

High frequency chest wall oscillation (HFCWO) for cystic fibrosis



What is high frequency chest wall oscillation (HFCWO)?

HFCWO is a way to clear secretions from your airways. It is also known as “the vest”.

- High frequency means that it is very fast.
- Oscillation means that it shakes or vibrates.

A HFCWO device has 4 parts:

1. An air compressor machine that creates short bursts of air
2. 2 air hoses that connect the machine to the vest
3. A vest that inflates with air to squeeze and release short, gentle bursts of pressure against your chest wall up to 25 times every second

How does HFCWO work?

Follow your doctor’s or respiratory therapist’s instructions for how to use your HFCWO device. Some guidelines are listed below:

- Attach the air hoses to the compressor.
- Put on your vest, and attach the air hoses to it.
- Turn on the compressor.

When the HFCWO device is on:

- The compressor fills the vest with air and makes it shake.
- This shaking causes a gentle squeezing and releasing of the chest wall. It is like having a lot of mini coughs.
- The mini coughs help move mucus from small airways to large airways. From there, you can cough the mucus out more easily.

How do I put on the vest?

- Put the vest on over a thin layer of clothing, such as a t-shirt.
- Put your arms through the arm holes of the vest so the Velcro or clips that close the vest are in the front.
- Tighten or loosen the shoulder straps so the vest covers your whole chest.
 - The bottom of the vest should touch the top of your hips.
 - You should just be able to fit a fist between the closed vest and your chest.
- Attach each hose from the compressor to the hose ports on either side of the vest.

In case of an urgent concern or emergency, call 911 or go to the nearest emergency department right away.

High frequency chest wall oscillation (HFCWO) for cystic fibrosis, continued

How long should I wear the vest?

Your doctor or respiratory therapist will choose the correct settings for the vest.

- The machine has 3 different settings.
- Do each setting for 10 minutes for a total of 30 minutes.
- Do 3 sets of huff coughs after each 10-minute session.

Which aerosols can I breathe in while using the vest?

While using the vest, you may breathe in:

- Saline
- Your prescription aerosol. Some examples include:
 - Albuterol (Proventil, Ventolin and others)
 - Levalbuterol (Xopenex)
 - Dornase alpha (Dnase or Pulmozyme)

After you turn off the vest, use your:

- Antibiotic aerosol **AND**
- Steroid MDI (metered dose inhaler)

What if I have a chest port-a-cath (port) or feeding tube button?

To protect a port or feeding tube button, you can:

- Cover them with a folded washcloth or a block of soft foam.
- Release the shoulder strap on the side of the port.

What if I have questions about how to use HFCWO?

Talk with your pulmonologist (lung doctor) or respiratory therapist if you have any questions or concerns.

When should I call the doctor?

Call 911 **right away** if you have trouble breathing.

Also call your doctor if you have any questions or concerns about how you feel.

This teaching sheet contains general information only. Talk with your child's doctor or a member of your child's healthcare team about specific care of your child.

In case of an urgent concern or emergency, call 911 or go to the nearest emergency department right away.