

## PATIENT INFORMATION

### Deep Inspiration Breath Hold (DIBH) for Breast Radiotherapy

#### What is Deep Inspiration Breath Hold?

Deep inspiration breath hold (DIBH) is a technique where you breathe in and hold your breath during your planning CT scan and also during your radiotherapy treatment for a minimum of 20 seconds at a time.

A **patient information video** explaining the process of DIBH training, planning and treatment process is also available on the cancer services website. You can access it by typing the following URL or scanning the QR code below.

<https://www.swslhd.health.nsw.gov.au/cancer/rt.html>

Once on the web page select the Deep Inspiration breath-hold video



**Will I need to have this technique?**

Breathing in deeply and holding your breath inflates your lungs and pushes your heart away from your chest wall, and away from the area being treated. This can reduce the amount of heart and lung exposure to radiation in some patients. However, as each person's anatomy is different, this does not apply to everyone.

Whether or not you benefit from breath hold will be assessed by the Radiation Therapists and your Radiation Oncologist during your planning CT scan. For some people, even when breathing normally, their heart will not be in the radiation field, so for them holding their breath is not necessary.

You will only be treated with this technique if there is a benefit to you.

## **THE EQUIPMENT**



Mouth Piece

**Snorkel:** You need to be able to create a good seal with your lips around the mouthpiece, making sure that you are not breathing around the mouthpiece. You will need to keep the mouthpiece in the whole time you are on the bed for planning and treatment appointments. Generally this can be from 15 – 45 mins depending on your treatment.



**Nose clip:** Ensure the nose clip fits securely; you should not be able to breathe through your nose at all. It is very important that you breathe only through your mouth so the machine can measure the amount of air you are breathing in and out.



**Patient Control Button:** This button allows you to stop holding your breath and breathe normally at any time. You must press this button the whole time you feel comfortable to holding breath.

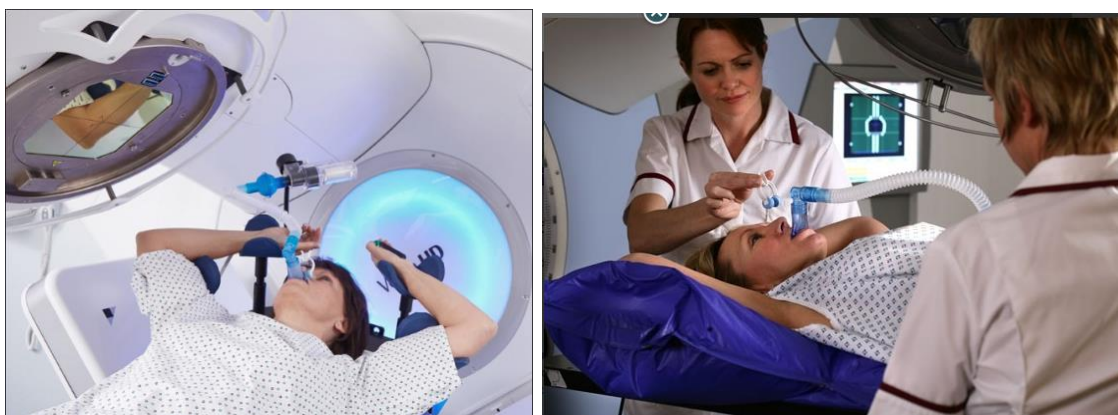
## **How does DIBH work?**

- The DIBH machine works by helping you to hold the same amount of air in your lungs each time you take a deep breath in.
- The radiation therapist will ask you to breathe in deeply through the snorkel. At a set level, the machine will stop you from breathing in or out any further. This is when the treatment machine will give you your treatment.
- You are always in control of the system by holding the patient control button.
- If at any time you wish to stop holding your breath, let go of the button and it will immediately allow you to breathe again.
- If you need assistance, press the button twice in a row. This will send a signal to your Radiation Therapists that you need help.
- It is important not to move your arms to adjust the snorkel once the Radiation Therapists have put you in the treatment position. Use the button to call for assistance.

To be suitable for the DIBH technique, you must be able to:

1. Hold your breath for a minimum of 20 seconds
2. Understand and perform the instructions given to you by the Radiation Therapists
3. Tolerate the breast radiotherapy position (lying with your arms up above your head) for 45 minutes

**If you are not able to do any of the above please do not be concerned, we can use other methods to ensure you receive the best possible treatment. You can proceed to treatment without holding your breath.**



### **How can I prepare for DIBH?**

Before you attend your radiotherapy planning session we would like you to practice at home to get used to the equipment.

1. Lie on your back, with a pillow underneath your head, and put your arms up above your head. Put on the nose clip and make sure you can't breathe through your nose. Put the snorkel in your mouth and make sure your lips are making a tight seal.
2. At first, just get used to breathing through the snorkel.
3. Once you are used to breathing through the snorkel, take a deep breath in and hold it for 5 seconds. The deep breath in should feel comfortably full, you should not arch your back or strain in any way.
4. Once you have held your breath for 5 seconds, breathe out and resume regular breathing. Repeat 2-3 times.
5. When you are ready, repeat holding your breath for 10, 15, 20 and then 30 seconds. Remember to breathe normally and catch your breath after each breath hold.

### **What happens during my radiation therapy treatment with DIBH?**

Each time you have your radiotherapy treatment you will lie down on the treatment couch in the same position as during your CT scan. The Radiation Therapists will ask you to hold your breath, and then release it several times while they set you up for treatment. You will be given the patient control button.

The Radiation Therapists will speak to you through an intercom, and tell you when to take a deep breath in and hold. You will hear the treatment machine switch on. When the radiation beam is finished they will tell you when you can breathe normally. You will keep doing this process until your radiation treatment is completed.

A computer monitors your breathing, so if you release the button to breathe normally the radiation will automatically switch off. The Radiation Therapists are watching you at all times. If you need assistance you can let them know by 'double-clicking' on the patient control button to send a distress signal to your Radiation Therapist.

### **Are there any alternatives?**

The alternative to DIBH is to have radiotherapy whilst breathing normally.

If you are not able to hold your breath, do not be concerned, we can use other methods to ensure you receive the best possible treatment.

If you have any questions or concerns about deep inspiration breath hold (DIBH), please contact the Radiation Therapist CT simulation team on **02 8738 9450** (Monday to Friday 8am to 4:45pm) or your Radiation Oncologist.