Respiratory Medicine

Nebulised antibiotic treatment

What is its aim?
The respiratory consultant in charge of your care may have spoken to you about the need for a trial of nebulised antibiotics. This leaflet aims to explain what is involved with taking nebulised antibiotics.

What are nebulised antibiotics?
Nebulised antibiotics are medications that have been shown to treat a particular bacterium that you may have grown in your sputum at some point. Your consultant will have discussed this with you and recommended the most appropriate medication for this treatment that would aim to help clear the particular bacteria growing in your sputum.

Benefits
The aim of taking nebulised antibiotic is to gain better control of respiratory symptoms like sputum volume, or thickness and to reduce the number of infections requiring oral or intravenous antibiotics.

Risks
In some cases nebulised antibiotics can cause tightening of your airways, wheeze and/or shortness of breath. We conduct a thorough assessment to limit the possibility of this occurring at home. However, sometimes this only becomes apparent after a few doses.

Things to consider
- You will need to own a nebuliser compressor.
- You may need to mix the drugs fresh for each dose using syringes and/or needles. The nebulisers do not come ready prepared and once prepared, do not keep for longer than 12 hours.
- You will need to take the nebulised antibiotic twice a day, every day. This can take between 2 and 10 minutes for each dose.
- Your nebuliser equipment must be cleaned daily and sterilised at least once a week.

Alternatives
Your respiratory consultant may be able to advise you on any alternatives if you feel that you would not be happy and/or able to take nebulised antibiotics at home.
How often do I need to take them?
Nebulised antibiotics are aimed to be used to prevent infections, rather than treat them after they happen. This means that they will need to be taken twice a day, every day. For example; first thing in the morning and then again in the evening.
Your respiratory consultant will monitor your progress once you have started taking nebulised antibiotics. If you have any adverse reactions or the antibiotics do not appear to be effective then your consultant may stop them.

What equipment do I need?
In order to take the nebulised antibiotic you will need:

- a nebuliser compressor
  - You may already have one of these for other nebulisers such as salbutamol etc. the same compressor can be used but a different chamber will be needed
  - Nebuliser compressors can be loaned and we recommend a breathing charity named NARA who can loan you a nebuliser – their contact details are 01604 494960
- a specific nebuliser chamber
  - This includes a special filter or tubing which prevents excess antibiotic being breathed out into the air
- a supply of antibiotics, saline for dilution and equipment like syringes etc for mixing
  - Your first prescription for these will be from the hospital. After this initial prescription, your GP should then continue to supply you the relevant medications
  - for certain nebulised antibiotics you may require syringes with needles for correct mixing, this will involve you needing a sharps bin for safe disposal of the needles

How do we know it’s safe?
In order for us to determine whether it is safe for you to take nebulised antibiotics at home we need to perform an in depth assessment. This usually takes between 60 to 90 minutes to complete.

It will involve:

- An initial lung function test
  - This involves blowing into special equipment to measure your lung capacity. This is usually at least three blows
  - If your lung function is worse than your usual, or is below our safe threshold we may be unable to proceed with the assessment on this occasion
- Taking a test dose of the chosen antibiotic
- Repeating the lung function tests immediately after the nebuliser has finished and then 20 minutes later
If you have any adverse reactions to the antibiotic during the course of the assessment then you will be given a nebulised bronchodilator and reviewed by a doctor. During the assessment process you will be shown how to prepare the antibiotics for nebulisation. Unfortunately, they do not come ready prepared like most nebulisers and must be made fresh each day. You will need to be confident in mixing the drugs before you are able to take them at home.

The results of the test will be discussed with your respiratory consultant before it is decided whether it is safe for you to take them at home. Therefore you may not find out on the day of the test but we will aim to inform you within a week.

If it is safe for you to take the antibiotic we will then write to your GP to inform them that you will require a regular prescription for the nebulised antibiotics and other equipment involved (excluding the compressor which must be bought privately).

**Contacts/Further information**

For further information please contact either:
- The consultant in charge of your care through the hospital switchboard
- The respiratory specialist physiotherapists on 01223 256 634
- The immunology specialist nurse on 01223 586 830 or through the hospital switchboard and ask for bleep number 157 932

**References/ Sources of evidence**


[www.nhs.uk/Conditions/Bronchiectasis/Pages/Treatment.aspx](http://www.nhs.uk/Conditions/Bronchiectasis/Pages/Treatment.aspx)

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We are a smoke-free site: smoking will not be allowed anywhere on the hospital site. For advice and support in quitting, contact your GP or the free NHS stop smoking helpline on 0800 169 0 169.

**Other formats:**

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**Document history**

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