

# Adult Veno-Arterial Extra Corporeal Membrane Oxygenation (VA ECMO)

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

## What do these terms mean?

**Extra Corporeal:** outside the body

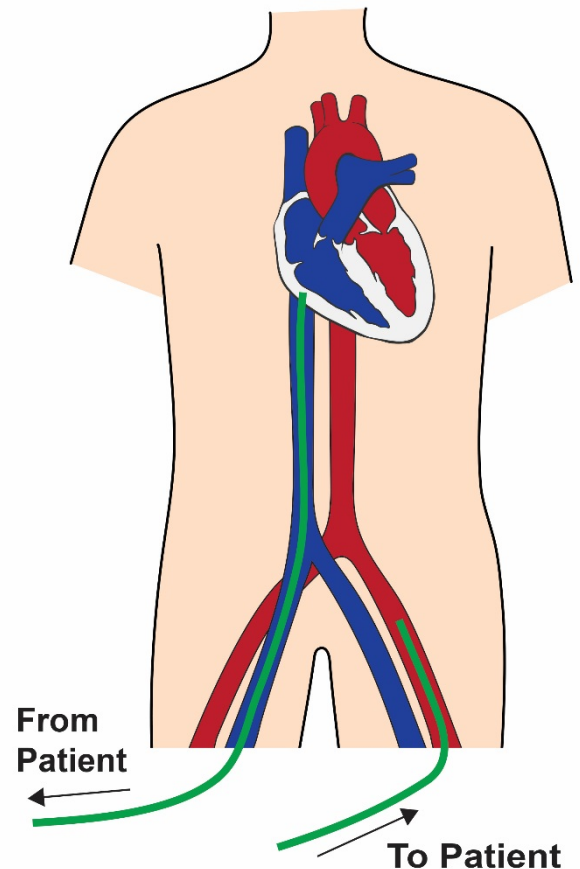
**Membrane:** artificial lung

**Oxygenation:** adding oxygen to the blood

## What Is VA ECMO?

VA ECMO is a support system for hearts that cannot pump well on their own.

- Your loved one 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 groin, and the other will be placed in a large artery in the groin.
- 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 returns the blood through the other cannula into the artery.
- Blood is pumped through the body by the ECMO machine and may have little or no help from your loved one's heart.



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

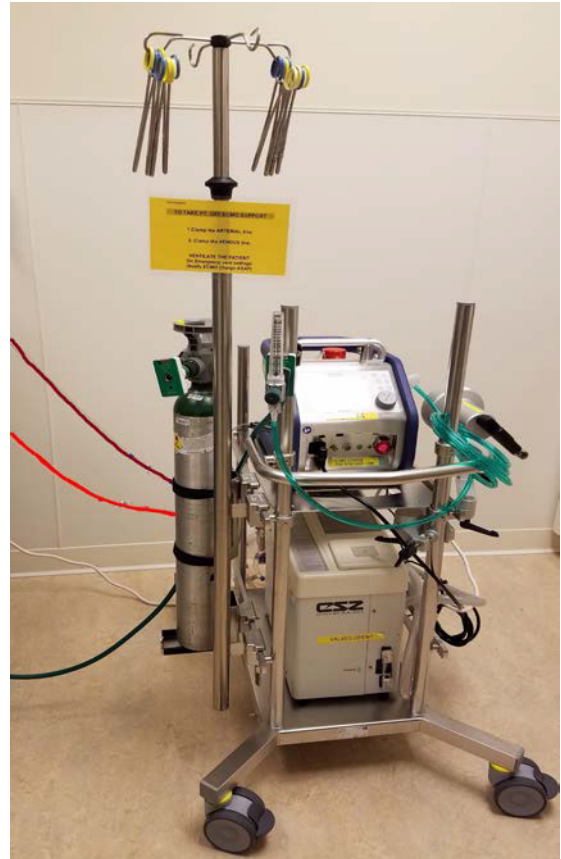
- ECMO does not heal the heart, but allows time for the heart to get better.

## **What should I expect with ECMO?**

An ECMO specialist will be a member of your loved one's care team. The specialist will check on your loved one and the ECMO machine several times a day. They are also available anytime you need them to answer questions or concerns with ECMO.

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

- Your loved one may be on medicine to make them sleep or allow them to wake up, depending on their treatment plan.
- Your loved one will have a daily chest x-ray.
- We will take blood for lab work from an IV, so there are no pokes.
- We will give your loved one medications for pain control, sedation (sleep), and blood thinning for the ECMO machine.
- Your loved one may bleed at the ECMO cannula site, any IV site, or wound. This is normal.
- Your loved one may appear swollen at times. Eventually this should go away.
- We may need to give blood transfusions, these are not uncommon.
- Your loved one's time on ECMO will vary. Every patient is different. Despite our best efforts, some people 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 loved one?**

This is the really hard part. There may be no changes in your loved one'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 loved one 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 loved one'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.
- Interact with your loved one. You can read to them, play music, allow them to listen to or watch TV, or just talk to them. Ask their nurse about other things you can do or bring for them.

## **How will I know when my loved one no longer needs ECMO?**

The medical team will decide when your loved one can be taken off ECMO. When we feel that your loved one is showing signs of improvement, we will discuss a "trial off" ECMO. This means that we will stop ECMO support for a short time to see if your loved one's heart can work without ECMO support. They will still have the support of the breathing machine and may have medication started or increased for blood pressure. If they no longer need ECMO, we will remove the cannulas. Do not be discouraged if your loved one 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](http://www.med.umich.edu/ecmo)



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