



Patient Information Assisted Breath Hold Technique

Why use the Assisted Breath Hold Technique?

Accuracy is the most important part of radiation therapy treatment. For some patients, normal breathing can affect the position of the treatment target and surrounding organs. In these cases, holding your breath in a consistent and comfortable way may help to ensure your internal anatomy is in the same position for both planning and treatment.

What is the Assisted Breath Hold Technique?

The breath hold technique involves holding your breath during the radiation therapy planning CT scan and during treatment. You will need to be able to hold your breath for a maximum of 20 seconds.

It can be difficult to determine if you're taking the same amount of air in each time you hold your breath. For this technique, you will be breathing through a device which is connected to a computer. This is called the Active Breathing Coordinator (ABC). When you take a breath in or out, the computer measures the amount of air in your lungs. When this measurement reaches a certain point, the device will prevent you from breathing in or out therefore keeping you in a breath hold. The machine does not control your breathing but assists you in holding the correct amount of air. If at any time you wish to breathe normally, you are free to do so. Once you are ready to hold your breath, the machine will take action as soon as you reach the desired amount of air in your lungs.

What you will need to do?

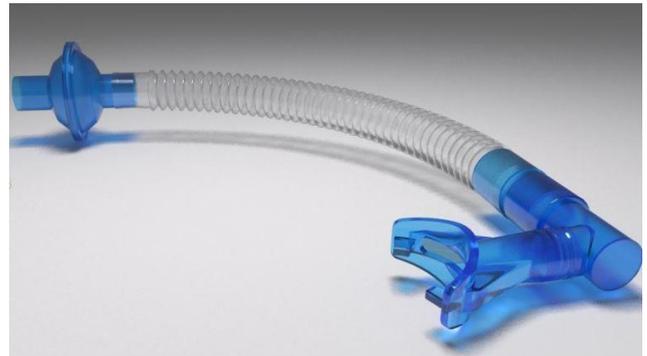
- Be able to hold your breath for 20 seconds (your doctor will determine whether this is inhalation or exhalation).
- Be comfortable with breathing through your mouth alone

Practice makes perfect!

- Practise holding your breath at home a few times a day for a week leading up to the planning CT scan.
- Start with short 5 second breath holds and build up in 5 second intervals.
- We want you to be comfortable holding your breath so try to find an amount that suits you and practice breathing in this amount each time

What will happen when you come for the planning CT appointment?

You will have a coaching session at your planning CT appointment. In this session you will meet a member of our team who will introduce you to the equipment and help you to familiarise yourself with the process. You will be lying down in the same position that you will be for treatment each day. During this session, we will establish how long it is possible for you to stay in breath hold and how much air you can hold.



This is the snorkel device which you will be using during this technique. A nose peg will also be used to ensure you are breathing only through your mouth.

Once the team have completed your set up and coaching, the staff will leave the room and speak to you through the intercom. From here you will be directed when to begin holding your breath for the scan.

What will happen when you are having your treatment?

You will be set up in the correct treatment position and we will give you another practice of holding your breath before starting your treatment. Once you are comfortable we will leave the room and get all the equipment ready. You will be breathing freely at this time. When you and the treatment machine are ready to start, we will talk to you over the intercom system and guide you when the breath hold will occur.

The breath hold device is connected to the machine and treatment will only begin when you are ready and have taken the correct breath. If this breath changes at all during the treatment, the machine will automatically stop delivering the dose until you take the correct breath again.

You will also be given an alert button to hold during treatment. If you need to release your breath, you can release this button which will then stop the treatment and alert the staff that you are going to start breathing normally. They will be prompted to check on you and take any necessary action.

Important Note

Not everyone will be able to manage the ABC snorkel system. If this is the case, then the CT team will complete your planning CT with you breathing normally. Everyone's internal anatomy is slightly different and the breath hold technique is not essential for all patients. Your doctor will review the scans taken at the planning session and decide if breathing normally is appropriate for your treatment.

Sometimes your doctor might request that you come back for another planning CT session to either try the ABC snorkel again, or try holding your breath voluntarily. We will work together when creating your treatment plan to ensure it is the most optimal for you.

You may also decide you don't wish to hold your breath for treatment. If this is the case, please discuss this with us at your planning CT appointment.

For more information, please get in contact with ARO or visit our website at www.aro.co.nz