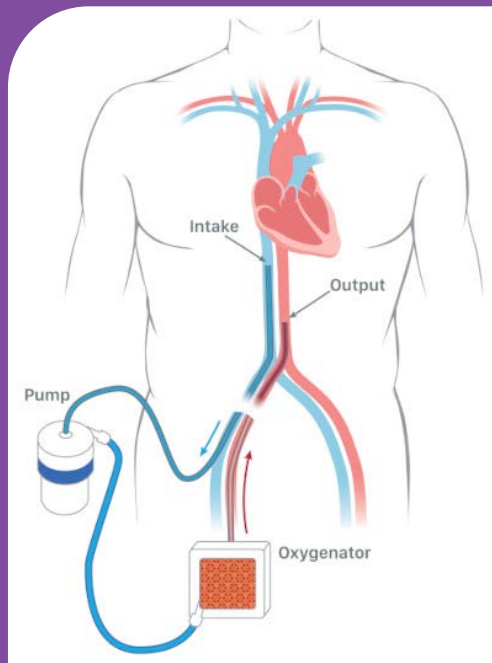


# Extracorporeal Membrane Oxygenation (ECMO) Patient Family Guide

We know that when we discuss this treatment option with you, you have a great deal on your mind. We prepared this handbook to help you understand Extracorporeal Membrane Oxygenation (also simply known as “ECMO”).

We hope this will be a useful addition to our discussion and will also help answer some of the questions that come up later. The entire ECMO team is here to answer your questions or clarify anything that you need.



## Extracorporeal Membrane Oxygenation (ECMO)

Cardiovascular Intensive Care  
(770) 793-9370

Green Tower 4th Floor North  
(770) 793-6485

[wellstar.org](http://wellstar.org)



To view this brochure online,  
scan the QR code.



# Wellstar ECMO Program



## What is ECMO?

ECMO is advanced life support, and an ECMO machine is a form of a heart-lung machine. It can do the job of both the heart and lungs, or just the lungs when they are not working well. To prepare your loved one for ECMO, the physician places tubes, called cannulas, into specific blood vessels. ECMO works by redirecting blood from the body into a machine that adds oxygen to the blood and removes carbon dioxide. The blood is then returned through a cannula back into the body with a mechanical pump, then the blood carries oxygen to the body's organs. This allows the heart and/or lungs to rest.

## Why is ECMO needed?

When a person is so sick that their heart and lungs need help, ECMO is a treatment doctors can use. ECMO supports the body while it tries to get better and heals itself. The system is also used to help patients waiting for a heart or lung transplant or other forms of heart surgery. It is important to note that ECMO does not cure the underlying problem itself. It is used when there is a possibility that with time and some other specific treatment, the body might heal itself from the original health issue. Conditions where a patient might need ECMO include:

- Heart failure, such as from a heart attack or surgery.
- Lung failure, such as a lung injury or infection.

## Types of ECMO

- Patients who require support only for their lungs will use VV ECMO, while a patient who needs support for both their heart and lungs would require VA ECMO.
- VV ECMO takes blood from a vein and returns it to a vein.
- VA ECMO takes blood from a vein and returns it to an artery. VA supports both the lungs and the heart.

## Medications given during ECMO

### Your loved one may need:

- Medicines to lower the risk of blood clots. Clotting inside the ECMO circuit can happen. To prevent this, we use blood thinners. Sometimes clots may form even though blood thinners are given to the patient. And sometimes, blood thinners cannot be used, making clotting more likely. If clots form while on ECMO, it may make it difficult for the ECMO circuit to work effectively.
- Blood products, such as a transfusion
- Antibiotics to treat infections if needed
- Sedatives, to help them rest and sleep. This is also helpful so the body can heal.
- Frequently they might need procedures while on ECMO. These procedures may be frequent/regular bronchoscopy to help clear secretions from the lungs, new "lines" which are catheters placed in the veins or arteries or to drain fluid from around the lungs ("chest tubes"). And many of these patients also receive tracheostomies to help reduce sedation and mobilize these patients early.

## What to expect when someone is on ECMO

ECMO involves a lot of equipment. It may look strange or even scary at first. You will see tubes, machines and monitors at your loved one's bedside. You will hear beeping, alarms and other sounds. This is normal in the Intensive Care Unit, but please talk to a nurse if you are concerned. Our team can tell you what each item is for. Someone on ECMO usually cannot eat or drink. You will see a feeding tube or an IV for liquid nutrition.

Along with the nurse caring for your loved one, the team will include a specially trained ECMO physician, an ECMO nurse specialist and a perfusionist who oversees the ECMO machine. All these people are specially trained. You will also see a respiratory therapist taking care of the breathing machine, called a ventilator.

Many other people are here to help you, too. A chaplain is here to assist you at any time, and a care coordinator will work with you as well. We want you to know that you are not alone on this journey.

## How long will ECMO continue?

Some people stay on ECMO for just a few days. Others need it for several days or weeks. The time depends on your loved one's conditions, and their physician will evaluate when your loved one can come off ECMO and determine when the heart and lungs are well enough to work on their own.

## How can you help?

You can sit with your loved one while on ECMO, talk to them and hold their hand if the nurses say it is OK. You can also:

- Play their favorite music or sing to them softly.
- Listen to an audiobook or a podcast.
- Watch TV, movies or videos together when they are awake.
- Talk to them. Even if they cannot answer, hearing your voice can help.
- Bring photographs, blankets or get well cards.

The ECMO team will come together to discuss the treatment plan for your loved one. This is called "making rounds." You will observe doctors, an RN ECMO specialist, nurses, a pharmacist, dietitians, respiratory therapists and the ECMO coordinator participating in the rounds. You are welcome to be there, share information and ask questions if you would like. However, even if you aren't able to be there at the bedside you will still receive daily updates from the physicians involved in your loved one's care.

Most importantly, take care of yourself and your family. We have an expert team to be here with your loved one. It is an incredibly stressful time, and we would not want you to get ill, too. You can call the hospital for updates on your loved one, and the nurse taking care of your family member is there for you to talk to if you have concerns or questions.