

Assisted breath hold exhale technique

This information is to be used in conjunction with your site specific information sheet.

Breathing out/exhaling and then holding your breath can help keep internal anatomy in the same position and minimise side effects from radiation therapy.

ARO has special equipment to help you achieve a dependable breath hold. You breathe through a snorkel like device which is connected to a computer. The device/computer system is called the Active Breathing Coordinator (ABC).

When you **exhale** the device will prevent you from breathing in again, and therefore keep you in a consistent breath hold.

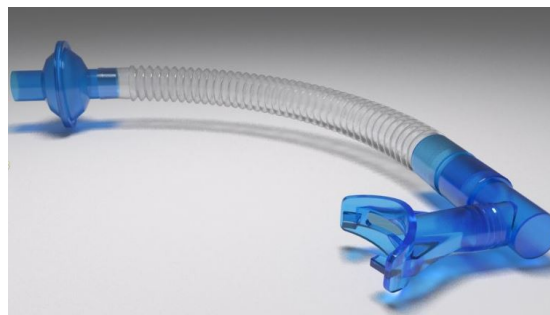
Criteria for the **assisted breath hold exhale technique** to be effective:

- Be able to **exhale** and hold your breath for approximately 20 seconds.
- Be comfortable breathing through your mouth only (your nose will be blocked with a soft clip)
- Your radiation oncologist confirms this technique improves your individualised treatment.

Preparing for the assisted breath hold exhale technique:

*Prior to your pre-treatment planning scan we recommend you practise **breathing out** a comfortable amount of air and holding your breath a few times each day prior to your pre-treatment planning scan. Start with 5 second breath holds and build up in 5 second intervals.*

You will be shown the ABC system at simulation (pre-treatment planning) and have time to become familiar with the assisted breath hold exhale technique. There will be an opportunity to practice using it multiple times.



This is the snorkel like device (the mouthpiece on the end is comfortably sealed by your lips). A soft nose clip is used to ensure you are breathing only through your mouth.

At simulation (pre-treatment planning) your body position will be determined. We will then establish how long you can hold your breath once you have exhaled. Everyone is different.

You will have a CT scan using the assisted breath hold exhale technique. This involves staff leaving the room during which time you will be breathing freely. When you and the radiation therapists are ready to start, they will talk to you over the intercom system and guide you through the exhale technique.

You will have a control (alert) button to hold down. *If you release this button the ABC system stops, air can flow back through the snorkel, and staff can support you however needed. Use of the control button will be demonstrated prior to the scan starting.*

You may have an appointment in a treatment room after your scan to simulate treatment setup and confirm the suitability of the breath hold technique without delivering any radiation. Or, on review of your CT scans your radiation oncologist may request another simulation appointment to try the technique again.

*Prior to your first day of-treatment continue to practise **breathing out** and then holding your breath for 20 seconds a few times each day. You will also be able to practise with the equipment on your first day.*

The ABC system is connected to the treatment machine and it will only turn on when you are ready and have exhaled. You will repeat this several times during each treatment.

A new mouth piece and snorkel filter is used for every treatment.

The assisted breath hold technique will be used for all treatments. *Please inform any ARO staff member if this becomes too uncomfortable.*

Sometimes the assisted breath hold technique cannot be used due to health problems that stop you being able to hold your breath for the required length of time, or you choose not to hold your breath for treatment. That is fine as we can plan your treatment using other techniques.

- Visit Treatment Techniques on www.aro.co.nz to learn more.