CPR & First Aid
First aid guide has info & links to CPR training, manikins, kits, more.
FirstAid101.com

Obstructive Sleep Apnea
Cpap machines, Mask, chinstraps, hoses, humidifiers, filters.
www.cpap-accessories.com

Heart Failure Trial
Paracor Medical is recruiting for important clinical trial
www.paracor.com

Tired Of Fad Diets?
Tired of gimmicks and fad diets? Lose weight with expert help!
www.DukeDiet.com

Ads by Goooooogle

Advertise on this site

March 24, 2007

Article Link: http://www.webmd.com/heart-disease/news/20070316/CPR-mouth-to-mouth-not-much-help

Heart Disease Health Center

CPR: Mouth-to-Mouth Not Much Help

Study: Chest Compression, Not Mouth-to-Mouth, Best Resuscitation for Adults

By Daniel J. DeNoon
WebMD Medical News

Reviewed by Louise Chang, MD

March 16, 2007 -- For adults who suddenly collapse, CPR is more effective if rescuers focus on chest compression over mouth-to-mouth ventilation.

CPR stands for cardiopulmonary resuscitation. It's used on people whose hearts suddenly stop beating. Using this emergency technique, you can keep a person alive until professional help arrives.

Currently, CPR includes two techniques. The first is mouth-to-mouth resuscitation, the so-called breath of life. The other is chest compression: pushing down hard on a victim's chest, more than once a second, pressing it down at least an inch and a half before releasing.

A major reason why bystanders don't give CPR to people who suddenly collapse is reluctance to put their mouths on the mouth of a stricken person. That reason no longer exists.

Now, for adults who suddenly collapse, there's powerful evidence that chest compression alone is far better than doing nothing. In fact, the new evidence suggests that by interrupting lifesaving chest compressions, mouth-to-mouth resuscitation may do more harm than good.

The striking evidence comes from Ken Nagao, MD, of Surugadai Nihon University Hospital in Tokyo, and colleagues. The researchers took a careful look at what happened to 4,068 adults who had an out-of-hospital cardiac arrest witnessed by bystanders.

More than 70% of the time, the bystanders did nothing when a person suddenly collapsed. Those victims were less likely to survive, and more likely to have brain damage if they did survive, than when bystanders tried to do something.

Bystanders bravely gave traditional CPR to 18% of victims. And those patients did much better than those who got no bystander aid.

But victims were 2.2 times less likely to suffer brain damage if they were among the 11% of patients who got chest compressions only -- without mouth-to-mouth resuscitation.

Death of Mouth-to-Mouth Resuscitation?

"This study just confirms what has pretty much become common knowledge," CPR researcher Alfred Hallstrom, PhD, of the University of Washington in Seattle, tells WebMD. "We did a randomized trial of compressions vs. CPR, and the results indicated that the compression-only technique was better. Subsequently, labs have done animal studies suggesting the same thing."

"This does not surprise me one bit," CPR researcher Joseph W. Heidenreich, MD, of Texas A&M Health Science Center, tells WebMD. "This is what all of us who have done CPR research have suspected for years. This is amazing data. Primarily, what people who suffer cardiac arrest need are chest compressions."

But not everyone is willing to give up on teaching people to give mouth-to-mouth resuscitation. One of them is Lance Becker, MD, director of the center for resuscitation science at the University of Pennsylvania and past chair of the basic life support subcommittee of the American Heart Association (AHA).

"The real message from this study is that doing something is better for saving people's lives than doing nothing," Becker tells WebMD. "Good compressions are associated with good things. It does not mean that ventilation is not an excellent thing as well."

Becker says the AHA has always said that if people feel uncomfortable doing mouth-to-mouth resuscitation, they should simply focus on chest compression. And he says the new study validates this approach.

Charles Sea, MD, an emergency-room physician at Ochsner Medical Center in New Orleans, teaches CPR to doctors. He says that new CPR techniques emphasize chest compressions over mouth-to-mouth ventilation.

"We are implementing new standards for faster, stronger chest compressions -- 100 a minute, and only about six to eight breaths a minute," Sea tells WebMD. "Compared to the old CPR, just doing compressions would get better results. But I bet if they did the new CPR with the fast compression and minimal ventilation, they would get even higher survival rates than with compression alone."

But mouth-to-mouth resuscitation steals precious time from chest compression, argues Gordon A. Ewy, MD. Ewy is director of the Sarver Heart Center and professor and chief of cardiology at the University of Arizona College of Medicine in Tucson.

"If you witness an adult collapse, it is most likely to be a cardiac arrest," Ewy says. "In cardiac arrest, the blood is fully oxygenated. What you need to do is press hard and fast on the chest to circulate the blood. This circulation you get from pushing on the chest is barely enough to keep the brain alive. If you stop for anything, like so-called 'rescue breathing,' which is an oxymoron, it is not good."

Reasons Remain for Mouth-to-Mouth

The main reason why the AHA teaches mouth-to-mouth resuscitation is that some people go into cardiac arrest because they have not been getting sufficient air. Such patients include drowning victims, for example, and victims of drug overdose. These patients do not have enough oxygen in their blood, and truly need mouth-to-mouth resuscitation.

But the vast majority of people who collapse have been breathing normally before their hearts stopped. That means that they have enough oxygen in their blood to survive until medical help arrives -- if someone gives them continuous chest compressions, Heidenreich says.

Heidenreich notes that chest compression is not risk-free.

"With the type of force it takes to move the blood through the veins, if you do good CPR you probably are going to break someone's ribs," he says. "In this past week, I've done CPR several times in elderly patients in the ER, and probably every time I have cracked a rib. But if you talk to most people -- and I have surveyed many -- most are much more concerned about contracting a disease from giving mouth-to-mouth than about breaking a rib to save a life."

Regardless of what kind of CPR you give, the most important thing is to call for help right away. CPR is intended only to keep a patient alive until emergency help gets there.

And the compression-only technique applies only to adult patients. Children are far more likely to have stopped breathing than to have suffered a sudden cardiac arrest. This means they far more often need mouth-to-mouth resuscitation than adults do.

SOURCES: Nagao, K. *The Lancet*, March 17, 2007; vol 369: pp 920-926. Ewy, G.A. *The Lancet*, March 17, 2007; vol 369: pp 882-884. Heidenreich, J.W. *Academic Emergency Medicine*, October 2006; vol 13: pp 1020-1026. Hallstrom, A. *The New England Journal of Medicine*, May 25, 2000; vol 342: pp 1546-1553. Gordon A. Ewy, MD, director, Sarver Heart Center, and professor and chief of cardiology, University of Arizona College of Medicine, Tucson. Lance Becker, MD, director of the center for resuscitation science, University of Pennsylvania; past chair, basic life support subcommittee, American Heart Association. Charles Sea, MD, emergency room physician, Ochsner Medical Center, New Orleans. Joseph W. Heidenreich, MD, teaching resident, Texas A&M Health Science Center, Temple, Texas. Alfred Hallstrom, PhD, professor of biostatistics, University of Washington, Seattle.