Brian Stevens, a fitness trainer, underwent a heart transplant at Inova in October 2012.
Ten years ago, fitness trainer Brian Stevens was taking a routine walk around a track with some clients and suddenly had so much trouble breathing that he had to stop several times to complete the lap. Doctors at his local hospital diagnosed the 36-year-old from Bowie, Maryland with congestive heart failure, a serious condition where the heart cannot pump enough blood to meet the body’s needs. A cardiologist at another hospital discovered he had sarcoidosis, an inflammatory disease affecting the heart, and gave him a pacemaker. “I lived with a pacemaker for five years and it was replaced in 2010, but soon after that, I took a turn for the worse,” Brian says.

Finally, he was referred to Shashank Desai, MD, Medical Director of the Heart Failure/Transplant Program at Inova Heart and Vascular Institute (IHVI) who delivered the shocking news: Brian had severe heart failure and needed a transplant, but his heart was too weak keep him alive until a donor heart could be found. The cardiovascular team at Inova Fairfax Hospital implanted two ventricular assist devices (VADs), one on each side of his heart. The VADs kept Brian alive for 11 months until he received a heart transplant in October 2012.

Brian was in good hands because IHVI is one of only a few centers in the country that can implant two VADs in one procedure and also performs the highest number of heart transplants in the mid-Atlantic Region. “IHVI is well-known for the high-quality, high-quantity VAD work we’ve been doing over the last 10 years. Inova Fairfax Hospital has been involved in ventricular assist devices since the early days of the technology,” Dr. Desai says.
Heart failure is responsible for more hospitalizations than all forms of cancer combined.

The number of Americans currently living with heart failure:

= 100,000 Americans

The number of new heart failure cases diagnosed in the U.S. each year:

670,000

55,583 new cases per month

1,836 new cases per day

76 new cases per minute

Heart failure is responsible for more hospitalizations than all forms of cancer combined.

The percentage of Americans who die within 5 years of diagnosis

50%

The estimated increase in the number of heart failure cases by 2030

25%
Today, about 5.1 million Americans are living with heart failure. There is no cure for heart failure, but ventricular assist devices (VADs) can help heart failure patients live longer with a higher quality of life. For those with advanced heart failure, the left ventricle of the heart does not pump with enough force to keep the body’s organs alive. Until VADs were developed, patients had limited options. Initially, VADs were implanted as a stop-gap measure to help patients survive until heart transplantation, but more recently, they are used as a long-term permanent support for patients who are not candidates for heart transplants.

The VAD consists of a small mechanical pump implanted in the chest and connected to the heart with tubes. A controller unit and a battery pack worn outside the body manage blood flow. Advances in design mean that VADs are now much smaller than even a few years ago. In the future, they may be fully implantable. Inova will continue to offer patients leading-edge VAD technologies.

HEART FAILURE NETWORK
IHVI continues to offer state-of-the-art devices, advanced therapies and surgical expertise for patients needing VADs and heart transplants. However, saving more people like Brian will require providing earlier identification and intervention. “The number of heart failure specialists is infinitesimally small compared to the number of patients,” Dr. Desai says. “It is important that patients with heart failure are identified and treated early and aggressively at their first point of contact with the healthcare system. In order to accomplish this and bring heart failure expertise and therapies locally into the community, Dr. O’Connor and I are committed to building a heart failure network that extends into every community in our region. We want to involve local cardiologists and primary care physicians in advanced diagnostics and therapeutics available to heart failure patients nationwide.”

As of this fall, IHVI is one of the first few hospital programs implementing the only

GIVE FROM THE HEART
For more information on philanthropic opportunities for IHVI, please contact Mary Myers, Executive Director of Development, Inova Fairfax Medical Campus, at mary.myers@inova.org or 703.776.3682.
FDA-approved heart failure monitoring system called CardioMEMS™. The size of a paper clip, the small device is placed in the pulmonary artery of patients with severe heart failure during a minimally invasive procedure. It collects and transmits heart pressures and heart rate data to a home monitoring electronics system. It is the only FDA-approved heart failure monitoring system.

**CARDIAC DREAM TEAM**

Dr. O’Connor is an internationally recognized clinician and researcher. As the former chief of cardiology at Duke University Medical Center and former director of the Duke Heart Center, he brings more than 25 years of experience to Inova. Leaders at IHVI are confident that he will be able to attract the best talent as he accelerates efforts to expand the current team of cardiovascular specialists and researchers. “We are undergoing a seismic shift to bring in new sub-specialists to further broaden the cardiovascular offerings already here at Inova,” Dr. Desai says. “With Dr. O’Connor, we can attract and maintain a world-class physician roster, putting us on the national stage of clinical care and innovative investigations.”

Dr. Sherber agrees: “With Dr. O’Connor, we anticipate doing more first-in-human trials and utilizing our clinical research to accelerate the delivery of cutting-edge treatments and enhance our educational outreach.”

Many top specialists are interested in moving to Inova and several have already joined, including a critical care cardiovascular surgeon with patient safety expertise, and a nationally-recognized interventional cardiologist/antiplatelet researcher who is creating a new unit for phase I drug trials. Other doctors interviewing have special expertise in sports medicine, cardio-oncology, population health, personalized medicine and genomics.

With a strong strategic plan in place, IHVI is poised to save many more lives throughout the mid-Atlantic States, helping more people like Brian. “When I had my VADs, Inova gave me so much confidence, making it that much easier to transition back to life after transplant,” he says. “Today, three years post-transplant, I am fitter and stronger than ever. I have no restrictions and I’m actually doing more now than when I thought I was in my best shape. I pinch myself and count my blessings every day.”

---

**“There are 150 cardiovascular specialists who practice at the institute, and my goal is to bring everyone under one vision.”**

—CHRISTOPHER O’CONNOR, MD