



Deep Inspiration Breath Hold (DIBH) for radiotherapy

DIBH is a technique where you breathe in deeply and hold your breath during your radiotherapy planning CT scan and your treatment. It is fairly new but research has shown that some patients can benefit from DIBH.

Who is it for?

This technique is mainly suitable for people with cancer in their left breast who need radiotherapy. It can help to reduce the amount of heart tissue in the area being treated. This is because the heart naturally moves away from the left side of the chest when you take a deep breath in and hold it. When you come for your planning appointment your oncologist or the radiographer will consider if you can hold your breath well enough to benefit from this technique.

You will need to be able to take in a deep breath and hold it for up to 30 seconds. You may find it helpful to practise at home:

- lie on a bed in a semi-reclined position, with your arms above your head
- take a deep breath in and hold it for 30 seconds
- repeat this a few times

Repeat this exercise a few times a day.

If necessary, the radiographers may ask you to practice your breathing at home and return for your planning scan.

During your planning appointment it may be decided that DIBH is not appropriate for you. This is quite normal and it will not affect your treatment.

How does DIBH work?

During your planning appointment you will be asked to lie on a board with your arms placed above your head. A small plastic box will be taped to your chest and camera equipment will monitor your breathing while you are having a CT scan.

A radiographer will ask you to take a few normal breaths and then to breathe in deeply and hold your breath for up to 30 seconds. When you have practiced this several times, you should be ready for your planning scan.

However, if you find it difficult to hold your breath you may find it a little easier if after taking in a deep breath, you release just a tiny bit of air, without lowering your rib cage. The deep inspiration breath-hold technique is explained on the video link below:

<https://cdn.respire.org.uk/coming-for-radiotherapy-breath-hold.mp4>

A radiographer will monitor your breathing while they are outside of the room using the computer system. They will instruct you over the intercom when to take a breath in and for how long you will need to hold your breath. There will be a radiographer in the room with you who will place some pen marks on your skin and will take some measurements. These pen marks will wash off so with your permission, the radiographers will make a few tiny permanent marks on your skin (tattoos). These are very small and are done by pinpricking the skin with some special dye. These permanent dots are important as they enable accurate positioning and treatment each day.

How long will the planning take?

Please be prepared to be in the department for up to two hours. Your breathing teaching session may take up to 20 minutes and the scan will be about 10 minutes. However, occasionally these may take longer.

What happens at my treatment session?

When you come for your radiotherapy, you will be asked to lie on the treatment couch in the same position as you were when you had your planning scan.

The radiographers will have computer screens outside the room, and will guide you with your breathing over the intercom system.

Once the radiographers have made sure you are in the correct position, you will be asked to breathe in the same way as during your planning appointment. The radiographers will tell you when they are ready to leave the room.

When your radiotherapy is ready to be delivered, the radiographers will ask you via the intercom system to hold your breath.

Once you have taken in a big enough breath, the treatment machine will turn on and deliver the treatment. The machine will turn off if you breathe out. You will need to hold your breath a few times to complete each treatment session.

If your breath is not enough the treatment machine will not turn on. The radiographers will be watching you and will guide you during your treatment.

Your treatment should take about 30 minutes, but be prepared to be in the department for up to an hour.

Who to contact

If you have any questions regarding your treatment please contact the radiotherapy planning department on 020 3826 2622. As the department is busy, a member of staff will take your name and contact details and someone will return your call as soon as possible.