

36 percent reduction in total mortality at 90 days in post-MI, low-EF LifeVest patients¹

98 percent first shock success rate for treating patients experiencing sudden cardiac arrest (SCA)^{2,3,4}

96 percent one-year survival in LifeVest patients, including those who recently suffered a heart attack or had a new diagnosis of heart failure⁵

WHAT IS SUDDEN CARDIAC DEATH?

- Sudden cardiac arrest (SCA) is an electrical malfunction that causes the heart to quiver, and not supply enough blood to the body to sustain life.
- SCA is truly sudden – victims lose consciousness immediately and cannot help themselves. Without medical intervention, sudden cardiac death (SCD) occurs in minutes.
- Sudden cardiac arrest (SCA) accounts for more than 350,000 deaths in the US each year and has an average survival rate of just 12 percent.^{6,7}
- Patients who have had a recent heart attack or a new diagnosis of heart failure are at risk for SCD.

WHAT IS LIFEVEST?

The LifeVest® wearable cardioverter defibrillator (WCD) is worn by patients at risk of sudden cardiac death (SCD) for an average of three months. LifeVest provides patients peace of mind, knowing they are protected while their long-term SCD risk is assessed by their doctor. LifeVest is prescribed for a wide range of patients, including those who recently suffered a heart attack or have a new diagnosis of heart failure.

HOW DOES LIFEVEST WORK?

LifeVest continuously monitors a patient's heart and, if a life-threatening heart rhythm is detected, the device delivers a treatment shock to restore normal heart rhythm. LifeVest treats a patient automatically, without assistance from a bystander or emergency medical professional.



The device is lightweight and easy to wear, allowing a patient to return to common activities of daily life, like work, shopping and moderate exercise, while having peace of mind they are protected from SCD. LifeVest is non-invasive and consists of a garment and a monitor.

CLINICAL EVIDENCE

- **LifeVest increases survival following a heart attack.** VEST, a randomized clinical trial of 2,302 patients, demonstrated LifeVest plus medication reduced mortality by 36 percent in the first 90 days following a heart attack compared to medication alone.¹
- **A wealth of evidence supports LifeVest use for a range of patients at risk of SCD, including following a heart attack or a new diagnosis of heart failure.** Studies covering over 20,000 patients consistently demonstrate LifeVest is safe and effective for use following a recent cardiac event.
- **LifeVest provides protection and peace of mind while a patient recovers, allowing the physician time to assess long-term SCD risk and make appropriate treatment decisions.** A study of more than 2,000 LifeVest patients found that 41% of patients experienced improved heart function to the point that an implantable cardioverter defibrillator (ICD) was no longer needed.⁴

GUIDELINE RECOMMENDATIONS

The 2017 American Heart Association / American College of Cardiology / Heart Rhythm Society Guideline for Management of Patients with Ventricular Arrhythmias and the Prevention of Sudden Cardiac Death includes recommended use of the wearable defibrillator for a wide range of patients, including following a heart attack or new diagnosis of heart failure.

WEARABLE CARIOVERTER DEFIBRILLATOR (WCD)

A defibrillator is a device that applies an electric shock to restore the normal rhythm of a heart. The LifeVest wearable defibrillator continuously monitors a patient's heart and, if a life-threatening heart rhythm is detected, the device delivers a treatment shock to restore normal heart rhythm.

SUDDEN CARDIAC ARREST (SCA) AND SUDDEN CARDIAC DEATH (SCD)

The heart's electrical system controls the heartbeat. When this system fails, it may trigger a dangerously fast heartbeat, causing the heart to quiver or shake instead of pumping blood to the body and brain. When this happens, a person can suddenly pass out, known as sudden cardiac arrest (SCA). It occurs without warning and, without immediate treatment, death – known as sudden cardiac death (SCD) – can occur in minutes.

EJECTION FRACTION (EF)

Ejection fraction (EF) is a measurement of the amount of blood leaving the heart each time it contracts. When the heart contracts, it ejects blood from the two pumping chambers (ventricles) and then relaxes, allowing the ventricles to refill with blood. Ejection fraction refers to the percentage of blood that's pumped out of a filled ventricle with each heartbeat. A normal ejection fraction is between 50 to 70 percent. Ejection fraction is the strongest indicator of mortality or death.

MYOCARDIAL INFARCTION (MI)

Myocardial infarction (MI), commonly known as a heart attack, occurs when oxygen-rich blood flow decreases or stops to a part of the heart because of a blockage. If blood flow isn't restored quickly, the section of heart muscle begins to die.

HEART FAILURE

Heart failure is a chronic, progressive condition in which the heart muscle is unable to pump enough oxygen-rich blood to meet the body's needs.

IMPLANTABLE CARIOVERTER DEFIBRILLATOR (ICD)

An implantable cardioverter defibrillator (ICD) is an electronic device that is surgically implanted into a patient's chest to detect and treat life-threatening heartbeat irregularities. ICDs provide long-term protection from SCD.

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1 Olgin J, Pletcher M, Vittinghoff E, et al. Vest Prevention of Early Sudden Death Trial: Efficacy of a wearable cardioverter-defibrillator after myocardial infarction. Presented as Late Breaking Clinical Trial at the 2018 American College of Cardiology Annual Scientific Session, March 10, 2018.

2 Chung MK, Szymkiewicz SJ, Shao M, et al. Aggregate national experience with the wearable cardioverter-defibrillator: Event rates, compliance, and survival. *J Am Coll Cardiol.* 2010;56(3):194–203.

3 Klein HU, Mellendorf U, Reek S, et al. Bridging a temporary high risk of sudden arrhythmic death: Experience with the wearable cardioverter defibrillator (WCD). *Pacing Clin Electrophysiol.* 2010;33:353–367.

4 Kutyifa V, Moss AJ, Klein H, et al. Use of the wearable cardioverter defibrillator in high-risk cardiac patients: Data from the prospective registry of patients using the wearable cardioverter defibrillator (WEARIT-III Registry). *Circulation* 2015;132(17):1613–1619.

5 Kutyifa V et al. One-year follow-up of the prospective registry of patients using the wearable defibrillator (WEARIT-III Registry). Presented as late breaking clinical trial at the 2016 CARDIOSTIM EHRA EUROPACE Congress, June 10, 2016.

6 American Heart Association. Heart disease and stroke statistics. Statistical update: Out-of-hospital cardiac arrest. Available at http://cpr.heart.org/AHA/ECC/CPRECC/General/UCM_477263_Cardiac-Arrest-Statistics.jsp.

7 Heart Rhythm Society News Sudden Cardiac Arrest Awareness. <http://www.hrsonline.org/News/Sudden-Cardiac-Arrest-SCA-Awareness>.