Breathlessness

Breathlessness is a common symptom for patients with lung cancer and can be experienced at any time during the cancer journey. In order to successfully manage the breathlessness it is essential you are fully assessed for the cause of the symptom; then the appropriate management strategies can be implemented.

Breathlessness, or feeling short of breath, is also known as dyspnoea and can have many causes when someone has lung cancer. It can be a distressing and frightening symptom.

This leaflet will discuss the causes (why do you feel breathless) and how breathlessness can be managed/improved. There are likely to be a number of health care professionals involved in your care and in helping to manage your breathlessness, particularly as breathlessness can have more than one cause in any one individual.

Please ensure your doctor and specialist nurse are aware of the problem as they will be able to assess you, give appropriate treatments and direct you to other health care workers who may be able to help.

The lungs and breathlessness

To make it easier to understand breathlessness it may help to understand the way lungs work.

People have two lungs; one on each side of the chest. When we breathe in, air passes from our nose or mouth through the windpipe (trachea), which divides into two tubes (airways), one going to each lung. These are known as the right and left bronchus. They divide to form smaller tubes called bronchioles, which carry air through the lungs.

At the end of the bronchioles are millions of tiny air sacs called alveoli. In the alveoli, oxygen is absorbed from the air we breathe in and passes into the bloodstream to be circulated around the body.

Carbon dioxide is a waste gas that needs to be removed from the body. It passes from the bloodstream into the alveoli and is then breathed out by the lungs.

When you breathe in, the muscles of respiration move the lungs down and outwards to expand the lungs and when you breathe out the lungs go back by moving up and
inwards. Normally in good health the lungs sit within the rib cage and fit snugly. The lung and the inside of the rib cage are both covered by a thin membrane or film called the pleura. The space between the two layers of pleura is called the pleural cavity or pleural space. Usually the pleural space contains about two teaspoons of fluid, this helps to lubricate the lung, so that it can slide easily within the rib cage.

Just below your lungs is a sheet of muscle called the diaphragm. The diaphragm and the muscles of the lower chest are the main breathing muscles used when you are relaxed.

During heavy exercise, the muscles in your shoulders and upper chest can also help with breathing. These muscles are not designed to work for long periods of time and tire easily.

Causes and management

Frequently it is difficult to know the cause of the breathlessness in a person with lung cancer and there is likely to be more than one cause. This is why an accurate assessment of the breathing and all other factors is vital. The assessment should take into account the physical and the psychological aspects of a person.

Some of the common possible causes are listed in the table below:

<table>
<thead>
<tr>
<th>Underlying problem</th>
<th>Consider</th>
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<tbody>
<tr>
<td>Pleural effusion: This is an accumulation of fluid in the pleural cavity, usually confirmed</td>
<td>Draining as much of the fluid as possible. Using pleural drainage systems.</td>
</tr>
<tr>
<td>Condition</td>
<td>Treatment</td>
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<td>------------------------------------------------</td>
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<tr>
<td>Pleural effusion: Prevent the fluid from coming back, pleuradesis. For persistent effusions some patients may be suitable for a permanent indwelling pleural drain.</td>
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<tr>
<td>Pericardial effusion: Involvement of the heart sac by the tumour can lead to fluid accumulating</td>
<td>Hospital specialist will assess if drainage of this fluid is safe and appropriate.</td>
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<tr>
<td>Chest Infections</td>
<td>Antibiotics</td>
</tr>
<tr>
<td>Pulmonary Embolus: This is a clot in the lung</td>
<td>Anticoagulation (thinning of the blood)</td>
</tr>
<tr>
<td>Anaemia</td>
<td>Iron medication</td>
</tr>
<tr>
<td>Anaemia</td>
<td>Blood transfusion</td>
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<tr>
<td>Tumour obstruction: Sometimes the tumour can compress the airways and cause obstruction</td>
<td>A range of treatments may be available; these include: Radiotherapy Airway stents Laser treatments</td>
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<tr>
<td>Superior vena cava obstruction: Sometimes the tumour bulk can compress this blood vessel in the chest</td>
<td>Steroids and consider stent insertion</td>
</tr>
<tr>
<td>Lymphangitis: This is an inflammatory condition in the lungs caused by the cancer</td>
<td>Steroids</td>
</tr>
<tr>
<td>Exacerbation of underlying disease such as chronic obstructive pulmonary disease</td>
<td>Treat the exacerbation appropriately</td>
</tr>
</tbody>
</table>
or heart failure

| Anxiety and panic: This can be really common when experiencing breathlessness | Control of the anxiety and panic using strategies that may help (see below). |

As there are so many potential causes, and any one individual may have more than one cause for their breathlessness, it is necessary to take a full history of the breathlessness experience, for example when it occurs, what makes it better or worse and using a scale to indicate level of breathlessness. A thorough evaluation is important to ensure that correctable causes are addressed and that the appropriate drug therapies are optimised. Please ensure you inform your specialist nurse and doctor, who will do a full assessment.

**Drug management**

Drug therapies that can be used specifically for breathlessness in lung cancer include – oramorph, lorazepam, steroids, oxygen therapy, and nebulised therapies. Any or all of these drug therapies can be tried to assess if they ease breathlessness, which can lessen anxiety and help to prevent respiratory panic attacks. Your doctor or specialist team will discuss whether these drugs are suitable for you to try.

**Non drug management.**

There are a number of ways of trying to help improve breathlessness without the use of medications; however, some people will require medications as well as the following strategies to get the maximum benefit with their breathing. Others may only require the following strategies. which include: - exploring your understanding of breathlessness; breathing retraining and control; coping strategies, including relaxation and anxiety management. Simple breathing exercises can be taught and practised regularly to help you to learn to breathe efficiently and in a controlled way. Also pacing yourself, prioritising activities and planning what you do each day can help to reduce the distress of breathlessness and make your breathing easier.

There are a number of websites giving very helpful information regarding managing breathlessness; however, a simple breathing technique will now be identified and there are links later in this chapter to other useful sites.
Breathing Techniques

Get into a comfortable position

When you feel breathless, it can help to get into a comfortable position that allows your shoulders and upper chest to relax and lets your diaphragm and tummy expand. This could be:

- sitting and leaning slightly forward with your forearms resting on your thighs
- sitting and leaning forward with your head resting on several pillows stacked on a table, and resting your arms on the table on either side of the pillows
- standing and leaning against a wall
- standing and leaning forward on to a secure surface

Breathe gently

Once you’re in a comfortable position, try breathing in through your nose and out gently through your mouth. Some people find it helpful to breathe out through pursed lips – as if blowing out a candle.

Focus on your breathing and count your breath in for three counts and out for four. If you find breathing in through your nose difficult, you can breathe through your mouth instead.

Controlled breathing

Breathlessness can cause you to breathe with the upper chest and shoulder muscles in a fast and shallow way. This can use up a lot of energy and tire you out.

An important part of managing breathlessness is learning a technique called controlled breathing, which uses your diaphragm and lower chest muscles. Controlled breathing can help you to relax and breathe more gently and effectively using lower chest breathing.

Practise these exercises when you’re not feeling too short of breath. You’ll then become familiar with them and can use them when you’re more breathless.

1. Sit comfortably with your neck, shoulders and back well supported - an upright chair with armrests is ideal.
2. Relax your shoulders.
3. Place your hands on your tummy, just below your ribcage.
4. Give a little cough; the muscle you feel under your hand is your diaphragm.

5. As you breathe in, you'll feel your hands rising and being pushed out by your diaphragm and tummy muscles.

6. As you breathe out, your hands will sink down and in. Try to get a sense of breathing from around the waist rather than from your upper chest, and feel your lungs expand as more air is able to get in.

It may help to sit sideways to a mirror so you can see that your lower chest is moving.

Relax your shoulders and upper chest muscles

When you breathe out, feel your shoulders and upper chest relax. As you breathe in gently, keep your shoulders relaxed. If this is hard to do, ask someone to press down gently on your shoulders to help relieve some of the tension.

Breathe in slowly and out gently, feeling your upper chest muscles relax more and more with each breath out.

It can take a bit of time to get used to these exercises. Try not to force the exercises or expect instant results. Aim for a gradual change from breathlessness to controlled breathing.

Complementary therapies that help you relax may help you manage your breathlessness.

Smoking

Smoking makes breathlessness worse and contributes to many actual and/or potential health problems. There are a number of medications that can be used to help with smoking cessation and there may also be specialist smoking cessation clinics in your local area to help you to quit smoking. Your GP’s surgery can advise you of these services. You may also wish to discuss smoking cessation with your lung specialist nurse.

More Information

More information and other information can be accessed from:

Macmillan Cancer support, phone; 0808 808 0000.
Download a Living with Breathlessness 'booklet'
http://be.macmillan.org.uk/Downloads/MAC11132Livingwithbreathlessness.pdf

The Roy Castle Foundation helpline; phone; 0800 358 7200, website;
www.roycastle.org

Information is available free of charge: alternatively your lung cancer nurse, district
nurse or palliative care nurse can access these for you.

References


University Press, Oxford

http://be.macmillan.org.uk/Downloads/MAC11132Livingwithbreathlessness.pdf