

Script – Print – A Real LifeSaver

LifeVest® is a Wearable Defibrillator Used to Prevent Sudden Cardiac Death

As registered nurses who work with heart patients at OSF HealthCare Saint Anthony Medical Center, Amy Kumlien and Bridget Penwell are no strangers to sudden cardiac events.

For people on the mend from a heart attack, the likelihood of experiencing a ventricular arrhythmia that could turn into cardiac arrest is greatest in the weeks right after the heart attack.

While cardiac rehabilitation and lifestyle changes lower the risk of a cardiac event, another tool in the arsenal is a wearable cardioverter-defibrillator (WCD) called LifeVest®, which is manufactured by ZOLL.

“A LifeVest® is a wearable defibrillator that people can use to prevent sudden cardiac death,” says Kumlien. “They typically have a decreased heart function that puts them at higher risk for this and it will monitor them and if they experienced arrhythmias, it will give them a shock that could save their life.”

A 2019 [study](#) of more than 11,000 individuals who were recent heart attack survivors found that in the first year following a heart attack, the death rate was lower among those who wore a WCD compared to those who did not.

“The ideal candidate to wear this vest is any person that has a decreased heart muscle function,” says Kumlien. “So typically, a decreased heart muscle function is considered anything less than 55% capacity. And these people typically are less than 35% and have experienced near sudden cardiac death. If they have lost consciousness at their home, and survived a lethal rhythm, they would be someone who would also be someone who would be a candidate for it.”

A patient wears a LifeVest® 24 hours a day. It includes a garment, an electrode belt, and a monitor that is worn under a patient’s clothes and is only removed when taking a shower. Timing is key. A treatment shock must be delivered within minutes after an event to be effective. After the shock, if the heartbeat returns to normal, the alarms stop and the LifeVest® returns to its normal monitoring mode.

“It's kind of like wearing a seatbelt,” says Penwell. “You know you may never use the seatbelt, but it’s there for protection in case you need it. If somebody does have a sudden cardiac event, arrhythmia, this life vest will deliver a shock treatment. Just like you see on TV, a defibrillator shocks them out of the lethal rhythm and can save their life.”

Before a patient is fitted with a vest, an echocardiogram will be ordered to assess any decreased heart muscle function. According to Kumlien, if the results are still less than favorable after three months then a permanent defibrillator will be considered.

While wearing the vest takes some getting used to, especially while sleeping, experts agree the payoff could be immeasurable.

“The vest can save your life,” says Penwell. “It may never go off, but all it takes is that one time. If you don’t have it on that one time, you may miss out on watching your grandkids grow up. You don’t get to see them grow up. I think that one time is very important. You know, so if it’s a little uncomfortable for three months, hang in there, because it’s well worth it.”