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PNEUMONIA - a patient's guide

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What is it?

Pneumonia can be defined as inflammation of the lungs. It is usually caused by bacteria, and requires treatment with antibiotic drugs.

Despite the advent and widespread use of antibiotics in the past 40 years, pneumonia continues to be a common health problem with a significant mortality (death) rate.

Types of pneumonia:

Pneumonias can be classified according to: 1) which areas of the lungs are affected, or 2) according to the cause.

Pneumonia can affect only one lobe of the lungs, in which case it is known as a "lobar pneumonia".

It can also affect the lungs diffusely, in which case it is known as "bronchopneumonia".

Bacteria are by far the most common cause of pneumonia.

"Aspiration" pneumonia is the term used when someone has aspirated their vomit or stomach contents, leading to lung damage from gastric acid as well as infection with bacteria that usually belong in the gut.

Viral pneumonias are rare in adults, but do occur in children.

Radiotherapy in cancer patients can cause a type of pneumonia, otherwise known as a "pneumonitis".

What are the symptoms?

Cough - In the majority of cases people with pneumonia will have a cough productive of green or yellow sputum (phlegm).

Fever - Although this is usually a feature of pneumonia, fever may be absent in elderly people and in some of the more unusual bacterial pneumonias.

Shortness of breath - This might be noticeable, particularly on exertion.

Chest pains - If the membranes lining the lungs are involved, pneumonia may be associated with sharp, "shooting" chest pains. (This is sometimes known as "pleurisy" and may persist for some time after the acute illness has resolved).

Making the diagnosis:

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The diagnosis of pneumonia needs to be confirmed by a doctor who will examine the patient and probably request some tests.

There are likely to be certain signs present on examination of the chest.

A chest x-ray usually shows characteristic changes.

Blood tests may be done to help confirm the presence of infection and/or screen for other conditions.

A sample of sputum (phlegm) should be obtained, if possible, to send to a laboratory for culture of the causative bacteria.

In certain patients, mainly those with a higher risk of getting lung cancer, the doctor may ask for a repeat chest x-ray 5-6 weeks after the infection to check the infection has cleared.

Who gets it?

Pneumonia is an infection, usually spread by droplet inhalation, but the risk of catching pneumonia from being in contact with someone who has it is low.

It is possible for anyone to get pneumonia, but there are certain groups who are more susceptible to it:

Those who have had a recent viral infection such as a 'cold' or 'flu'

Hospitalised patients

Cigarette smokers

Those who drink excessive alcohol

Those with underlying chronic lung conditions

People whose immune systems are suppressed e.g. on immune-suppressing drugs following a kidney transplant or HIV positive people

Treatment

Pneumonia is invariably treated with an antibiotic. However, the choice of antibiotic and the method of administration (oral or intravenous) varies, depending on the severity and cause of the infection. Your doctor may ask for a sample of sputum (phlegm) before starting treatment, as this can be useful for identifying which bacteria is causing the infection.

Mild to moderate cases of pneumonia in otherwise healthy people can often be treated with an oral antibiotic. A derivative of penicillin would be the first choice.

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More severe cases of pneumonia, or cases where the person is elderly, or has an underlying medical condition, usually need to be treated in hospital where intravenous antibiotics can be given.

If hospitalised, the person may also need supplemental oxygen, either via a facemask, or via nasal prongs.

Chest physiotherapy is often used to help clear lung secretions and make breathing easier.

Cough syrup is not helpful for treating the infection, but may be used if a cough is very distressing and unproductive.

There is a nickname for pneumonia occasionally used by doctors: "old person's friend". Sometimes in the very elderly whose quality of life is thought to be very poor because of other chronically disabling medical conditions, the difficult decision is made not to use antibiotics, but rather to let nature take its course. This sort of decision should be made only in consultation with a patient's family, and the patient him or herself, if possible.

Prognosis:

The likely outcome of a case of pneumonia is dependent on two main factors:

The general health and age of the patient, and

The causative organism - some bacteria are more virulent than others and some are more likely to cause complications.

Possible complications include:

Lung abscess - an area of lung can break down, forming a cavity which fills with pus and causes ongoing symptoms, frequently a cough productive of foul-smelling sputum.

Empyema - Pus can collect between the inner and outer linings of the lung. This is a serious condition and may require drainage by placing a tube in the chest.

The overall mortality (death) rate for pneumonia is about 5-10%. However, streptococcus pneumoniae, the commonest bacterial cause of community-acquired pneumonias, has a mortality rate of 25%. Surprisingly, this has not changed significantly in the past 40 years, despite the widespread use of antibiotics.

Hospital-acquired pneumonias have a higher mortality rate, both because of the virulence of the organisms and because the patient has an underlying illness, which has required hospital admission.

The growing problem of antibiotic resistance is likely to have an impact on the prognosis of pneumonia in the future.