

CPR for 38 minutes or longer improves chance to survive cardiac arrest (w/ Video)

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Performing CPR for 38 minutes or longer can improve a patient's chance of surviving cardiac arrest, according to a study presented at the American Heart Association's Scientific Sessions 2013.

Sustaining CPR that long also improves the chances that survivors will have normal brain function, researchers said. Cardiac arrest occurs when electrical impulses in the heart become rapid or chaotic, causing it to suddenly stop beating.

About 80 percent of cardiac arrests—nearly 288,000 people—occur outside of a hospital each year, and fewer than 10 percent survive, according to the American Heart Association.

Research has found that early return of spontaneous circulation—the body pumping blood on its own—is important for people to survive [cardiac arrest](#) with normal brain function. But little research has focused on the period between cardiac arrest and any return of spontaneous circulation.

Using a massive registry tracking all out-of-hospital cardiac arrests in Japan in 2005-11, researchers studied how much time passed between survivors' collapse and the return of spontaneous circulation, and how well [brain function](#) was preserved a month later.

Survivors were considered to have fared well neurologically if they were alert and able to return to normal activities, or if they had moderate

disability but were well enough to work part-time in a sheltered environment or take part in daily activities independently.

The time between collapse and return of spontaneous circulation for those who fared well was 13 minutes compared to about 21 minutes for those who suffered severe brain disability, said Ken Nagao, M.D., Ph.D., professor and director-in-chief of the Department of Cardiology, CPR and Emergency Cardiovascular Care at Surugadai Nihon University Hospital in Tokyo.

After adjusting for other factors that can affect neurological outcomes, researchers found that the odds of surviving an out-of-hospital cardiac arrest without severe brain damage dropped 5 percent for every 60 seconds that passed before spontaneous circulation was restored.

Based on the relationship between favorable brain outcomes and the time from collapse to a return of spontaneous circulation, the researchers calculated that CPR lasting 38 minutes or more was advisable.

"It may be appropriate to continue CPR if the return of spontaneous circulation occurs for any period of time," said Nagao. The 2010 AHA Guidelines for CPR and ECC advise bystanders to perform CPR until emergency crews arrive.

Provided by American Heart Association

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