood (3 months).
- You have had a pneumothorax (collapsed lung). This happens when air leaks into the space between your lung and chest wall (3 months).
- You have had stomach, chest or eye surgery (3 months).
- You have ongoing angina (cardiac chest pain).

Who will be present at my appointment?

The test will be performed by a physiologist. There may be occasions when a student or trainee staff member accompanies the physiologist however, we will always ask your permission. If you do not want a student present during your test, please let the physiologist know. This will not affect your care in any way.

Test results

After your appointment, your test results will be sent to the consultant who referred you for testing. Your consultant will contact you to discuss the results and the next steps in your treatment.

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Inhaled / Oral Medication withholding guide

Time to withhold	Medication
6 hours	Inhaled corticosteroids e.g. Beclometasone, Budesonide, Fluticasone (Clenil, Qvar, Pulmicort, Flixotide)
8 hours	Short acting beta 2 agonists (SABA) e.g Salbutamol, Terbutaline (Ventolin, Salbutamol, Bricanyl)
12 hours	Short acting muscarinic antagonist (SAMA) Ipratropium bromide (Atrovent)
24 hours	Theophylline (uniphyllin)
36 hours	Inhaled corticosteroids plus beta 2 agonist (Seretide, Fostair, Symbicort)
36 hours	Long-acting beta2 agonists (LABA) e.g. Serevent, Oxis
72 hours	Long acting muscarinic antagonist (LAMA) including combinations. E.g. Trimbow, Spiriva
48 hours	Ultra LABA e.g Breo Ellipta
72 hours	Antihistamines, Cetirizine, Chlorphenamine, Fexofenadine, Loratadine
96 hours	Leukotriene-receptor antagonists (Montelukast)

Contact information

Lung Function Department

Cheltenham General Hospital

Tel: 0300 422 4313

Monday to Friday, 8:00am to 5:00pm

Email: ghn-tr.lung.function@nhs.net

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Making a choice

Shared Decision Making

If you are asked to make a choice, you may have lots of questions that you want to ask. You may also want to talk over your options with your family or friends. It can help to write a list of the questions you want answered and take it to your appointment.



Ask 3 Questions

To begin with, try to make sure you get the answers to three key questions if you are asked to make a choice about your healthcare.

1. What are my options?
2. What are the pros and cons of each option for me?
3. How do I get support to help me make a decision that is right for me?

These resources have been adapted with kind permission from the MAGIC Programme, supported by the Health Foundation* Ask 3 Questions is based on Shepherd HL, et al. Three questions that patients can ask to improve the quality of information physicians give about treatment options: A cross-over trial. Patient Education and Counselling, 2011;84: 379-85

<https://aqua.nhs.uk/resources/shared-decision-making-case-studies/>