

# VA ECMO for severe acute heart failure in adults

Information for the public

Published: 22 October 2025

[www.nice.org.uk](https://www.nice.org.uk)

## As a bridge to recovery, heart transplant or implanted LVAD

This procedure can be used for severe acute heart failure in adults as a bridge to recovery, a heart transplant or an implanted left ventricular assist device (LVAD). This is because evidence suggests it can improve survival.

## When the potential for functional recovery is low or uncertain, and heart transplant or implanted LVAD is unsuitable

This procedure can only be done as part of a research study for severe acute heart failure in adults when:

- the potential for functional recovery is low or uncertain, and
- a heart transplant or an implanted LVAD is unsuitable.

This is because there is not enough evidence to be sure how well it works or how safe it is in these populations.

Your healthcare professional should talk to you, or your family or carers, about the research.

## About this procedure

Heart failure is when the heart cannot properly pump blood around the body to deliver enough oxygen to meet the body's needs. Severe acute heart failure is when life-threatening symptoms develop very quickly.

Venoarterial extracorporeal membrane oxygenation (VA ECMO) is when blood is taken out of the body and put through an artificial pump and lung outside of the body (extracorporeal). The ECMO machine adds oxygen to the blood (oxygenation), removes carbon dioxide and pumps the blood around the body. Tubes take blood out of the major veins and return it through tubes into a large artery (venoarterial). This is done over days or weeks. The aim is to provide oxygenated blood to the body:

- while the heart, or heart and lungs, recover (bridge to recovery), or
- until a treatment can be done (bridge to treatment), such as a heart transplant or an implanted LVAD.

## Is this procedure right for me?

You should be included in making decisions about your care, where possible. See [our webpage on shared decision making](#).

Your healthcare professionals should explain the risks and benefits of this procedure and how it is done. They should discuss your options and listen carefully to your views and concerns or those of your family or carers. They should offer you more information about the procedure.

Where possible, you will be asked to decide whether you agree (consent) to have the procedure.

In an emergency, healthcare professionals may give treatment immediately, without obtaining your informed consent, when it is in your best interests. [Find out more about giving consent to treatment on the NHS website](#).

## Some questions to think about

- What are the possible benefits? How likely am I to get them?
- What are the risks or side effects? How likely are they?
- What happens if it does not work or something goes wrong?
- Are other treatments available?

## Information and support

The [NHS webpage on heart failure](#) may be a good place to find out more.

The [NHS website has information about NHS hospital services](#) and [referrals for specialist care](#).

- [NICE's information on HealthTech guidance](#) explains what HealthTech is and how we assess it.
- [NICE's information on HealthTech recommendations](#) explains the types of recommendation we make.

[Pumping Marvellous](#) (01772 796542) can give you advice and support.

You can also get support from your local [Healthwatch](#).

ISBN: 978-1-4731-9028-3