

# Extracorporeal Membrane Oxygenation (ECMO)

Extracorporeal Membrane Oxygenation (ECMO) is a sophisticated process that adds oxygen to the blood of patients whose lungs are too diseased to work efficiently. ECMO is a bypass process, meaning that the blood is taken out of the body, cleaned of carbon dioxide and infused with oxygen, then returned to the body. The blood bypasses the lungs, or the heart and lungs, depending on the situation.

ECMO is much like a heart-lung bypass which is used during open-heart surgery, except the ECMO machine is smaller, more portable, and can be used for longer periods of time.

For patients with Acute Respiratory Distress Syndrome (ARDS) who are not responsive to other therapies, ECMO allows the lungs time to rest and recover. Our ECMO program saves the lives of patients who otherwise may not have survived.

Patients suffering from refractory hypoxemia caused by an acute respiratory condition (ARDS, asthma, aspiration pneumonitis, viral/bacterial pneumonia, or other respiratory condition) may be a candidate for ECMO.





## Ventricular Assist Devices

A Ventricular Assist Device (VAD) is an implantable mechanical pump that can help the heart move blood throughout the body in patients whose hearts cannot function properly by themselves. Typically, the device takes blood from the lower chamber of the heart (the ventricle) and pumps it through the aorta, the large artery that supplies oxygen-rich blood to the body's organs and muscles. In some cases, the blood may be taken from the ventricle and pumped to the lungs through the pulmonary artery.

Patients who have advanced heart failure are ideal candidates for a VAD. This potentially life-saving therapy can be used either as long-term support for the diseased heart that cannot be treated using other options or as a bridge to keep patients alive while awaiting a heart transplant.