



Improve safety and survival.  
Whatever the challenges.

# CPR That Never Misses a Beat

When treating patients in sudden cardiac arrest (SCA), consistent continuous, high-quality chest compressions are critical to survival. But uninterrupted CPR can be impossible for rescuers who need to navigate unpredictable obstacles – while keeping themselves safe and their patients well perfused.

The revolutionary ZOLL® AutoPulse® provides a better choice for top-quality CPR on the move. The only device of its kind, AutoPulse is a non-invasive cardiac support pump that moves more blood<sup>1,2,3</sup> more consistently than is possible with human hands.

AutoPulse sets a new standard of care for effective, easy-to-use, non-invasive cardiac support during resuscitation. Its capabilities give you more time to focus on everything that matters when saving lives.



Unrestrained ▶



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*AutoPulse allows rescuers to be safely restrained during transport, secure in the knowledge that the patient is receiving excellent perfusion.*

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◀ Restrained

## Uncompromised Safety

Saving others shouldn't mean putting your own life at risk. With unrestrained ambulance occupants involved in a crash at 4 times greater risk of death and 6.5 times greater risk of permanent disability,<sup>4</sup> CPR needs to be as safe as it is effective.

The AutoPulse allows EMS providers to be safely restrained while its load-distributing<sup>5</sup> LifeBand<sup>®</sup> squeezes a patient's entire chest to provide uninterrupted blood flow.

## Another Set of Hands

During SCA events, there is always too much to do in far too little time. AutoPulse frees up a rescuer to perform other critical life-saving tasks such as starting an IV, administering medication, ventilating, or intubating.

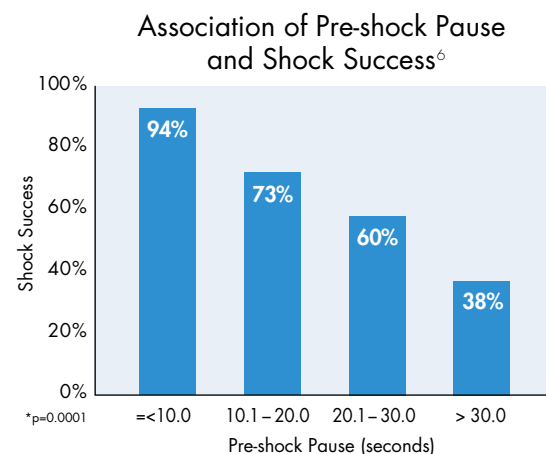
## Minimal Interruptions

Interruptions in CPR can be deadly for SCA patients. Successful resuscitation plummets from 94% with fewer than 10 seconds between compressions to just 38% with a 30-second pause.<sup>6</sup>

The AutoPulse delivers excellent, consistent blood flow during all patient movement operations – even when rescuers are going down stairs, rushing to and from the ambulance, or navigating traffic at high speeds.



*With AutoPulse, rescuers can provide optimal compressions while transporting patients or performing other life-saving activities.*





## Lifesaving Technology

The patented load-distributing LifeBand squeezes a wide area of the chest, spreading out the force of the compressions and helping to maximize blood flow. In contrast, manual CPR and piston-driven devices concentrate the force on a very small surface area. The LifeBand also allows full decompression for maximum coronary perfusion.

## Simple and Smart

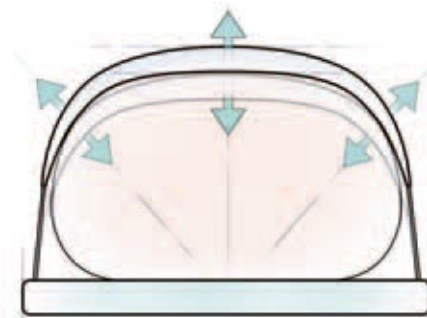
Deploying the AutoPulse takes only seconds by properly trained professionals. The AutoPulse automatically determines the size, shape, and resistance of each individual, then adjusts the force required to result in a true 20% anterior-posterior displacement.

## Integrated Data Management

After resuscitation, AutoPulse data can be easily uploaded to ZOLL's RescueNet® Code Review and seamlessly integrated with defibrillator and other critical event data to provide the most comprehensive pre-hospital patient record possible.

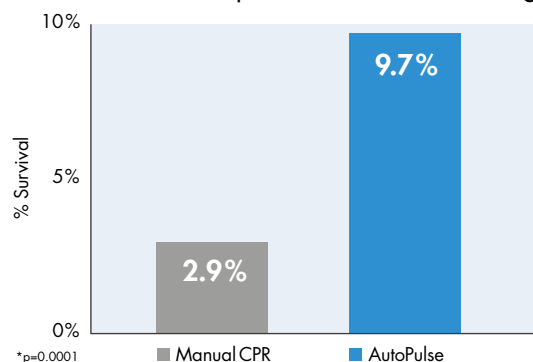
## Clinical Studies

A number of studies document the impact of AutoPulse on clinical outcomes, the efficacy of AutoPulse, including its ability to triple survival rates to hospital discharge.<sup>7</sup>



Load-distributing band (LDB) technology<sup>5</sup>

## AutoPulse Tripled Survival to Discharge<sup>7</sup>



Casner M et al. The impact of a new CPR assist device on rate of return of spontaneous circulation in out-of-hospital cardiac arrest. *Prehospital Emergency Care*. 2005;9(1):61-67.

Hallstrom AP et al. Manual chest compression vs use of an automated chest compression device during resuscitation following out-of-hospital cardiac arrest. *Journal of the American Medical Association*. 2006;295(22):2620-2628.

Halperin HR et al. Cardiopulmonary resuscitation with a novel chest compression device in a porcine model of cardiac arrest. *Journal of the American College of Cardiology*. 2004;44(11):2214-2220.

Ikeno F et al. Augmentation of tissue perfusion by a novel compression device increases neurologically intact survival in a porcine model of prolonged cardiac arrest. *Resuscitation*. 2006;68:109-118.

Krep H et al. Out-of-hospital cardiopulmonary resuscitation with the AutoPulse system: a prospective observational study with a new load-distributing band chest compression device. *Resuscitation*. 2007;86:86-95.

Ong ME, Ornato JP et al. Use of an automated, load-distributing band chest compression device for out-of-hospital cardiac arrest resuscitation. *Journal of the American Medical Association*. 2006;295(22):2629-2637.

Swanson M et al. A CPR assist device increased emergency department admission and end tidal carbon dioxide partial pressures during treatment of out of hospital cardiac arrest. *Circulation (Supplement)*. 2006;114(18):2664.

Timerman S et al. Improved hemodynamic performance with a novel chest compression device during treatment of in-hospital cardiac arrest. *Resuscitation*. 2004;61:273-280.

<sup>1</sup>Halperin HR et al. *Journal of the American College of Cardiology*. 2004;44(11):2214-2220.

<sup>2</sup>Ikeno F et al. *Resuscitation*. 2006;68:109-118.

<sup>3</sup>Timerman S et al. *Resuscitation*. 2004;61:273-280.

<sup>4</sup>Becker L et al. *Accident Analysis and Prevention*. 2003;35.

<sup>5</sup>*Circulation* 2005;112:IV-207.

<sup>6</sup>Edelson D et al. *Resuscitation*. 2006;137-145.

<sup>7</sup>Ong ME Ornato JP et al. *Journal of the American Medical Association*. 2006;295(22):2629-2637.

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