

# New ablation treatment for ventricular tachycardia reaches deeper into heart muscle

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Loyola Medicine is among two centers in the world offering a novel catheter ablation system intended to improve treatment outcomes for a life-threatening heart rhythm disorder called ventricular tachycardia (VT).

VT can cause sudden death from cardiac arrest. A treatment called [catheter ablation](#) destroys [heart](#) tissue responsible for errant electrical signals that can trigger VT. But the standard catheter [ablation](#) technique completely prevents VT in only about 50 percent of patients.

In the ablation technique, a physician guides a catheter through blood vessels and into the heart. The tip of the catheter delivers radiofrequency heat energy or extreme cold to destroy a small portion of [heart muscle](#) responsible for errant electrical activity. Standard catheter ablation applies energy to the inside surface of a pumping chamber. However, this may be ineffective if the errant electrical signals come from deeper within the heart muscle.

Loyola is testing a new catheter ablation system that can reach deeper into heart muscle where errant electrical signals often originate. Loyola cardiologist David Wilber, MD, is a principal investigator of the clinical trial, along with Douglas Packer, MD, of the Mayo Clinic. Dr. Wilber, Loyola's medical director of clinical electrophysiology, is a nationally known expert in the treatment of VT and other arrhythmias (heart rhythm disorders).

The clinical trial will test a new ablation catheter called Durablate. After the catheter is placed on the inside surface of the pumping chamber, a needle penetrates the heart muscle and delivers radiofrequency heat. Simultaneously, the device delivers saline solution, heated to 140 degrees F., through 30 tiny holes in the tip and sides of the needle. The hot saline and radiofrequency heat work synergistically to ablate (destroy) troublesome heart tissue that's not accessible to standard catheter ablation systems.

About 800,000 cases of sudden cardiac death occur each year in the United States and Europe, and most are caused by VT. During a VT episode, the heart beats so fast—170 times per minute or more—that the upper pumping chambers don't have enough time to fill, so not enough blood is pumped to the body. Symptoms can include lightheadedness, dizziness, chest pain, heart palpitations, shortness of breath, fainting, unconsciousness and death.

A patient at risk for life-threatening VT may receive an implantable cardioverter defibrillator (ICD). The device, implanted in the chest, can detect a VT episode and restore a normal heart rhythm with electrical shocks. While lifesaving, ICDs can cause psychological distress by subjecting patients to sudden, painful shocks at any time.

Dr. Wilber is a globally recognized expert in VT ablation, and his clinical and investigative work enables Loyola Medicine to offer lifesaving therapies to patients who do not benefit sufficiently from other forms of treatment, said Verghese Mathew, MD, director of Loyola's division of cardiology. Dr. Mathew noted that Loyola is one of only two centers in the world that offer the new VT ablation [catheter](#).

"Our cardiologists continue to be a part of the development of novel treatment approaches, enabling us to treat more complex conditions with less invasive procedures," Dr. Mathew said. "This also allows people to

return to work and normal life sooner after treatment, and enjoy productive lifestyles."

Provided by Loyola University Health System

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