Clearway 2



A Patient Guide to the Clearway 2



Why do I need to use a Clearway 2?

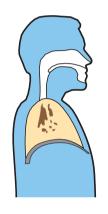
Cough is essential to prevent a build up of mucus/phlegm from our airways. Mucus is important as it traps dirt and bacteria. The mucociliary escalator transports the mucus to the larger airways and is usually cleared with a cough. In order for a cough to be strong and effective the following occurs:

- A deep breath in.
- A short pause and closure at the top of our airway allowing pressure to build up in the chest.
- A good strong expiratory muscle contraction (abdominal muscles and intercostal muscles).

These components are essential to get enough air into the lungs, so that when the expiratory muscles contract, the air comes out faster, clearing the mucus up towards the mouth. If we have a weakness in the muscles that we use to take in a deep breath, or in our expiratory muscles, our cough strength decreases and becomes less effective resulting in a build up of mucus within the lungs.

The Clearway 2 is a mechanical insufflation-exsufflation device. These devices can help improve your cough strength. Your device will be set up by your physiotherapist/clinician.

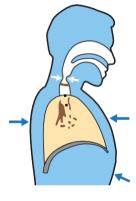
The Clearway 2 gives a deep breath in (insufflation) followed by a rapid suck out (exsufflation). This simulates what naturally happens when you cough and therefore can make your cough stronger so you can bring mucus up in to your mouth or high enough to be cleared.







Breath in



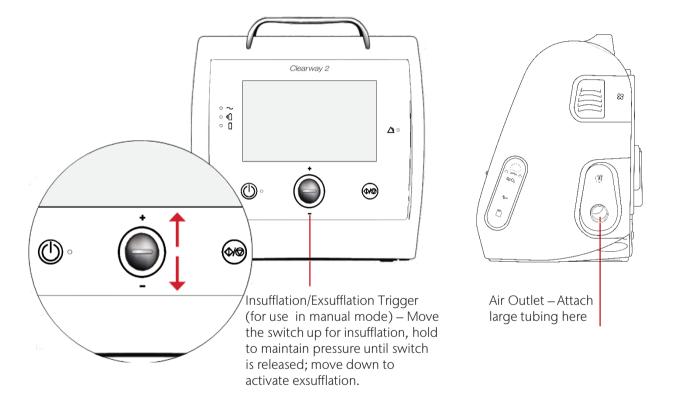
Compression

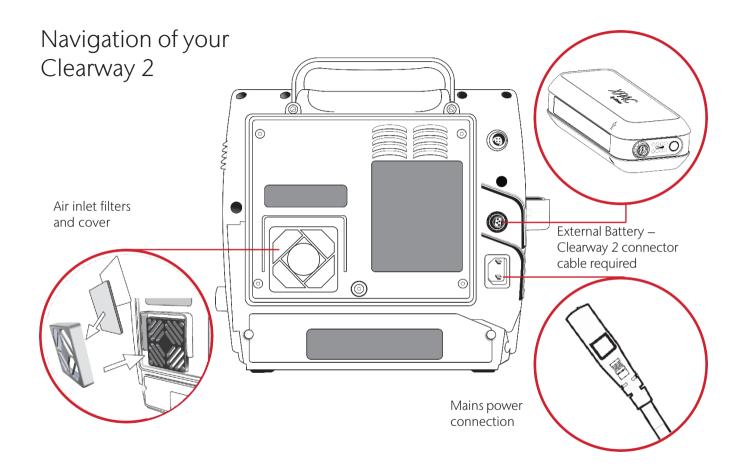


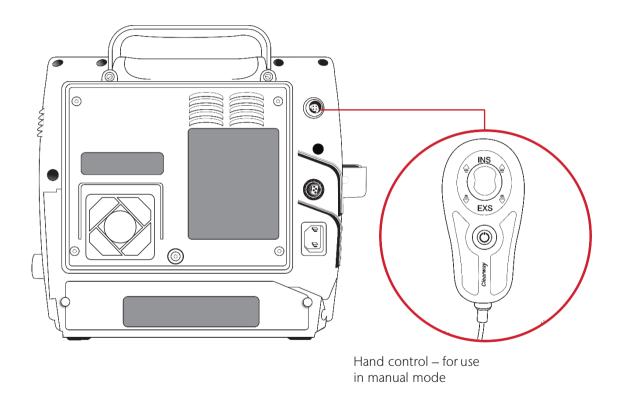
Navigation of your Clearway 2

Clearway 2 0 D0 On/Off – Press once to turn device on, to turn off, press once then confirm using the (CHINGING CONTROL OF THE CONTROL OF touchscreen

Start/Stop – Press to start or stop treatment

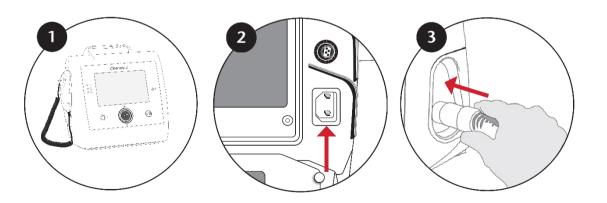


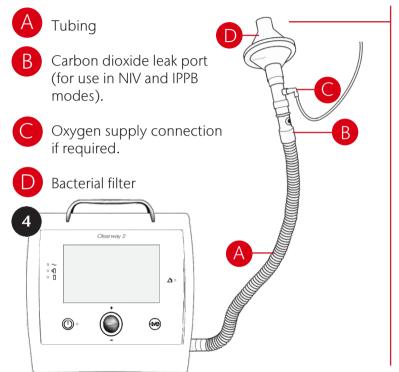




Setting up your Clearway 2

- 1 Place the Clearway 2 on a clean, smooth, hard surface (not carpet).
- 2 Connect to the mains or battery.
- 3 Attach the breathing circuit to the air outlet on the side of the Clearway 2.
- 4 Attach breathing circuit to the interface. The bacterial filter should be at the end of the circuit closest to interface. This helps to protect the breathing circuit from any secretions.





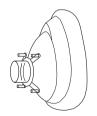
Interface options



Catheter Mount



Mouthpiece & nose clip

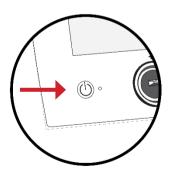


Facemask

Entraining oxygen to your Clearway 2

If you need supplementary oxygen, it may be entrained via a connector as shown below:

- Always switch on the Clearway 2 before the oxygen supply. When adding oxygen, attach an entrainment port at the mask or tracheotomy end of the circuit.
- When treatment is complete, switch off the oxygen supply then the Clearway 2 and disconnect the oxygen tubing from the breathing circuit.
- Store the breathing circuit in a clean bag or other suitable container.





Information about treatment and settings

- If you need a caregiver to assist with treatment, you may want to agree on a signal with them to alert them that you want to stop treatment. This maybe a thumbs up, looking up or shaking your head.
- Treatment is usually carried out in the position you cough best in. Your clinician will advise you on this.
- Treatment settings are prescribed like medicine; therefore, they should only be set by a clinician. Your device will be programmed with the appropriate settings for you.
- If possible, try to avoid treatment immediately after a meal or food.
- When using the Clearway 2 in the automatic modes, a Synchrony Beep® will sound prior to the delivery of the negative pressure, signalling when to cough, making the treatment more effective.
- A Clearway 2 has different modes and therefore can provide different treatments. MI-E (cough) treatment usually consists of one or more insufflation time (Ti) (length of the breath in), exsufflation time (Te) (length of the suck out), and a pause. These together are called a cycle. The number of cycles you should do in each treatment will be advised by your physiotherapist or clinician. After each treatment, you may need to have a short rest (30 seconds or longer). Any secretions can then be cleared.

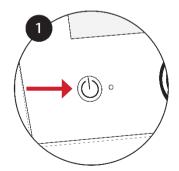
∠ Attach

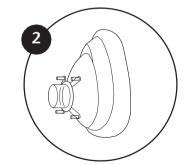
interface to here

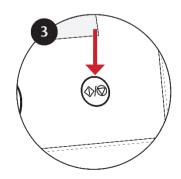
Starting treatment

When you switch on the Clearway 2, it will remember the last settings that were used, so you will not need to set up the device each time, unless you are changing to a different prescription or mode.

- 1 Turn the Clearway 2 on by pressing the On/Off button. Check and confirm that you are using the correct circuit type.
- 2 Position the interface. If using a mask, ensure it is firmly against your face to prevent air leakage. Your carer may need to support the back of your head to ensure a steady seal of the mask.
- 3 Use 'Start/Stop' button on the Clearway 2 or hand controller if you are using one, to commence therapy.
- If you use a ventilator in addition to the Clearway 2, ensure that you only begin treatment with the Clearway 2 when you are ready and your ventilator is ready for you to use at the end of treatment.





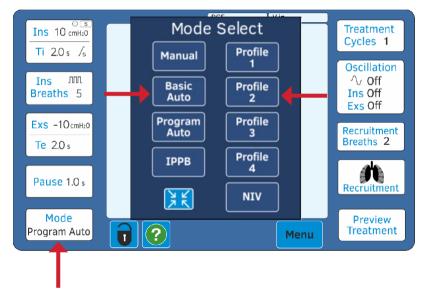


Changing the mode on your Clearway 2

The Clearway 2 has different modes and can save settings from a mode in a profile. Your clinician will set up the device with the most appropriate mode or modes for you.

If you have multiple modes or profiles programmed, change the mode or profile, by pressing the **Mode** button on the touchscreen, to display those available to you.

Using the touchscreen display, press the **Mode** button then select the **Mode** or **Profile** you want to use - the individual settings for each mode and profile will be retained in the device memory and so you do not need to alter the settings each time you change the mode or profile you are using.



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What does the Active Treatment Display mean?

Ti - Breath in

Te - Cough phase

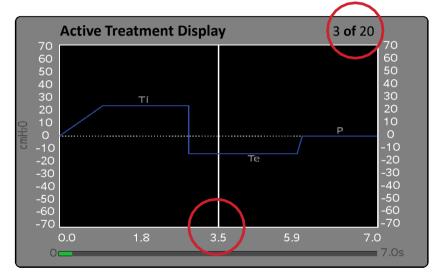
P - Pause

You will hear a 'beep' just before it delivers the negative pressure, at this point you should cough.

The number in the top right corner shows the current cycle being performed by the Clearway 2. In this example, the device is on cycle number three out of a total of twenty.

The vertical white line tracks where you are in the treatment cycle on the screen.

The Clearway 2 works through the programme of therapy, and when it beeps and 'Treatment has Ended' appears on the screen, the treatment is finished. You may need to repeat the sequence if you feel it is necessary.



Cleaning and maintenance

The device:

- 1. Turn off the Clearway 2 and disconnect the mains supply.
- 2. Remove the patient circuit.
- Disconnect all electric cables.
- 4. Clean the outside of the Clearway 2 using disinfection wipes containing ethanol 70%.
- 5. Reconnect the patient circuit. Make sure all parts are dry before the Clearway 2 is put into operation.

Inspect the device, power cord and patient circuit for damage whilst cleaning. If the is any damage noticed, do not continue to use the device, and contact your care provider, hospital or referring clinician immediately.

For more detailed information please consult the Clearway 2 User Manual.

Filters, breathing circuit and interface:

The air inlet filters are located on the back of the device and accessed by simply removing the filter housing. There are two types of filter to be used:

- 1. Cleanable filter (grey)
- 2. Disposable filter (white)

The filters should be inspected weekly, and changed if discoloured, or more frequently if advised by your referring clinician. Clean the cleanable filter at least once a week and replace once a year.

- 1. Remove and separate the two filters.
- 2. Carefully vacuum the cleanable filter to remove any build-up of dust.

Replace the white filter at least every 4th week, or more frequently when used in high pollution or pollen-rich environments.

Please check the User Manual for more information.

Troubleshooting

Below is a list of common alarms or information messages and what to do if these occur while you are using the device. Please check the User Manual for a comprehensive list of alarms and troubleshooting.

Further information and tutorial videos can also be found at www.EducationByBreas.com

Alarm/Information Message	User Action Required
Power Fail	All power sources have been lost – mains power has become disconnected and the batteries do not have enough charge to power the Clearway 2. Check all of the power connections, change to a new power source if possible.
High Pressure	120% of set pressure is detected for >2 seconds. This could be as a result of coughing into the breathing circuit during the insufflation phase. Acknowledge the alarm using the touchscreen and re-start your Clearway 2 by switching the power off then on again.
Incorrect Circuit in Use	No exhalation port is detected in the breathing circuit. This could be because the incorrect circuit is being used or that the exhalation port is blocked. Ensure the correct circuit type is being used and that it he exhalation port is not blocked during treatment.
Internal Over Temperature	Internal temperature of the Clearway 2 is >60°C – this could as a result of high ambient temperature or that the device is placed in direct sunlight or close to a heat source. It could also be as a result of the air inlet filters being blocked with dust and dirt. Check for these things.

Your prescription settings 1

Mode	Interface Type	
INS. Pressure	EXS. Pressure	
INS. Trigger	Te (seconds)	
Ti (seconds)	Treatment Cycles	
Rise	Oscillation Frequency	
INS. Breaths	INS. Osc. Pressure	
Stepped INS.	EXS. Osc. Pressure	
Pause Time (seconds)	Recruitment Breaths	

Your prescription settings 2

Mode	Interface Type
INS. Pressure	EXS. Pressure
INS. Trigger	Te (seconds)
Ti (seconds)	Treatment Cycles
Rise	Oscillation Frequency
INS. Breaths	INS. Osc. Pressure
Stepped INS.	EXS. Osc. Pressure
Pause Time (seconds)	Recruitment Breaths

Your prescription settings 3

Mode	Interface Type	
INS. Pressure	EXS. Pressure	
INS. Trigger	Te (seconds)	
Ti (seconds)	Treatment Cycles	
Rise	Oscillation Frequency	
INS. Breaths	INS. Osc. Pressure	
Stepped INS.	EXS. Osc. Pressure	
Pause Time (seconds)	Recruitment Breaths	

Your prescription settings 4

Mode	Interface Type
INS. Pressure	EXS. Pressure
INS. Trigger	Te (seconds)
Ti (seconds)	Treatment Cycles
Rise	Oscillation Frequency
INS. Breaths	INS. Osc. Pressure
Stepped INS.	EXS. Osc. Pressure
Pause Time (seconds)	Recruitment Breaths

Your prescription settings (NIV/ IPPB Modes)

Non-Invasive Ventilation (NIV) Mode			
IPAP Pressure		Ti (seconds)	
EPAP Pressure		Trigger Level	
Back-Up Rate (BPM)		Interface Type	
Intermittent Positive Pressure Breathing (IPPB) Mode			
Flow (L/min)		Maximum Ins. Pressure	
		TVIGATITION TO COSCITE	
Plateau (seconds)		Trigger Level	

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