



Cardiac electrophysiology

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EXPERT CARE.**

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To refer a patient to the Goshen Heart & Vascular Center, call (574) 364-3921 or fax a referral form to (574) 533-7145.

Dr. Djavid Hadian, Electrophysiologist

Electrophysiology shining a light on contemporary cardiac care

The heart is an amazing machine. In an average lifetime of 70 years, a person’s heart will beat about 2 billion times. Recognizing the vital role of the heart’s electrical system in controlling the heart rhythm, medical science has increasingly embraced the role of electrophysiology in the care and treatment of patients with heart conditions. Cardiac electrophysiology involves the assessment and treatment of the heart’s electrical infrastructure. As Ram Khattri Chettri, the service line administrator of heart and vascular services at Goshen Health remarked, “Being able to offer more access to electrophysiology is central to providing well-rounded, lifesaving and life-improving cardiovascular care and services in Goshen.”

As an electrophysiologist, providing that access to EP is my contribution to the team at Goshen Heart & Vascular Center. I have been pleased to work with many outstanding primary care providers and their cardiac patients in northern Indiana. At Goshen Health, our team ensures that patients in our region who need world class heart and vascular services can receive that care in Goshen.

What are the conditions relevant to cardiac electrophysiology?

The specific conditions for which electrophysiology is beneficial are many and varied – too much so to adequately address in this article. However, many of the primary conditions involve various arrhythmias. The most common form of arrhythmia among adults is atrial fibrillation (AFib), an irregular and fast heart rhythm in the upper chambers of the heart. Others include atrial flutter (rapid circular movement in the upper chambers of the heart that is a curable condition); a heartbeat that is too slow (bradycardia); too fast (tachycardia); ventricular tachycardia (a dangerously fast heartbeat from the bottom chambers of the heart); supraventricular tachycardia (sudden, very fast heartbeat from the top chambers of the heart); and ventricular fibrillation (quivering of the main heart muscle that impedes the ability of the heart to pump blood). Each of these conditions can contribute to symptoms ranging in relative severity from weakness and fatigue to syncope, palpitations and more serious consequences.

Testing, diagnosis and treatment often begins with EP tests

Depending on the patient’s specific condition, EP tests such as those we provide at the Heart & Vascular Center’s EP Lab, include a broad range of diagnostic procedures. The most basic of these are EKGs, blood tests, echocardiograms, stress tests, other imaging studies like cardiac CT and MRI. Event recorders enable tracking of abnormal rhythms of the patient’s heart. Another recording device is the implantable loop recorder put in the chest under the skin to provide continuous monitoring of the heartbeat over an extended period of time. Somewhat more invasive in nature can be cardiac catheterization to rule out coronary artery disease or other heart diseases that may be contributing to an underlying arrhythmia and ultimately an electrophysiology study in which a catheter is placed into a large vein and threaded into the heart to identify specific problems within the heart’s electrical system.



Cardiac electrophysiology

This publication is for healthcare providers

EP testing guides treatment and management of cardiac patients

Until recently, arrhythmia management consisted mainly of medication that did not work in many cases. With recent advances in science and technology, we have now the technology and skills to surgically remove or terminate faulty electrical foci and circuits from sections of the heart. This is the case for some patients with atrial fibrillation, and most patients with atrial flutter and supraventricular tachycardia. While the goal is to avoid an invasive approach whenever possible, surgery is sometimes the only viable option.

As an electrophysiologist, we also have technologies available in the form of implantable cardiac electronic devices like defibrillators and pacemakers including biventricular pacemakers. These devices are extremely beneficial for deadly arrhythmias (such as slow heartbeat, when the heart stops beating or when survival is dependent on an electrical shock by an ICD).

These resynchronization devices are critical if the patient's left ventricle becomes very weak and the heart fails. Patients with this condition are most likely to benefit from a CRT-D (cardiac resynchronization therapy defibrillator) when they meet certain criteria. Implantable cardiac defibrillators and resynchronization devices provide exceptional options for treatment of patients with potentially advanced heart failure.

Atrial tachyarrhythmia, including Afib, can be precursors of future cardiomyopathy or heart failure. Left untreated or inadequately managed, arrhythmia can profoundly diminish the quality of life for heart patients and damage the heart function. Fortunately, we now have access to many treatment options through electrophysiology to improve the life expectancy and quality of life for our cardiac patients.



Dr. Djavid Hadian joined the Goshen Heart & Vascular team full time in May of 2020. He is a board-certified cardiologist specializing in electrophysiology focused on interventional techniques to manage cardiac arrhythmias and prevent cardiac death. With his advanced expertise in conducting complex EP studies and evaluation of electric circuits in the heart, Dr. Hadian is uniquely qualified to address cardiac patients throughout northern Indiana.

TO REFER A PATIENT

To refer a patient, fax a referral form to (574) 533-7145. A referral form can be downloaded at GoshenQuickGuide.com. Call for an appointment at (574) 364-3921.

We make every effort to see referrals the same day or within 24 hours as needed.

If you would like more information or to meet any of our doctors, please contact **Jenny Rupp, Physician Liaison**, at jrupp2@goshenhealth.com or (574) 364-2978.

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