



Oxford University Hospitals
NHS Foundation Trust

Radiotherapy: Deep inspiration breath hold (DIBH)

Information for patients



Radiotherapy Department

Why have I been given this leaflet?

Your clinical oncologist has reviewed your case and has recommended using the DIBH technique to help optimise your radiotherapy treatment.

DIBH is most commonly used in radiotherapy treatment for breast cancer, but it may also be helpful when treating other tumour sites.

Radiotherapy is routinely planned using a CT scanner. You will lie on the scanner couch on equipment which will support your position. It is important that you are as comfortable as possible. You will need to be in the same position for each treatment. We will require you to remove your clothes on your top half however we will make sure your privacy and dignity is protected at all times.

What is deep inspiration breath hold (DIBH)?

Deep inspiration breath hold (DIBH) is a technique whereby you hold your breath after taking a large breath in. We will ask you to do this during both the planning scan and your treatment. You will need to be able to hold your breath for a minimum of 20 seconds each time. Not everyone will feel comfortable or be able to hold their breath for the required time. If you feel that you may not be able to do this, please speak with your oncologist or therapeutic radiographer.

What is the advantage of DIBH?

When you hold your breath during DIBH, your lungs expand and so your heart is further from the treatment beam. This reduces the risk of the X-rays damaging your heart.

How can I prepare for DIBH?

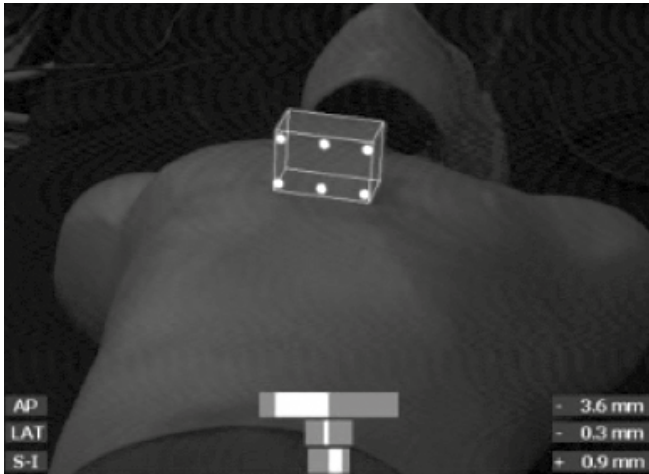
As this technique relies on self-control of your breathing pattern, you may like to practice holding your breath for 20 seconds after taking a deep breath in, while lying flat. Try to repeat this 3-4 times, as the average duration of radiotherapy treatment is approximately a couple of minutes. You could practice at home a couple of days before your radiotherapy planning appointment.

Respire offers resources on-line to help you prepare for radiotherapy. The videos will help you learn to relax in the treatment position and guide you through what to expect if you are required to undertake 'breath hold' during your radiotherapy.

<https://www.respire.org.uk/resources>

How do I know if I am holding my breath at the correct level?

At your planning scan, a small box will be placed on your chest to record your chest movements. A special camera will record how this box moves when you breathe.



Recording your chest movements

Following a short pause you will be asked to take a deep breath in and hold it. The radiographers will tell you when to breathe normally. They will review your breath hold and provide coaching to make sure you are holding your breath at the correct level. They will practice with you until you are comfortable with the technique, before beginning the scan. When the radiographers start the scan they will tell you when to hold your breath and when to breathe out.

What happens during the radiotherapy treatment?

You will be asked to lie in the same position every time you come for your treatment. You will be asked to take a breath in whilst the radiographers ensure you are in the correct position. It is normal for this to take a couple of breath holds, allowing you to practice the technique. Treatment will only start when you are in the correct position. It will be delivered in several sections, each lasting for around 20 seconds.

If at some point during treatment you need to breathe out, the machine will automatically pause the treatment until you are ready to hold your breath again. Radiographers will talk to you through the intercom and monitor you from outside the room, to guide you until treatment is completed.

What happens if I am not able to perform DIBH?

We will plan your treatment from a normal breathing CT scan using alternative measures to minimise the dose to your heart. It is far more important that you are comfortable and in the same position for each treatment, so do not worry if you have not been able to perform DIBH.

Please speak with your oncologist or therapeutic radiographer if you have any further questions.

Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

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