



**BTS/ACPRC Guideline**  
**Physiotherapy management of the adult, medical, spontaneously breathing patient**  
**Web Appendix 7 – Respiratory (chest) physiotherapy for people with**  
**Scoliosis or Kyphoscoliosis (curvature of the spine)**

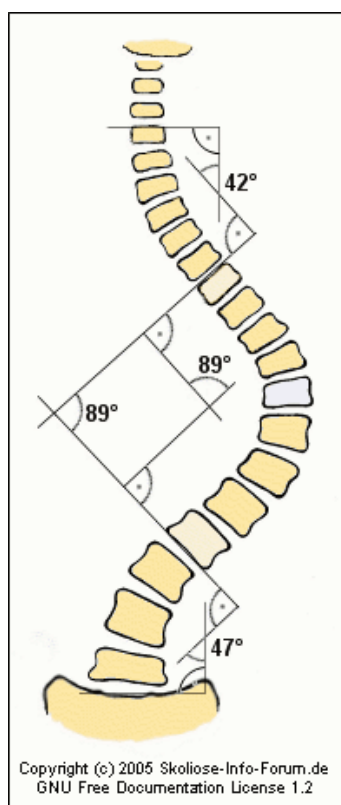
www.brit-thoracic.org.uk

### Why do people with scoliosis or kyphoscoliosis develop breathing problems?

When your spine is curved it alters the shape of your chest wall. This changes the angle of your breathing muscles, making it harder for them to work. Your rib cage is also a bit stiffer and can restrict the amount your lungs are able to expand. These things combined make breathing harder work and can lead to you feeling breathless when you are exerting yourself. You may find this gets more noticeable with age.

### How do I know if my curvature is going to be a problem?

The Cobb angle is the measurement used to identify the degree of curvature in your spine. This is done by measuring the angle between the points where the curve begins and where it finishes (see diagram). If you have a mild scoliosis (a Cobb angle of less than 25°) it does not tend to cause breathing problems or limit your ability to exercise. If your scoliosis is in the middle range (a Cobb angle between 25° - 60°) you may have, or go on to develop, breathing problems. If you have a Cobb angle greater than 60° - 70° you are at a greater risk of developing breathing problems.



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### What symptoms should I be aware of and when should I ask for help?

If you notice any of the following symptoms, talk to your GP, nurse, physiotherapist or spine specialist. They should refer you to a specialist who deals in breathing problems. You may be given tests to see if you need any special treatment:

- You are becoming increasingly breathless during activities, such as walking or getting dressed.
- You suffer from frequent chest infections.
- You find that you are tired during the day, or need lots of cat naps.
- You cannot sleep for long periods without waking, or lack concentration.

### What can I do to help myself?

For anybody, getting fitter is the best way you can help yourself. It allows you to keep as active and as independent as possible. This is especially true for those with breathing difficulties, or for those who are at risk of getting them.

### What sort of exercise should I do?

- Anything you can do and enjoy doing is good.
- Ask your GP to refer you for Pulmonary Rehabilitation (PR) if you have it in your area. These programmes are for anybody with breathing problems and are a mix of exercise and education sessions over a few weeks. These are proven to give benefit and are enjoyable as well.
- You may be offered a test to see if using oxygen while walking helps. You can ask your nurse, physiotherapist or doctor for more information on these at any time.

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- If you are not able to join a PR programme, ask your doctor what exercise is available to you; there may be an exercise on prescription scheme local to you.

### Will breathing exercises help?

#### *Deep breathing*

Deep breathing exercises alone may help keep your chest more mobile and help maintain or increase your lung capacity. Exercise, however, is the best way to work the breathing muscles and make you breathe deeply. It will keep your joints supple and the muscles of the chest working properly too. Ask your Physiotherapist for advice.

#### *Deep breathing after an operation*

Some people with scoliosis are offered an operation to insert a metal rod (called a Harrington Rod) in your back to help straighten it. If you have this surgery it is advisable to do deep breathing exercises both before and afterwards. Ask for physiotherapy advice.

#### *Respiratory muscle training*

Breathing (either in or out) against a resistance is a way of making the breathing muscles work harder and will make them stronger. If your muscles are stronger it may help reduce some of the breathlessness. However, this only works for some people. Speak to your Physiotherapist to see if this is an option for you.

### Who should I contact if I do not have a physiotherapist?

Ask your GP, nurse or specialist doctor to refer you to a physiotherapist who specialises in chest wall or breathing problems.

### Useful Contacts

Your physiotherapist is \_\_\_\_\_

Association of Chartered Physiotherapists in Respiratory Care  
[www.acprc.org.uk](http://www.acprc.org.uk)

British Thoracic Society  
[www.brit-thoracic.org.uk](http://www.brit-thoracic.org.uk)

British Lung Foundation  
[www.lunguk.org](http://www.lunguk.org)

Chartered Society of Physiotherapy  
[www.csp.org.uk](http://www.csp.org.uk)

Association of Chartered Physiotherapists in Women's Health  
[www.acpwh.org.uk](http://www.acpwh.org.uk)

NHS free smoking helpline **0800 0224332**  
[www.smokefree.nhs.uk](http://www.smokefree.nhs.uk)