

# Extracorporeal CPR does not offer more favorable neurologic outcome

January 26 2023, by Elana Gotkine

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For patients with out-of-hospital cardiac arrest, extracorporeal

cardiopulmonary resuscitation (CPR) does not improve favorable neurologic outcome compared with conventional CPR, according to a study published in the Jan. 26 issue of the *New England Journal of Medicine*.

Martje M. Suverein, M.D., from Maastricht University in the Netherlands, and colleagues randomly assigned [patients](#) aged 18 to 70 years with an [out-of-hospital](#) cardiac arrest who had received bystander CPR, had an initial ventricular arrhythmia, and did not have return of spontaneous circulation within 15 minutes after initiation of CPR to receive extracorporeal CPR or conventional CPR (70 and 64 patients, respectively). Survival with a favorable neurologic outcome at 30 days was assessed as the primary outcome.

The researchers found that 20 and 16 percent of patients in the extracorporeal CPR and conventional CPR groups, respectively, were alive with a favorable neurologic outcome at 30 days (odds ratio, 1.4; 95 percent confidence interval, 0.5 to 3.5;  $P = 0.52$ ). The two groups had a similar number of serious adverse events reported per patient.

"Available data do not yet support the broad use of extracorporeal CPR in patients with witnessed out-of-hospital cardiac arrest," write the authors of an accompanying editorial. "Definitive evaluation of extracorporeal CPR will probably require studies on a much larger scale with robust statistical power to estimate any potential benefit of this resource-intensive strategy."

**More information:** Martje M. Suverein et al, Early Extracorporeal CPR for Refractory Out-of-Hospital Cardiac Arrest, *New England Journal of Medicine* (2023). [DOI: 10.1056/NEJMoa2204511](https://doi.org/10.1056/NEJMoa2204511)

John F. Keaney et al, Extracorporeal CPR in Out-of-Hospital Cardiac Arrest—Still on Life Support?, *New England Journal of Medicine*

(2023). [DOI: 10.1056/NEJMe2214116](https://doi.org/10.1056/NEJMe2214116)

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