



Information for patients, relatives and carers

Acute Hyperventilation

Hyperventilation means over-breathing. That is breathing in excess of your body's needs.

Acute hyperventilation is common during panic attacks and is a perfectly normal response to any stressful situation. This is because some degree of over-breathing is part of the body's normal response to threat. Its function is to supply the muscles with more oxygen for 'fight or flight'. It often happens after a combination of strong emotions (fear, excitement, anger etc.) and physical exertion, though either can bring it on.

If the extra oxygen is not needed by the muscles, the effects can be dramatic and terrifying and can cause the following symptoms:

- Rapid breathing, but difficulty in getting breath
- Tightness in the chest
- Very rapid heartbeat
- Tingling or numbness
- Feeling of faintness
- Feeling of unreality
- Visual problems
- Rigid muscles, cramps
- Sudden emotional outbursts
- Feeling too hot or too cold

When you begin to over-breathe, the balance of gases in the lungs is upset. Breathing in an excess of air too frequently pushes out carbon dioxide which normally forms a reservoir in the lungs. Because there is too little carbon dioxide in the lungs, the blood becomes more alkaline, which causes the above symptoms. It is important to remember that the symptoms are the effects of too little carbon dioxide.

Two things are necessary to manage acute hyperventilation:

- To stop over-breathing
- To get enough carbon dioxide back into the lungs.

A general point to remember is that hyperventilation produces symptoms which are frightening in themselves; these can cause more over-breathing.

The Re-breathing Technique

If your symptoms don't go away after a few minutes it is probable that you haven't caught it quick enough, and you will need to use the re-breathing technique. This involves breathing in the air you have just breathed out. This air is richer in carbon dioxide and will therefore quickly replenish the carbon dioxide you have been exhaling (breathing out).

- Make a mask with your hands, put them over your nose and mouth and keep them there.
- Breathe in through your nose
- Breathe out hard through your mouth
- Breathe your own exhaled air. This should be done slowly and without holding your breath. Repeat four or five times (no more)
- All the time try to remain calm and relaxed.

It is even better using a paper bag (**not** a plastic one) over your nose and mouth instead of your hands, if circumstances allow. Adjust your posture so that your elbows are level with or above your shoulder (this makes it difficult to over-breathe).

What to do if you are with someone who is hyperventilating:

- Don't allow yourself to panic. Keep calm because fear can be infectious.
- Familiarise yourself with each of the procedures for controlling hyperventilation and encourage the person to use them. They may need reminding of what to do, so it may help to talk them through it.
- Don't shout or raise your voice; it should be firm, but quiet. Speak slowly.
- Comfort them physically: a hand gently cupping the back of their neck, or your arm loosely places around their upper back, may be soothing.
- They may become very emotional. Don't get into an argument by disagreeing with what they are saying. Repeat calming and encouraging statements, such as 're-breathe your own air...you're going to be all right... that's it, drop your shoulders....relax.'
- Afterwards treat as if for shock, with rest and a sweet drink.

① If you have further concerns about your condition, please contact your GP. If you are not sure what to do, call 111 or get help from 111 online: <https://111.nhs.uk/> [When to use NHS 111 - NHS \(www.nhs.uk\)](https://www.nhs.uk)

Patient Advice and Liaison Service (PALS)

We can listen to feedback (positive or negative), answer questions and help resolve any concerns about Trust services.

PALS can be contacted on 01904 726262, or email pals@york.nhs.uk

An answer phone is available out of hours.

Leaflets in alternative languages or formats

If you require this information in a different language or format, for example Braille, large print, Easy Read or audio, please ask the staff who are looking after you.

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