Our superb electrophysiology team recently performed the first implantation in NYC of the world's smallest, thinnest defibrillator device (CRT-D).

Clinical Cardiac Electrophysiology

Cardiac electrophysiologists evaluate and treat people who have evidence of abnormal electrical signals in their hearts, called "arrhythmias," that can cause fainting (syncope) or death if not eliminated. There are many different forms of arrhythmias: tachycardia (heart beats too fast), bradycardia (heart beats too slowly), atrial fibrillation and flutter, supraventricular tachycardia, ventricular tachycardia and fibrillation, heart block, and other complex arrhythmias.

Electrophysiologists also deal with abnormal connections and short circuits in the heart's electrical wiring system, problems like Wolff-Parkinson White (pre-excitation) syndrome, and other problems such as neurocardiogenic syncope (fainting because of abnormal neurovascular reflexes) that mimic the effects of arrhythmias.

Thought of as "electricians of the heart," EP physicians perform sophisticated computer mapping techniques to identify the sites of origin of arrhythmias or the location of short circuits to enable application of optimal therapy.

Catheter-based ablation procedures cure a variety of arrhythmias and short circuits, but, in some cases, must be combined with or replaced by drugs and/or pacemakers for optimal results.

Arrhythmias can affect anyone, even those who are otherwise healthy. In most cases, however, individuals with underlying heart disease are at the highest risk. Some arrhythmias can result in cardiac arrest and sudden death. Some cause symptoms, such as palpitations, fainting or chest pain; others may be asymptomatic but predispose an individual toward a potentially life-threatening stroke. Atrial fibrillation, the most common arrhythmia of the heart, is now recognized as a major source of strokes, and, if uncontrolled, can lead to severe weakening of the heart muscle.

"Preventive Cardiology," a program to reduce the factors (high blood pressure, smoking, high cholesterol, alcohol excess, narcotic use, etc.) that commonly cause heart disease leading to arrhythmia, can help to prevent arrhythmias. Some arrhythmias, however, are caused by genetically-determined characteristics and can be prevented or cured only by sophisticated EP strategies.

Over the past two decades, tremendous advances have been made in understanding and treating cardiac arrhythmias.

One in four people over 50 will develop atrial fibrillation. People with AF usually have a significantly increased risk of stroke (up to 7 times that of the general population). An implantable cardioverter defibrillator (ICD) may reduce the risk of dying of cardiac arrest by detecting and stopping dangerous arrhythmias.

Sudden Cardiac Death in Athletes

Over the past decade there have been many news reports of sudden death in young athletes. Few athletes are at risk for sudden cardiac death. However, among persons predisposed to arrhythmia, intense exercise may stimulate overt development of the problem; some of the resulting arrhythmias can be fatal.

Adrenaline produced during exercise may bring out such arrhythmias. The effects of athletic training generally result in abnormally intense activity of the vagus nerve. This can also predispose athletes to some arrhythmias (like atrial fibrillation).

Testing to unmask the tendency for arrhythmia can involve screening with electrocardiography, exercise testing, echocardiography to detect subtle cardiac structural abnormalities, and even genetic testing. Testing for the problem could save lives.

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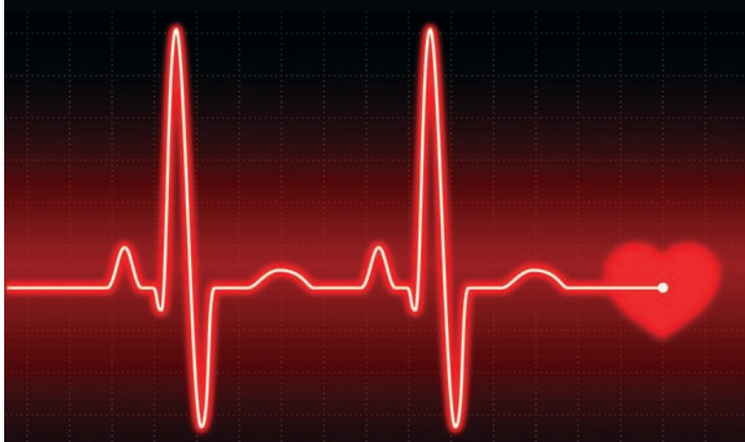
SUNY Downstate Medical Center

Division of Clinical Cardiac Electrophysiology

State-of-the-art Evaluation and Treatment of

Heart Rhythm Disorders



We offer a wide array of services related to heart rhythm disorders:

- MEDICATIONS to control abnormal heart rhythms or treat related conditions.
- ABLATION PROCEDURES using radiofrequency energy and cryoenergy for elimination of tachycardias, including complex ablations of atrial fibrillation and scar-related ventricular tachycardia.
- CARDIOVERSION to convert and maintain a normal heart beat.
- IMPLANTABLE CARDIOVERTER DEFIBRILLATORS (ICD) to restore natural rhythm in patients at risk for recurrent, sustained ventricular tachycardia or fibrillation. (99% effective in stopping life-threatening arrhythmias)
- PACEMAKERS to monitor and regulate the rhythm of the heart and transmit electrical impulses to stimulate the heart if it is beating too slowly.
- CARDIAC RESYNCHRONIZATION THERAPY improves symptoms and prevents the progression of heart failure.
- REMOTE MONITORING for difficult-to-diagnose arrhythmias and for heart failure patients.
- CLINICAL FOLLOW-UP and reprogramming of implanted devices.
- LEAD EXTRACTION — Due to infection or mechanical lead failure, it is sometimes necessary to remove the leads of pacemakers or implantable cardioverter defibrillators (ICD).
- SYNCOPE — full range of diagnostic tests to evaluate patients with syncope (fainting).
- GENETIC TESTING to determine the presence of hereditary arrhythmias — most carry risk of sudden death, are usually seen in a younger population, and cause sudden death in young athletes.
- WEARABLE DEFIBRILLATORS for temporary protection from sudden cardiac death.

We're the only physicians in Brooklyn who specialize in the extraction of pacemakers and implantable cardioverter defibrillators.

Implantable Cardioverter Defibrillators offer the most successful therapy for ventricular fibrillation, the major cause of sudden cardiac death. ICDs continuously monitor heart rhythm, automatically function as pacemakers for heart rates that are too slow, and deliver life-saving shocks if a dangerously fast heart rhythm is detected.

Diagnostic testing includes:

- Echocardiogram
- Electrocardiogram (ECG/EKG)
- Electrophysiology Study (EPS)
- Event Recorder
- Exercise Stress Test
- Heart Catheterization
- Holter Monitor/Home Telemetry
- Implantable Loop Recorder
- Tilt Table Test
- T-wave Alternans Testing

Flexible electrode catheters (tubes) are inserted into the heart to facilitate coronary sinus mapping, pacing and ablation procedures.

Patients need only a mild sedative, and usually go home from the hospital the next day following ablation therapy.

We accept most insurance plans, including Medicare, Medicaid and Managed Care Plans.

The skills and experience of our highly specialized team of physicians, nurse practitioners and physician assistants, combined with our state-of-the-art electrophysiology laboratory, make us the premier comprehensive arrhythmia management center in Brooklyn.

Our Physicians

JOHN KASSOTIS, MD, ENG SCI D, FACC

Director, Clinical Cardiac Electrophysiology
Associate Professor of Medicine
Director, Cardiac Electrophysiology Fellowship Program
Board Certified in Internal Medicine, Cardiovascular Disease and Clinical Cardiac Electrophysiology
Fellowship Training – Columbia University College of Physicians and Surgeons

AREAS OF EXPERTISE:

Implantation and Management of Pacemakers and Cardiac Defibrillators • Invasive Management of Congestive Heart Failure • Atrial Fibrillation • Ventricular Tachycardia • Radiofrequency Ablation of Complex Supraventricular/Ventricular Arrhythmias, Including WPW • Hereditary Channelopathies (Long QT and Brugada Syndrome)

ADAM S. BUDZIKOWSKI, MD, PhD

Assistant Professor of Medicine
Director, Fellows Clinic
Board Certified in Internal Medicine, Cardiovascular Disease and Clinical Cardiac Electrophysiology
Fellowship Training – University of Rochester, Strong Memorial Hospital

AREAS OF EXPERTISE:

Atrial Fibrillation • Ventricular Tachycardia • Lead Extraction • Hereditary Arrhythmias (ARVD, Long QT, Short QT and Brugada Syndrome) • Genetic Testing and Family Screening • Sudden Cardiac Death • Wearable Defibrillator • Resynchronization Therapy

MOLLY SACHDEV, MD, MPH

Assistant Professor of Medicine
Fellowship Training – Johns Hopkins Hospital

AREAS OF EXPERTISE:

Heart Failure • Atrial Fibrillation • Pacemaker and Defibrillator Therapy • Ischemic Heart Disease • Valvular Heart Disease • Atrial/Ventricular/Supraventricular Tachycardia • WPW Syndrome • Genetic Testing and Family Screening

Our electrophysiologists perform a high volume of complex ablations of ventricular arrhythmias related to scarring after a myocardial infarction, or heart attack.