Deep inspiration breath hold (DIBH) for radiotherapy to the breast or chest wall

This leaflet explains more about using the DIBH technique when having radiotherapy to the breast or chest wall. It includes the benefits, risks and any alternatives, as well as what you can expect when you come to hospital. If you have any further questions, please speak to a doctor or radiographer caring for you.

What is DIBH?
DIBH is a technique where you hold your breath during your planning CT scan and during your radiotherapy treatment.

Why should I use DIBH?
The action of holding your breath inflates your lungs and pushes your heart away from your chest wall and away from the area being treated. This is important to minimise any potential radiation damage to your heart.

As everyone is different due to their size, shape and internal anatomy, we won't know if you need to use DIBH until you have had your first planning CT scan. For some people, even when breathing normally, their heart will not be in the radiation field, so for them DIBH is not necessary.

What are the risks?
There are no risks associated with DIBH.

Are there any alternatives?
The alternative to DIBH is to have radiotherapy while breathing normally. Your heart will be shielded from the radiation beam as much as possible.

How can I prepare for DIBH?
You do not need to do any specific preparation but you might like to practise holding your breath for 20-30 seconds at a time to get used to the sensation. For more information and a film to help prepare for DIBH, go to, w: www.respire.org.uk
What happens during my CT scan with DIBH?
The procedure for having a planning CT scan is explained in the leaflet, Radiotherapy to the breast and chest wall. At your planning appointment you will have an initial CT scan without holding your breath. The radiographers will then decide if you would benefit from DIBH.

If the radiographers decide that you will benefit from DIBH, you will be asked to hold your breath 5 times and they will draw some pen marks on your skin and take some measurements. This is to make sure that your chest wall moves enough when you hold your breath. Once you are happy with the process you will have another CT scan while holding your breath. An automated voice through an intercom will tell you when to hold your breath and when to release it. You will be holding your breath for approximately 20-30 seconds at a time. If you are not able to hold your breath or your chest wall does not move enough when you hold your breath, then DIBH is not going to help you and we will give you your radiotherapy while you breathe normally.

What happens during my radiotherapy treatment with DIBH?
Each time you have your radiotherapy treatment you will lie down on the treatment couch in the same position as you were for your CT scan.

The radiographers will move you into the correct position and will ask you to hold your breath and then release it several times until they are happy with your position. The radiographers will then leave the treatment room and will speak to you through an intercom. When the radiographers are ready to switch the radiation on they will ask you to hold your breath. You will hear the treatment machine switch on. When the radiation beam is finished they will tell you to release your breath. This will happen several times until the treatment is finished. The number of times that you need to hold your breath depends on how long you are able to hold it for.

A computer monitors your breathing and position, so if you release your breath without being told to, it will alert the radiographers and they will switch the radiation off. The radiographers are watching you all the time, so if you are not happy, you can let them know by raising your hand.

Will I feel any pain?
You will not feel any pain with this technique.

Contact us
If you have any questions or concerns about DIBH, please contact the pre-treatment team, t: 020 7188 1449, Monday to Friday, 9am-5pm.

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit, w: www.guysandstthomas.nhs.uk/leaflets

Pharmacy Medicines Helpline
If you have any questions or concerns about your medicines, please speak to the staff caring for you or call our helpline.
t: 020 7188 8748, Monday to Friday, 9am-5pm

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