

Infant Veno-Arterial Extra Corporeal Membrane Oxygenation (VA ECMO) for Management of Congenital Diaphragmatic Hernia (CDH)

Your baby is on VA ECMO. ECMO stands for: Extra Corporeal Membrane Oxygenation.

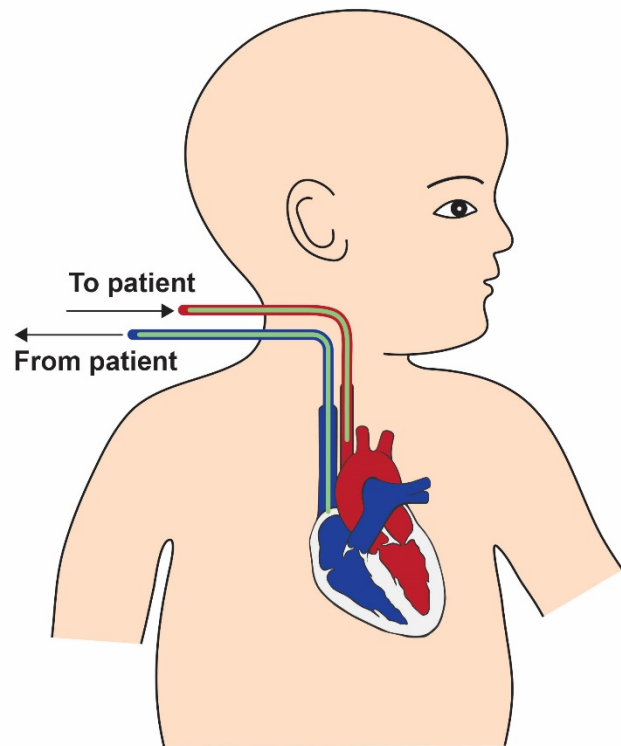
What do these terms mean?

Extra Corporeal: outside the body
Membrane: artificial lung
Oxygenation: adding oxygen to the blood

What Is VA ECMO?

VA ECMO is used as a support system for the lungs and heart.

- Your baby will have two ECMO tubes (cannulas). A cannula is a large tube that the doctor will place surgically. One cannula will be placed in a large vein in the neck, and the other will be placed in a large artery in the neck.
- Blood flows from the vein, through the cannula into the ECMO machine.
- The machine adds oxygen to the blood and removes carbon dioxide. The machine then pumps the blood through the other cannula into the artery.



Adapted from: Heart Circulation Diagram
(https://upload.wikimedia.org/wikipedia/commons/7/73/Heart_circulation_diagram.svg) by Patrick J. Lynch, medical illustrator, C. Carl Jaffe, MD, cardiologist [CC BY 2.5 (<https://creativecommons.org/licenses/by/2.5/>)], via Wikimedia Commons

What should I expect with ECMO?

An ECMO specialist will be a member of your baby's care team. The specialist will be at your baby's bedside to monitor and manage the ECMO machine. They are available anytime you need them to answer questions or concerns with ECMO.

Below are some things to expect while your baby is on ECMO:

- The respiratory therapist will turn down the ventilator (breathing machine) to allow the lungs to rest. ECMO does not heal the lungs, but allows time for the lungs to get better.
- Medications for blood pressure, or to help the heart pump better, may or may not be needed while on ECMO.
- Your baby may be on medicine to make them sleep or allow them to wake up, depending on their treatment plan.
- We will give your baby medications for pain control, sedation (sleep), and blood thinning for the ECMO machine.
- Your baby will have a daily chest x-ray.
- We will take blood for lab work from an IV, so there are no pokes.
- Your baby may bleed at the ECMO cannula site, any IV site, or wound. This is normal.
- Your baby may appear swollen at times. Eventually this should go away.
- We may need to give blood transfusions, these are not uncommon.



- While your baby is on ECMO, the surgeon will repair the CDH. Your baby will still need ECMO after the repair is done. They will need time for the lungs to rest and improve.
- Your baby's time on ECMO will vary. Every patient is different. The surgeon will keep you updated on the length of time they feel is needed. Despite our best efforts, some babies will not recover.

What are the risks of ECMO?

The doctor will discuss risks with you. Some of the more common risks are bleeding, infection, and potential equipment failure. We monitor for these very closely.

What can I do to help my baby?

This is the really hard part. There may be no changes in your baby's condition for days or possibly weeks. We know that this is a very stressful time for you. The following steps may help you cope with having a baby on ECMO:

- Get rest, take breaks away from the Intensive Care Unit and hospital, and eat regularly. You will need to make decisions about your baby's medical care, which you can do best if you are rested and alert.
- Ask questions. We will answer the best we can or find you the best person to speak with.
- You can bring drawings from siblings or recordings or videos of them for your baby.
- Interact with your baby. You can read to them, play music, or just talk to them.
- Ask their nurse about other things you can do or bring for them.

How will I know when my baby no longer needs ECMO?

The medical team will decide when your baby can be taken off ECMO. When we feel that your baby is showing signs of improvement, ECMO support may be turned down. The ventilator will be used to help the lungs start to work better. We call this “recruitment.” We will discuss a “trial off” ECMO. This means that we will stop ECMO support for a short time to see if your baby’s lungs and heart can work without ECMO support. If they no longer need ECMO, we will remove the cannulas. Do not be discouraged if your baby does not do well with their trial off. Most patients need more than one trial.

What is the mailing address for the ECMO Program?

F5850 UH South
1500 E. Medical Center
Drive Ann Arbor, MI
48109-5282



www.med.umich.edu/ecmo

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