Locations:

Heart Specialists of Sarasota PL

1852 Hillview Street
Suite 308
Sarasota, Florida 34239

Phone: (941) 917-4250
Fax: (941) 917-4257

Heart Specialists of Sarasota (Blackburn Point)

929 S. Tamiami Trail
Suite 203
Osprey, Florida 34236

Phone: (941) 917-4250
Fax: (941) 917-4257

Heart Specialists of Sarasota (Clark Road)

5880 Rand Blvd.
Suite 209
Sarasota, Florida 34238-5118

Phone: (941) 917-4250
Fax: (941) 917-4257

Heart Specialists of Sarasota (University Parkway)

5350 University Parkway
Suite 207
Sarasota, Florida 34243-5812

Phone: (941) 917-4250
Fax: (941) 917-4257

©2009 Savvy Marketing Solution LLC • ph: 941.518.6170 • www.aSavvyMarketingSolution.com

About the Heart Specialists

Heart Specialists of Sarasota was founded in 2001 by Stephen C. Culp, MD who has assembled a premier team of board certified cardiovascular specialists dedicated to providing the latest technological advances in the areas of prevention, diagnostics, intervention and treatment of heart and vascular disease. Our physicians are complimented by highly skilled advanced nurse practitioners and professional staff dedicated to providing you and your family the highest quality, personalized cardiovascular care.

Our team is proud to offer evidence based care following nationally recognized guidelines, and actively participates in clinical cardiovascular research trials. For your convenience we now have offices in 3 additional locations. We look forward to providing you the highest quality cardiovascular care.

MEET OUR PHYSICIANS

Stephen Culp, MD, FACC, FSCAI

Senior Managing Partner

Dr. Culp attended Yale and then the University of Vermont Medical School for Doctor of Medicine. He then completed his fellowship in Cardiovascular Disease and Interventional Cardiology at Duke University Medical Center, where he then joined the faculty in the Department of Cardiology. He is Board Certified in Cardiovascular Diseases, as well as Interventional Cardiology. He remains on the faculty at Duke as an Assistant Consulting Professor of Medicine.

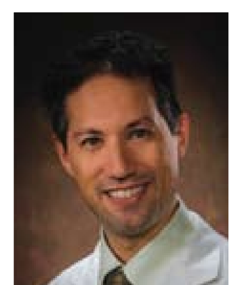
Dr. Culp served as a visiting consultant to Beijing Hospital's department of Internal Medicine and Cardiology in Beijing China. His expertise has availed him the opportunity to author in multiple publications such as The American Heart Journal and medical reference books. His commitment to the advancement of cardiac medicine and care of his patients has lead him to participate in multiple clinical research studies in the field of cardiology.

David S. Schreibman, MD, FACC, FSCAI

Associate Managing Partner

Dr. Schreibman relocated to Sarasota from New Haven CT with his wife and two children in 2004. He obtained his medical degree from New York University School of Medicine and then trained at Yale University/ Yale New Haven Hospital where he completed his residency in internal medicine. Remaining at Yale he completed his training in Non-invasive Cardiology, followed by specialized training in Interventional Cardiology (including peripheral vascular disease). He is Board Certified in Cardiovascular Diseases, Interventional Cardiology, and Adult Echocadiography. He is Board Eligible in Nuclear Cardiology.

Dr. Schreibman specializes in all aspects of cardiology with a particular emphasis on Interventional Cardiology.



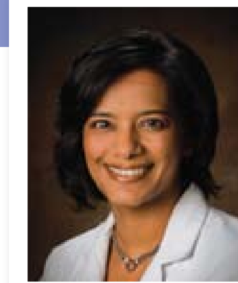
DAVID S. YAMADA, MD, FACC, FSCAI

Dr. Yamada graduated from Northwestern University Medical School. After internship and residency at Emory University, he completed his cardiology fellowship at the Cleveland Clinic in Cleveland, Ohio. Moving to Sarasota where he joined Heart Specialists in 2001, he has served as Chairman of the Cardiovascular Quality Review Committee, Chairman of the Cardiology Privileging Committee, and Cardiology Department Chief, all at Sarasota Memorial Hospital. Dr. Yamada is Board Certified in Cardiovascular Disease and Nuclear Cardiology, and specializes in Invasive Diagnostic Coronary Angiography as well as all aspects of Non-invasive Cardiology. In addition, Dr. Yamada became one of the first physicians worldwide to become Board Certified in Cardiovascular Computed Tomography (Cardiovascular CT) in 2008. He resides in Sarasota with his wife and two children.

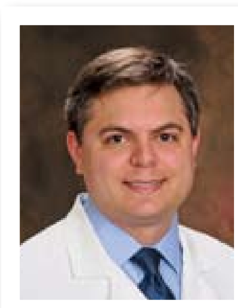
HARDY J. SCHWARTZ, MD, FACC

Dr. Hardy Schwartz completed his cardiology fellowship at Temple University and moved to Sarasota with his wife and three daughters in 2003. He is trained in all aspects of non-invasive cardiology, including adult comprehensive echocardiography and nuclear imaging. He is board certified in Cardiovascular Diseases, Nuclear Cardiology, and Adult Echocardiography. Dr. Schwartz treats all cardiovascular diseases, but has a special interest in managing the unique problems of patients with valvular heart disease and congestive heart failure.

CHIPPY NALLURI, MD, FACC



Dr. Nalluri completed her cardiology fellowship at Case Western Reserve University, and relocated to Sarasota area in June 2001 with her husband and two daughters. She is specially trained in all aspects of non-invasive cardiology, including 3 dimensional Echocardiography and CTA imaging. She is board certified in Cardiovascular Diseases and Nuclear Cardiology. She manages all cardiovascular diseases, but has a passion for managing the unique problems of women with heart disease.

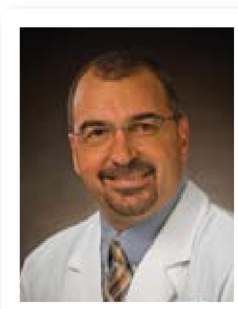


DANIEL FRIEDMAN, MD, FACC

Dr. Friedman graduated from Tulane University School of Medicine in New Orleans. He then went to Mayo Clinic (Rochester, MN) where he completed his residency in Internal Medicine. Returning to Tulane, he completed fellowship training in cardiovascular diseases. He then completed his electrophysiology fellowship training at Saint Louis University (St. Louis, MO). He served as Assistant Clinical Professor of Medicine at St. Louis University, where he practiced clinical electrophysiology. Dr. Friedman is Board Certified in Cardiovascular Diseases, Nuclear Cardiology and Clinical Cardiac Electrophysiology. Dr. Friedman specializes in Electrophysiology and is the area's first fellowship trained atrial fibrillation ablation specialist.

JOVANNA MORRISON, ARNP

Jovanna Morrison ARNP, BC graduated with an Associate's Degree in Nursing in Belleville Area College in Illinois in 2000. She then attended a Nurse Practitioner training program at St. Louis University graduating with her Bachelors in Nursing in 2001 and her Masters in Nursing in 2003. She is board certified through ANCC. Jovanna is responsible for HSS's lipid and Amiodarone clinic along with post hospitalization follow-up and collaborating cardiac management of patients in the office.



BOB SMITH, ARNP

Bob is an Advanced Registered Nurse Practitioner (ARNP) with an extensive background in the field of cardiology with an emphasis on the treatment of heart failure patients. He received his bachelor's degree in nursing from the University of the State of NY and holds a Master's degree in nursing from Andrews University. He was instrumental in developing the Heart Failure Center at SMH. Bob then established the Heart Failure Clinic at Heart Specialists where he works closely with the cardiologists to provide comprehensive expert care.

Services Offered

The team of specialists at HHS provide Office & Hospital consultations.

Nuclear Cardiology

- Exercise treadmill testing
- Stress myocardial perfusion scanning
- MUGA scans

Echocardiography

- Resting and stress echocardiograms
- Transesophageal echocardiography
- 3-dimensional ultrasound

Interventional Cardiology

- Cardiac catheterization
- Balloon angioplasty and valvuloplasy
- Coronary, carotid and peripheral stenting
- ASD and PFO closures

Electrophysiology

- Heart rhythm assessment and diagnostics (EKG and holter monitoring)
- Exercise treadmill testing
- Pacemaker management
- Cardiac defibrillator implantation and management
- Electrical cardioversion
- Radiofrequency ablation

Vascular Lab

- Abdominal vascular ultrasound
- Carotid ultrasound
- Peripheral vascular ultrasound

Clinics

- Heart Failure Clinic
- Lipid Clinic
- Amiodarone Clinic
- Pacer Clinic

TAKE CONTROL OF YOUR HEART HEALTH!

RISK FACTORS FOR HEART DISEASE

- High cholesterol
- Obesity
- Physical inactivity
- High blood pressure
- Diabetes
- Increasing age
- Smoking
- A family history of early heart disease (a parent or sibling less than 55 years old, if male or 65 years old if female)

MAKE CHANGES FOR THE BETTER...

Stop Smoking, as this is one of the best things you can do for your heart. Smoking will increase blood pressure and makes blood more likely to clot. It can increase your chance for a heart attack.

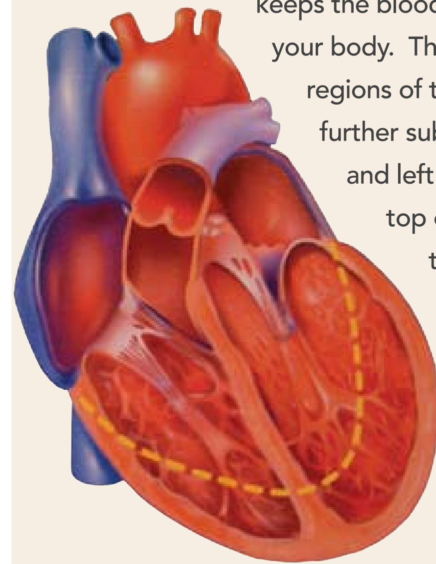
Eat Right, and if you need to change what you eat, do it. Eating less fat can help lose weight and control blood pressure and cholesterol. Using less table salt and choosing foods low in sodium can help control blood pressure as well.

Be More Active, and be smart about exercise. You can talk to the physician for guidance before starting any new exercise program. To help your heart you may be advised to get at least 30 minutes of moderate exercise such as walking.

Control Blood Pressure and Cholesterol. Know your numbers. Total cholesterol less than 200 mg/dl, optimal LDL of less than 100mg/dl, blood pressure less than 120/80, waist circumference < 35 inches.

The Basic Anatomy

The heart is a muscular structure that lies roughly in the center of the chest. The different layers of cardiac tissue are comprised of four chambers, two on the top and two on the bottom. The top chambers are called atria and the bottom chambers are known as the ventricles. The atria are smaller than the ventricles and receive blood as it returns from either the body or the lungs. The ventricles are larger and are responsible for most of the pumping action that keeps the blood circulating in your body. The top and bottom regions of the heart are further subdivided into right and left sides. Thus, the top of the heart contains the right and left atria and the bottom regions of the heart are made up of the right and left ventricles.



PHYSICAL EXAM

The initial evaluation of a cardiac patient consists of performing a physical examination and obtaining a medical history. During a physical examination, the team at Heart Specialists looks for an underlying cause for symptoms that have presented (chest pain, shortness of breath) and assesses heart function. A stethoscope is used to detect abnormal heart sounds (murmurs) that may indicate a leaky or narrowed (stenotic) valve, and to detect fluid accumulation in the lungs. They will feel the thyroid gland in the neck to see if it is enlarged or nodular and will listen over the neck, abdomen, and groin area for sounds created by turbulent blood flow through diseased or blocked arteries. They also look for enlarged (distended) veins in the neck and for swelling (edema) in the legs (particularly the ankles and feet) and/or the abdomen; check the blood pressure in both arms (rare conditions produce different blood pressures in each arm); and may also look at the back of the eyes with an ophthalmoscope, to examine the small blood vessels for signs of damage (e.g., from chronic high blood pressure).

Obtaining a medical history requires the cardiologist, PA or NP to ask the patient for information. Typical questions include asking if you have a history of heart problems (such as heart attack) or chest pains (which might suggest coronary artery disease); if the patient has suddenly developed a sensation of shortness of breath and chest pains (which can suggest that a blood clot has broken off from a blood vessel in the legs and traveled to the lungs); if the patient is losing weight or feels hot all the time (symptoms of an overactive thyroid gland); and if the patient regularly consume alcohol.

When performing an evaluation, it's important for our physicians to also know what medications are being taken (prescription drugs and over-the-counter medicines); if the patient has experienced symptoms such as sweating, palpitations, headaches, or dizziness; and if there are other medical conditions.

Did you know?

Typically, the heart beats 60-100 times a minute or 100,000 times each day. This state is called 'normal rhythm.' Depending on the level of activity the body is experiencing, the heart may beat faster due to running, or slower, such as during sleep.

CHEST PAIN AND ANGINA

INITIAL EVALUATION OF CHEST PAIN

Physicians do several things to determine the probable cause of a patient's chest pains, including an evaluation of the patient's description of his or her pain:

What does the pain feel like?

Does the pain occur with exertion? This is highly suggestive of a fixed blockage in one or more of the coronary arteries.

Does the pain radiate to the neck, jaw, and/or arms? Such pain also suggests angina, the pain caused by insufficient blood reaching the heart.

Does the pain have a "squeezing" or "tightness" quality? Is it accompanied by shortness of breath, sweating, a feeling of "clamminess," nausea or indigestion? These symptoms strongly suggest angina due to a blockage in the coronary artery.

If the pain is anginal in nature, does it last more than 15 to 30 minutes? This may suggest the coronary artery is totally blocked and a heart attack is occurring.

Are you experiencing shortness of breath, back pain, fatigue, or insomnia? This may be "atypical" angina many times experienced by women.

Did the pain come on suddenly? Is it sharp, perhaps the worst the patient has ever experienced? This may suggest aortic dissection, pneumothorax (collapsed lung), or pulmonary embolus (blood clot in the lung).

Is the pain brought on by eating or lying down? Is it relieved with antacids? This may suggest acid reflux or an ulcer.

Angina

Angina is a symptom of ischemic heart disease (IHD). Episodes of stable angina typically are brought on by exertion or emotion and are relieved with rest. An attack of stable angina lasts from 1 to 5 minutes and is described as:

- squeezing,
- dull pain
- pressure in the chest

Pain may radiate to the shoulders, arms, back, neck, or jaw. Patients with atherosclerosis also may experience sweating, clamminess, shortness of breath (dyspnea), nausea, and a sensation like indigestion.

Unstable Angina

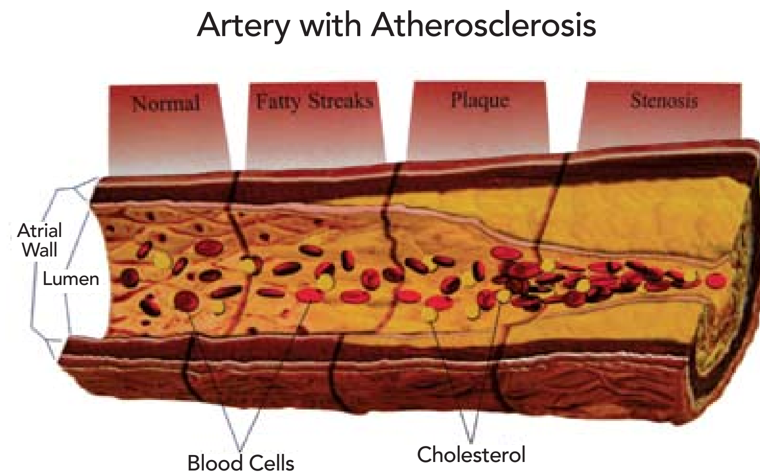
Unstable angina causes symptoms that are more severe, more frequent, and occur with modestly increased physical activity and at rest. Blood clots may form at anytime and may partially dissolve spontaneously. Whenever this occurs, blood flow to heart tissue is blocked and angina occurs.

An attack of unstable angina may last several minutes to half an hour or longer and is considered a medical emergency that requires immediate attention. Nitrates are the most commonly used medicines to treat angina. They relax and widen blood vessels that allows more blood to flow to the heart while reducing its workload.

CORONARY ARTERY DISEASE

Coronary artery disease generally refers to the buildup of plaque in the inside layers of the arteries of the heart. This causes narrowing or blockage of the flow of blood through the vessel, depriving the heart muscle of the blood (and thus oxygen) that it needs. This plaque can rupture forming blood clots which then totally occludes blood from traveling through the vessel - which is the mechanism of most heart attacks.

There are factors which help your doctor predict your risk of developing coronary disease. Factors that a person cannot change such as age, family history of heart disease, diabetes, and being male are counted along with factors that CAN be modified such as having high cholesterol, being overweight, smoking, and uncontrolled blood pressure. The more risk factors that are present, the higher the risk of heart disease. Therefore, the doctor works with each patient to lower risk factors individually.



HEART ATTACK

A heart attack occurs when blood flow to a section of heart muscle becomes blocked from a clot of plaque broken off of the inner walls of the arteries. If the flow of blood isn't restored quickly, the section of heart muscle becomes damaged from lack of oxygen and begins to die. Heart attack is a leading killer of both men and women in the United States. But fortunately, today there are excellent treatments for heart attacks that can save lives and prevent disabilities. Treatment is most effective when started within 1 hour of the beginning of symptoms.

Common warning signs of a heart attack include the following:

- Uncomfortable pressure, fullness, squeezing, or pain in the center of the chest that lasts more than a few minutes or that goes away and comes back
- Pain that spreads to the shoulders, neck, or arms
- Chest discomfort with light-headedness, fainting, sweating, nausea, or shortness of breath

Less common warning signs of heart attack include the following:

- Atypical chest, stomach, or abdominal pain
- Nausea or dizziness (without chest pain)
- Shortness of breath and difficulty breathing (without chest pain)
- Unexplained anxiety, weakness, or fatigue
- Palpitations, cold sweat, or paleness

The goals of initial treatment are to minimize damage by restoring blood flow to the heart and to determine the amount of damage to heart tissue.

DASH- Direct Angioplasty Saves Hearts is one of the optimal treatments for an acute MI to take a patient directly to the cath lab for an angioplasty. Dr Culp and Dr Schreibman participate in this program.

Did you know?

Endocarditis is twice as common in men of any age and is 8 times as common in elderly men as in elderly women.

Hypertension

Most people have essential hypertension, which has no identifiable cause. Some think it may be due in part to a genetic predisposition. The probability of developing this condition increases with age. In the last few decades, the risk for high blood pressure has increased because of a decline in healthy life styles. In fact, nine out of 10 persons are at risk for developing hypertension after age 50.

In approximately 5–10% of patients, a secondary cause exists. Secondary causes include certain types of kidney disease, abnormal functioning of certain glands (adrenal glands, thyroid gland, parathyroid glands), chronic intake of certain substances and medications (e.g., alcohol, steroids), and the presence of a rare tumor. Recent studies have shown that a high intake of sodium combined with a low intake of potassium may increase the risk for high blood pressure.

Evaluation of patients with high blood pressure consists primarily of the following:

- Focused history to collect important data including symptoms like chest pain
- Family history of high blood pressure
- Medical history of co-existing conditions like diabetes
- Physical examination
- Blood tests
- Electrocardiogram
- Echocardiogram or ultrasound of the heart

Several studies have demonstrated that treating patients to lower their blood pressure significantly decreases their risk for developing disabling and potentially deadly complications like heart attack, sudden death, heart failure, stroke, and kidney failure.

The goal of treatment for most patients is to lower the systolic blood pressure below 140 mm Hg and the diastolic blood pressure below 90 mm Hg. In some patients, such as those with diabetes, it is recommended that blood pressure be lowered even further, to a systolic pressure below 130 mm Hg and a diastolic pressure below 90 mm Hg.

Treatment for high blood pressure involves lifestyle modification and medication. If untreated this can lead to serious medical problems such as:

ARTERIOSCLEROSIS - Arteries become thick and stiff which speeds the build up of cholesterol and fats in the blood vessels. This prevents the blood from flowing through the body and in time can lead to a heart attack or stroke.

HEART ATTACK - When the arteries that bring blood to the heart muscle become blocked, the heart cannot get enough oxygen, this can lead to MI.

STROKE - The arteries narrow and less blood can get to the brain.

ENDOCARDITIS

Endocarditis is an infection of a heart valve or the inner lining of the heart (the endocardium), which can damage or destroy the heart valves and damage the heart. Endocarditis usually occurs in patients with congenital or acquired heart conditions.

Although several different organisms can cause endocarditis, it is usually caused by bacteria. In most cases, it develops when normal bacteria on the skin or in the respiratory, gastrointestinal, or urinary tract enter the bloodstream and lodge within a damaged heart valve or abnormal heart tissue. Untreated, this bacterial infection gradually damages the endocardium and causes the heart valve to malfunction. Infection can spread to the bloodstream (septicemia) and to other parts of the body.

Endocarditis is more common in older people with about 50% of all cases occurring in patients over the age of 50.

PERICARDITIS

The pericardium is a thin layer of specialized tissue that covers the outer surfaces of the heart. This tissue helps to anchor the heart in place, prevents excessive movement of the heart in the chest when body position changes, protects the heart from infections and tumors that develop in and may spread from nearby tissues, and may help keep the heart from enlarging. Inflammation of the pericardium is called pericarditis and causes a characteristic chest pain that usually compels one to seek medical attention.

Causes include: heart attack, infection, kidney failure, metastatic disease, some medications, and radiation therapy. Recent viral infection often precedes pericarditis in young, otherwise healthy patients. In idiopathic pericarditis, no clear cause is determined.

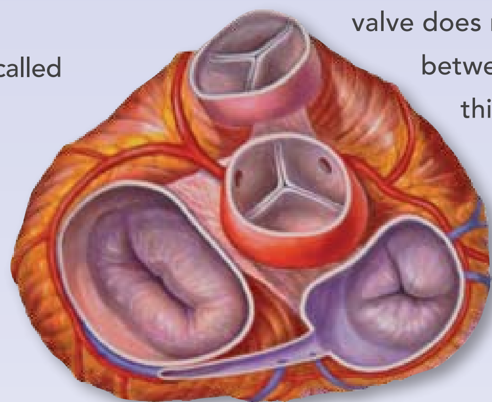
The most common symptom of pericarditis is chest pain. The pain is predominantly felt below the breastbone (sternum) and/or below the ribs on the left side of the chest and, occasionally, in the upper back or neck. Breathing causes the lungs and heart to move in the chest and rub against the irritated pericardium, worsening the pain. Pain may worsen when patients lie down and may improve when they sit up and lean forward. Changes in position can increase or decrease pressure and the irritation of the inflamed pericardium.

HEART MURMURS

A heart murmur is a "whooshing" or "swishing" sound heard with a stethoscope as blood flows through the heart. This sound is different from the usual "lub-dub" heartbeat sound. Heart murmurs can sometimes indicate a heart condition that needs treatment. People of any age can have a heart murmur and the condition may come and go throughout a person's lifetime.

TYPES: Heart Murmurs are classified in two ways: Innocent and abnormal.

Innocent heart murmurs (also called normal, benign flow, functional, or physiologic murmurs) occur when blood flow moves quickly through the heart or there is extra blood flow in the heart. Patients with innocent murmurs have healthy, normal hearts and usually do not need treatment. Innocent heart murmurs frequently are detected in children. They become louder or softer when the heart rate changes from exercise, excitement, or anxiety; however, this usually is not cause for concern.



Abnormal heart murmurs, also called pathologic murmurs, usually indicate an underlying heart condition (e.g., congenital heart defect, heart valve defect, infection) that needs further evaluation.

In adults and older children, heart murmurs are typically caused by heart valve problems related to infections, illness, or aging. These conditions include:

- RHEUMATIC FEVER – is an inflammatory illness that can develop when strep throat infection is not treated properly. This may eventually damage heart valves permanently.
- ENDOCARDITIS – is a bacterial infection that attacks the inner lining of the heart. Left untreated, it can damage or destroy heart valves, block blood flow, or cause blood to leak backward.
- MITRAL VALVE PROLAPSE – occurs when the mitral valve does not close properly. This valve is located between the left atium and left ventricle. When this valve doesn't close as it should, the "leaflets" of the valve expand back into the atrium when the left ventricle contracts. Mitral valve prolapse sometimes is a congenital heart defect that is not discovered until adulthood.
- STENOSIS – is when the valve doesn't open completely, and the heart has to work harder to pump the blood through the valve.
- REGURGITATION – is when the valve doesn't close completely, so blood leaks back through the valve.
- VALVE CACIFICATION – may develop as people age with a hardening or thickening of the valves that make it more difficult for blood to move through them.
- CARDIAC MYXOMA – is the most common type of tumor in adults, that can grow inside of the heart and block blood flow.
- HYPERTROPHIC CARDIOMYOPATHY – is a condition that causes the muscle inside the left ventricle to thicken and narrow the path for blood flow.

Did you know?

More than half of all abnormal heart murmurs in children are caused by ventricular septal defects.

WHAT IS AORTIC STENOSIS?

When aortic valve stenosis occurs, the aortic valve, located between the aorta and left ventricle of the heart, is narrower than normal size. When the degree of narrowing becomes significant enough to impede the flow of blood from the left ventricle to the arteries, heart problems develop.

Aortic stenosis is caused by many disorders such as rheumatic fever, calcification of the valve and congenital abnormalities. There may be a history of other valve diseases, coronary artery disease, or heart murmur. Symptoms usually do not appear until middle age or older.

Symptoms (some may not show until late in the course of the disease):

- breathlessness, fainting or weakness with activity
- chest pain, angina-type under the sternum which may radiate
- crushing, squeezing, pressure, or tightness increased with exercise, relieved with rest
- dizziness

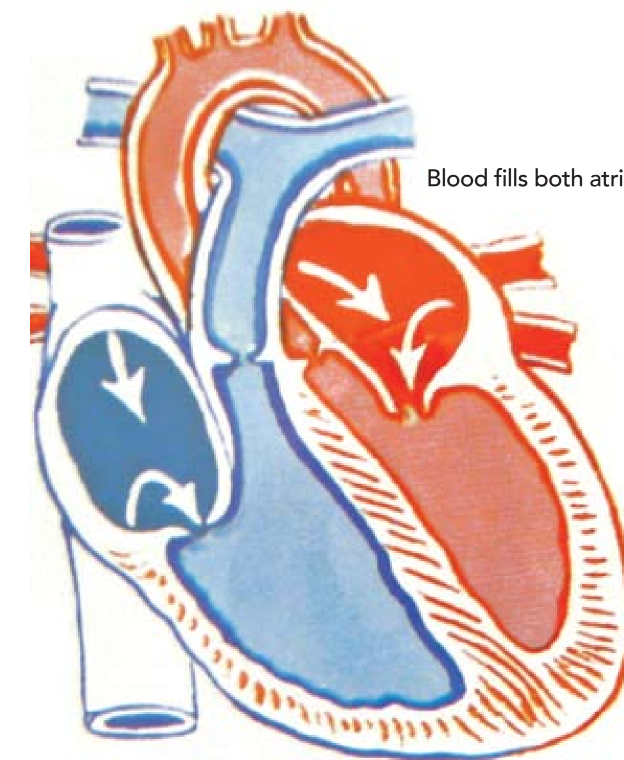
Aortic stenosis is curable with surgical repair, although there may be a continued risk for arrhythmias.

MITRAL VALVE PROLAPSE

The most common heart valve abnormality is called **mitral valve prolapse (MVP)**. It can go undetected for years, as symptoms usually do not occur until adolescence or even adulthood. It is a condition of the mitral valve, a two-flapped heart valve between the left atrium and left ventricle.

In MVP, one or both of the valve flaps are too floppy, and the mitral valve does not close evenly with each heartbeat. Because of this imperfect closing, the valve itself balloons back into the left atrium, sometimes causing what is known as a "click". With the flappy valve there may sometimes be a backward leaking of blood (regurgitation) as well, resulting in a heart murmur.

It seems that MVP is an inherited disorder, although the exact genes are not known. If proper precautions are taken it will not affect life expectancy, and generally has no impact on normal activities unless it starts to leak significantly.



Blood fills both atria.

MITRAL REGURGITATION

Mitral regurgitation is a condition in which disease or injury has caused the heart's mitral valve to become leaky. The four heart valves function as one-way valves, allowing blood to be pumped forward and preventing blood from regurgitating backwards. When the mitral valve becomes leaky, blood may back up into the lungs, causing shortness of breath. An untreated leaky valve can lead to heart failure.

In patients with mitral regurgitation, the lungs become congested with fluid, which interferes with the absorption of oxygen from the lungs into the bloodstream. This leads to shortness of breath with exercise or exertion. Some patients feel short of breath when they lie down at night and may need to sleep with their heads elevated to avoid waking up in the middle of the night.

As the heart dilates (enlarges) and, eventually, decompensates, other symptoms of heart failure develop. Patients may fatigue easily and feel weak; others may also notice swelling in their ankles and feet due to accumulation of fluid in these areas.

Patients with suspected mitral regurgitation undergo an echocardiogram (cardiac echo) and this can be followed by a cardiac catherization. The only proven treatment for mitral regurgitation is surgery. The indications for mitral valve surgery are falling ejection fraction, dilation (increased diameter) of the left ventricle, and symptoms.

What is Aortic Dissection?

Aortic dissection involves a tear into and along the wall of the aorta (the major artery from the heart), most often because of damage to the inner wall of the artery. This most often occurs in the chest portion of the aorta but can also occur in the abdominal portion.

The exact cause is unknown, but risks include atherosclerosis and hypertension. Traumatic injury is a major cause of aortic dissection, especially blunt trauma to the chest as with the steering wheel of a car during an accident. It may also be associated with other injury, infection, congenital weakness of the aorta, collagen disorders, abdominal aortic aneurysm, pregnancy, and valve disorders.

Aortic dissection occurs in approximately 2 out of 10,000 people. It can affect anybody, but it is most common in men over 40 years of age.

Aortic dissection often causes a sudden, sharp, severe pain that feels like tearing, ripping, or stabbing. The location of the pain usually depends on where the dissection occurs and how it affects nearby organs. In most cases, pain starts in the chest, neck, or upper back, and spreads to the arms, legs, shoulders, jaw, abdomen, or hips as the dissection worsens. The patient may lose feeling in different parts of the body or may not be able to move.

Although aortic dissection is a life-threatening condition, patients can recover if they are treated quickly enough. Approximately three-quarters of patients who receive prompt treatment live another 5 years, and 40–69% live another 10 years, whether they have been treated with surgery or medication.

Congenital Defects

Atrial Septal Defect (ASD) is a hole in the septum (wall) that divides the heart's upper chambers (atria). An ASD can be small or large. Small ASDs allow only a little blood to leak from one atrium to the other. Very small ASDs don't affect the way the heart works so therefore don't need any special treatment. Many ASDs close on their own as the heart grows during childhood. Medium to large ASDs allow more blood to leak from one atrium to the other, and are less likely to close on their own.

Ventricular Septal Defect (VSD) is a hole in the septum that divides the heart's lower chambers (ventricles). More than half of all abnormal heart murmurs in children are caused by ventricular septal defects. The hole allows oxygen rich blood to flow from the left ventricle into the right ventricle instead of flowing into the aorta and out to the body as it should. Ventricular septal defects can go undetected until adulthood.

Boston Scientific *Delivering what's next.*™ www.bostonscientific.biz/home.bsci

Making More Possible

Boston Scientific's Cardiac Rhythm Management (CRM) Group is a leading developer of implantable devices used to treat cardiac arrhythmias (abnormal heart rhythms), sudden cardiac arrest, and heart failure. Boston Scientific is a company on the forefront of Cardiac Rhythm Management therapy. Our CRM group works in concert with our Electrophysiology group to offer state-of-the-art products to treat a number of cardiac conditions.

Electrophysiology Group

Boston Scientific's Electrophysiology Group is a leading developer of less-invasive medical technologies used in the diagnosis and treatment of rate and rhythm disorders of the heart.

Products used in the less-invasive treatment for cardiac arrhythmias include the following: **Diagnostic catheters** are used to accurately map the heart's electrical signals. These catheters allow an electrophysiologist to identify the site where an arrhythmia is originating. **Ablation catheters** use radiofrequency (RF) energy to render the heart's abnormal sites electrically inactive. This procedure treats the arrhythmia and restores a normal heart rate.

Heart Disease causes more deaths in Americans of both genders and all racial and ethnic groups than any other disease. The good news is that you can take action to lower your risk of heart disease by eating healthy and not smoking, managing your stress and exercising daily. Talk to your doctor about your specific risk factors for developing heart disease or stroke and take control of your high cholesterol, high blood pressure as well as managing your diabetes.

Close the Gap is a Boston Scientific educational initiative created to reduce the disparities in cardiovascular care.

www.heart-health-disparities.org

Alliance

ALLIANCE IS DEDICATED TO HELPING CLIENTS MAINTAIN THE GREATEST LEVEL OF INDEPENDENCE AT HOME AS POSSIBLE.

Alliance has been providing oxygen and other respiratory therapy services and equipment to individuals and nursing care facilities in Sarasota and Manatee counties for over 10 years.

For patients in a home care environment, Alliance provides:
- Oxygen systems
- Sleep Apnea Equipment
- Nebulizers
- Respiratory Medications
- Other related products and services

(941) 926-8090
4562 Mcashton Street, #312 • Sarasota, FL 34233

Why is home oxygen prescribed?

Your doctor may prescribe oxygen if your lungs are not getting enough oxygen to your blood (a condition called hypoxemia). Breathing prescribed oxygen increases the amount of oxygen in the blood, usually reduces shortness of breath and other symptoms, and helps increase survival. Prescribed oxygen may also help protect your heart.

The air you breathe every day contains 21% oxygen. The oxygen you will receive at home is close to 100% pure oxygen. Because it is a pure concentration of oxygen, home oxygen is considered to be a drug and must be prescribed by your doctor. Oxygen is not addictive and causes no side effects when used as prescribed. Your doctor will prescribe a specific amount of oxygen that is right for you. Some people may need to use supplemental oxygen 24 hours a day, while others may only need oxygen during exercise or sleep.

Home oxygen can help promote your independence and make it easier and safer for you to complete daily living activities.

Cardiac Conditions

CARDIOMYOPATHY

Cardiomyopathy is a serious disease in which the heart muscle becomes inflamed, weakened, and doesn't pump blood as well as it should. There may be multiple causes that make cardiomyopathy worse such as high blood pressure, heart valve disease, congenital defects, virus, pregnancy, or drug/alcohol abuse. Other cardiomyopathies cannot be attributed to a specific cause at all, which are called idiopathic.

Though there are different types of cardiomyopathies, all effect the heart function and the cardiac output, or ability to pump blood effectively. Symptoms such as an increased shortness of breath, or inability to perform activities/exercise range in severity and can be debilitating. These symptoms can be greatly improved with proper medications and/or exercise combination, and can even be reversed in some cases.

People of all ages can develop cardiomyopathy, but certain cardiomyopathies are more common in certain groups:

- African Americans are more likely to have dilated cardiomyopathy compared to Caucasians.
- Men are more likely to have dilated cardiomyopathy compared to women.
- Teens and young adults are more likely to have arrhythmogenic right ventricular dysplasia compared to older people.

Specific treatments depend on the type of cardiomyopathy, how severe the symptoms and complications are, and the age and overall health of the person. The main goals of treating cardiomyopathy are to:

- Manage any conditions that cause or contribute
- Control symptoms to live as normally as possible
- Stop the disease from getting worse
- Reduce complications and the chance of sudden cardiac death

Treatments for cardiomyopathy may include:

- medication
- surgery
- nonsurgical procedures
- lifestyle changes

Did you know?

Stroke is the third leading cause of death in the United States (second for women) and the number one cause of adult disability.

WHAT IS A STROKE?

Similar to a heart attack that cuts off the blood flow to the heart, stroke is when blood flow to the brain is cut off. When an artery in or leading to the brain becomes clogged or ruptured, blood cannot reach brain cells. Deprived of the blood's essential oxygen and nutrients, these cells die and functions that were normally controlled by these cells become impaired. This can cause paralysis or loss of speech or vision.

About 80% of strokes are caused by blood clots that obstruct circulation. A thrombotic stroke occurs when blood flow is blocked by a clot formed in an artery in the head. An embolic stroke occurs when a small clot forms elsewhere in the body (e.g., the heart) and gets stuck in an artery leading to the brain. The other 20% of strokes are hemorrhagic strokes that occur when an artery in the brain ruptures.

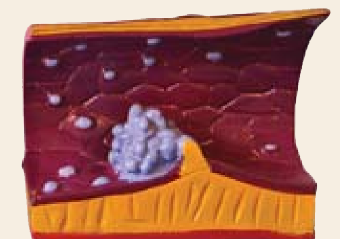
Stroke symptoms are more subtle and often overlooked. Recognizing these symptoms is very important to getting the quick diagnosis and treatment that can save lives. The most common symptoms are:

- Numbness, pain, weakness or paralysis of face, arm or leg (especially on one side of the body)
- Sudden blurred or decreased vision
- Sudden headaches with no apparent cause
- Difficulty speaking or understanding speech or writing
- Dizziness, loss of balance or coordination

The Process of Clot Formation in an Artery

1. Oxygen-rich blood flows through a normal artery easily.

2. Deposits collect within the artery walls, causing plaque that narrows the artery and reduces blood flow.



3. The plaque ruptures and platelets in your blood may form clots.

4. A clot can reduce or block the flow of blood, possibly resulting in heart attack, stroke, or PAD.

Diagnostic Tests

CAROTID ULTRASOUND

Carotid ultrasound is a noninvasive diagnostic procedure that uses sound waves and is used to diagnose carotid artery stenosis – a condition where narrowing of the carotid arteries may partially or completely block blood flow from the heart to the neck and head. Ultrasound produces better images of certain "soft" tissues than x-rays do. Ultrasound can also show internal motion such as blood flowing through veins and arteries. It provides information that will help the doctor determine the need for surgery to remove a blockage (called a carotid endarterectomy).

Your physician may ask to have this test done if you are having symptoms that could be related to a blockage within the carotid arteries. Symptoms such as dizziness, "blackouts" or syncope, TIAs, or history of CVA (stroke) are common reasons for this test.

Chest X-Ray

Chest x-rays may be performed to detect abnormalities in the size and shape of the heart (e.g., an enlarged heart), to detect fluid around the heart (pericardial effusion), and to detect heart failure. They also may be used to detect abnormalities of the major artery (aorta).

ECHOCARDIOGRAM

(ALSO CALLED CARDIAC ECHO)

Echocardiography is a painless test that uses sound waves to create images of your heart. It provides your doctor with information about the size and shape of your heart and how well your heart's chambers and valves are working. Symptoms such as shortness of breath and swelling in the legs can be due to weakness of the heart (heart failure), which can be seen on an echocardiogram.

The physicians at Heart Specialists of Sarasota also use echocardiography to provide information on:

The size of your heart and heart muscles that are weak and aren't pumping properly. Weakening could mean that the area isn't getting enough blood supply. An enlarged heart can be the result of high blood pressure, leaky heart valves, or heart failure.

Problems with your heart's valves or abnormalities in the structure of your heart – such as a hole in the septum or other congenital heart defects, aorta aneurysm, blood clots or tumors that may have caused it.

The physicians also use echocardiography to see how well your heart responds to certain heart treatments, such as treatment for heart failure.

A colorless gel is applied to the chest and the echo transducer is placed on top of it. The technologist then makes recordings from different parts of the chest to obtain several views of the heart. The images are constantly viewed on the monitor. It is also recorded on photographic paper, on videotape and on a computer disk. 12 leads of the EKG are recorded on paper and the blood pressure is taken.

TRANSESOPHAGEAL ECHO (TEE) A transesophageal echo is a type of echocardiogram that uses a long tube with a special microphone-like device mounted on one end. The tube is passed through the mouth and throat and then down the esophagus located directly behind the heart. This allows for closer proximity to the heart for high-quality images of the heart and the heart valves. TEE is performed at the hospital under anesthesia.

CT of the Heart

Patients undergoing a coronary computed tomography angiography (CTA) examination receive iodine-containing contrast intravenously while x-rays pass through the body that are picked up by multiple detectors in the scanner. The examination usually takes about 10 minutes, and is used to visualize atherosclerosis in the coronary arteries. In recent years we have seen rapid evolution of technology which has improved this imaging modality greatly, enabling direct visualization of the coronary arteries via a noninvasive approach. However, the coronary arteries are often not visualized as well with coronary CTA as with diagnostic cardiac catheterization. Your physician will help decide which coronary imaging modality is best for you.

A coronary calcium CT scan is an ultrafast scan that detects calcified deposits (plaques) in coronary arteries and takes just a few minutes to perform without the need for intravenous contrast. It can be used to help diagnose the presence of atherosclerosis years before the disease becomes clinically evident in order to enable appropriate medical preventative measures.

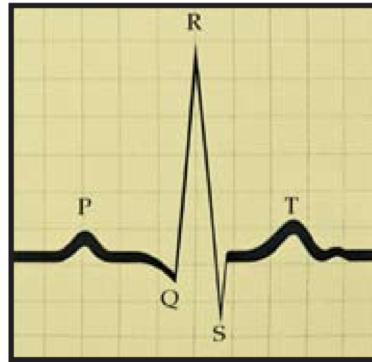
Diagnostic Tests

LABORATORY TESTS

Laboratory tests can help our cardiologists identify underlying ischemic heart disease and conditions that may contribute to its development. For example, urinalysis may indicate diabetes mellitus or renal disease, both of which are associated with atherosclerosis.

Blood tests may show elevated lipid (fats) levels that indicate atherosclerosis and an elevated CPK , which is an enzyme released into the blood when heart tissue dies.

EKG



An electrocardiogram (ECG or EKG) is a non-invasive test used to measure electrical activity in the heart. Electrical sensors called leads are attached to predetermined positions on the arms, legs, and chest to record electrical activity and help assess heart function.

The ECG creates a graph that represents the phases of the heart beat for normal rhythm and irregular beats. The ECG can also suggest recent or past heart attack, inflammation of the pericardium, or a blood clot that has traveled to the lungs. Electrocardiogram may be used in the diagnosis of atrial fibrillation, congestive heart failure, and heart attack.

Holter Monitoring is a machine that continuously records the heart's rhythms. The monitor is usually worn for 24 - 48 hours during normal activity-and is used to determine how the heart responds to normal activity. The monitor may also be used after a heart attack, to diagnose heart rhythm problems, or when starting a new heart medicine.

It may be used to diagnose:

- Arrhythmias
- Palpitations
- Reasons for fainting

Ultrasound

Ultrasound is a painless, non-invasive, radiation-free diagnostic test that uses high-frequency sound waves to create images of body tissues. Duplex ultrasound measures the velocity of blood flow and helps to see the structure of the blood vessels. Physicians use duplex ultrasound to diagnose and to plan for and evaluate surgical and interventional therapies.

Duplex ultrasound is used to detect the presence and severity of numerous conditions, including:

- Thrombosis (blood clots
- Blockages from atherosclerosis (hardening of the arteries)
- Thrombophlebitis (an inflammation of the blood vessels)
- Trauma to an artery or vein
- Raynaud's phenomenon (a spasm of small blood vessels in the fingers)
- Increases in the thickness of the blood vessel lining

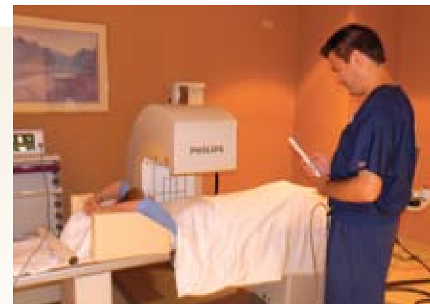
STRESS TEST

A test used to provide information about how the heart responds to stress. It usually involves walking on a treadmill at increasing levels of difficulty, while the electrocardiogram, heart rate and blood pressure are monitored. Patients with coronary artery blockages may have minimal or no symptoms during rest. However, symptoms and signs of heart disease may be unmasked by exposing the heart to the stress of exercise. During exercise, healthy coronary arteries dilate more than an artery with a blockage. This unequal dilation causes more blood to be delivered to heart muscle supplied by the normal artery. In contrast, narrowed arteries end up supplying reduced flow to it's area of distribution. This reduced flow causes the involved muscle to "starve" during exercise, which can produce symptoms like chest discomfort or inappropriate shortness of breath, EKG abnormalities and reduced movement of the heart muscle.

In some cases, a drug is infused into the bloodstream to increase the heart rate or to affect the flow of blood within the heart and an echocardiogram is used to obtain images of the heart.

Nuclear Stress Tests

Nuclear stress test involves injecting a radioactive substance into a vein and using a special camera to obtain images of the heart during rest and immediately following exercise on a treadmill. The test will show how well blood flows to the heart muscle.



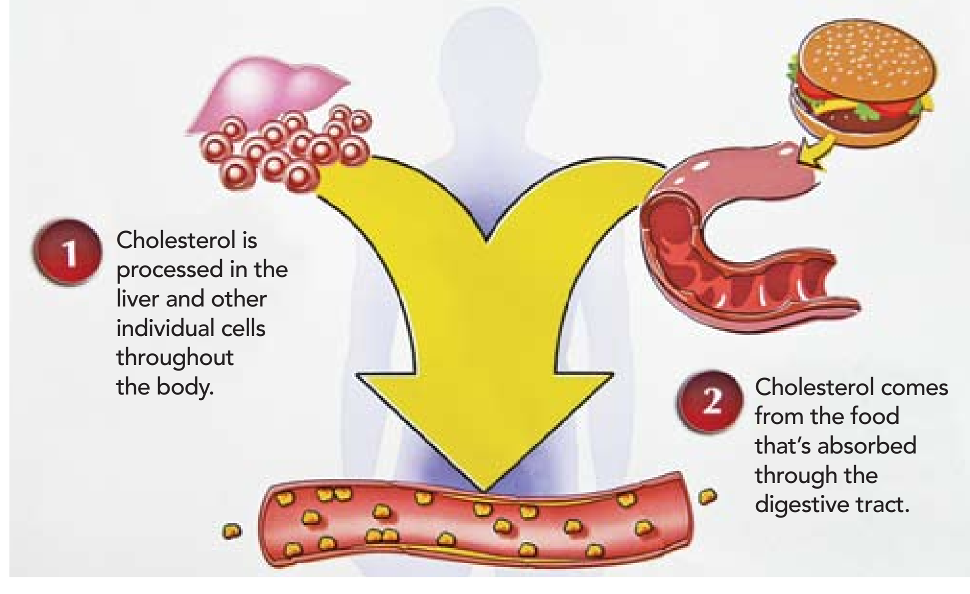
Clinics

THE LIPID CLINIC

The Lipid Clinic focuses on dietary and lifestyle education, analysis of laboratory results, and medication titration, instruction, and information to help minimize cardiovascular risk with controlling patients' cholesterol.

High cholesterol is a serious health risk because it can lead to coronary heart disease. More than 13 million Americans have heart disease and each year, it kills more Americans than any other cause. These individuals have already had a heart attack or experienced chest pain (angina). The American Heart Association says an elevated LDL-cholesterol level is a major risk factor for heart disease.

High cholesterol (**hypercholesterolemia**) can cause the formation and accumulation of plaque deposits in the arteries. Plaque is composed of cholesterol, other fatty substances, fibrous tissue, and calcium. When it builds up in the arteries, it results in atherosclerosis, or coronary heart disease (CHD). **Atherosclerosis** can lead to plaque ruptures and blockages in the arteries, which increase the risk for heart attack, stroke, circulation problems, and death.



Types of Cholesterol:

Several different types of blood cholesterol can be measured, and high levels of some types are worse or better than high levels of other types. Included are:

- Total blood cholesterol
- HDL (high-density lipoprotein) cholesterol ("good" cholesterol)
- LDL (low-density lipoprotein) cholesterol ("bad" cholesterol)
- Triglycerides ("backbone" of many types of fat)

Total blood cholesterol is the most common measurement of the concentration of fat (lipid) in the bloodstream, including cholesterol and triglyceride molecules contained in LDL, HDL, and other lipid particles. Total blood cholesterol levels can help to determine if LDL and triglyceride levels are likely to be normal or elevated. If total cholesterol levels are elevated, a lipid profile is used to determine which lipid level is too high.

HDL ("good") cholesterol may help protect against atherosclerosis by preventing cholesterol from depositing on arterial walls as it circulates in the bloodstream. Low HDL levels may be caused by a genetic predisposition, lack of exercise, smoking, and/or obesity.

Most of the cholesterol that circulates in the bloodstream is **LDL ("bad") cholesterol**. High LDL levels may result from a combination of the following risk factors:

- Age (over age 45 in men and age 55 in women)
- Certain medications (e.g., some diuretics, immunosuppressants, and corticosteroids)
- Cigarette smoking
- Diseases (e.g., diabetes, hypothyroidism)
- Gender (after menopause, women's LDL levels tend to rise)
- Genetic predisposition (i.e., family history of early heart disease)
- High blood pressure (hypertension)
- High dietary intake of cholesterol
- Obesity

Pharmacological Therapy (Medication)

The introduction of **HMG-CoA reductase inhibitors (statins)** has significantly advanced the treatment of hypercholesterolemia. Statins can reduce LDL cholesterol levels by 20–40% and, at maximum doses, they can lower levels by 40–50%. They also can modestly increase HDL ("good") cholesterol levels, usually by about 5–10%.

These medications are usually well tolerated, have few side effects, and are taken once or twice a day. Because the body produces cholesterol primarily during the night, these medicines usually are taken after dinner or during the evening. Higher doses can be split and taken once in the morning and once in the evening.

Other cholesterol-lowering medications can be used alone, or combined with a statin, to reduce cholesterol to an acceptable level. Combining medications may increase the risk for liver and/or muscle inflammation.

Did you know?

Cardiovascular disease is the leading cause of death in both men and women in the United States, and is a major cause of death throughout the world. According to the Centers for Disease Control and Prevention (CDC), approximately 61 million people in the United States have heart disease. Heart disease contributes to approximately 40% of all deaths.

lifestyle changes

that may lower LDL cholesterol levels include the following:

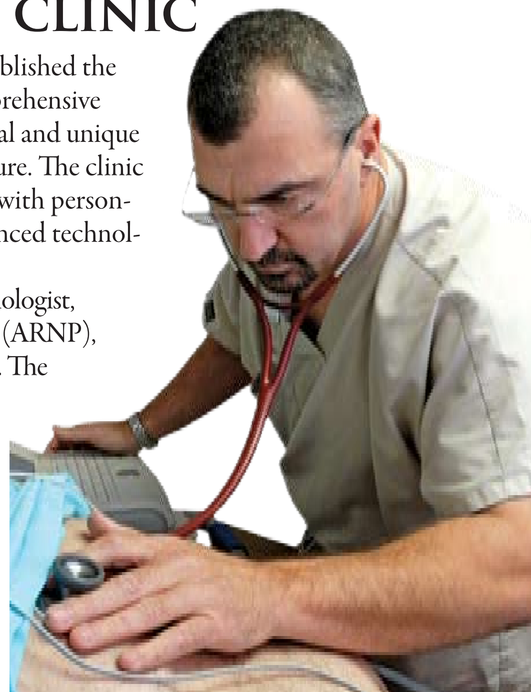
DIET. Minimize cholesterol and fat intake, especially saturated fat, which raises cholesterol levels more than any other substance. Cholesterol and saturated fats are found primarily in foods derived from animals, such as meats and dairy products. Dietary guidelines for reducing cholesterol and fat consumption:

1. Eat lean fish, poultry, and meat. Remove the skin from chicken and trim the fat from beef before cooking.
2. Avoid commercially prepared and processed food (e.g., cakes, cookies) and breaded fried foods.
3. Increase the intake of fruits, vegetables, breads, cereals, rice, legumes (e.g., beans, peas), and pasta.
4. Use skim or 1% milk.
5. Eat no more than 2 egg yolks (or whole eggs) per week.
6. Use cooking oils that are high in unsaturated fat (e.g., corn, olive, canola, safflower oils)
7. Use soft margarine, which contains less saturated fat than butter.

WEIGHT LOSS. Losing a modest amount of weight (even 5-10 lbs.) can double the reduction in LDL levels achieved through an improved diet. Weight loss should be gradual.

EXERCISE. Exercise can decrease LDL levels and increase HDL levels. For example, taking a brisk 30-minute walk 3-4 times a week can positively impact cholesterol levels.

HEART FAILURE CLINIC

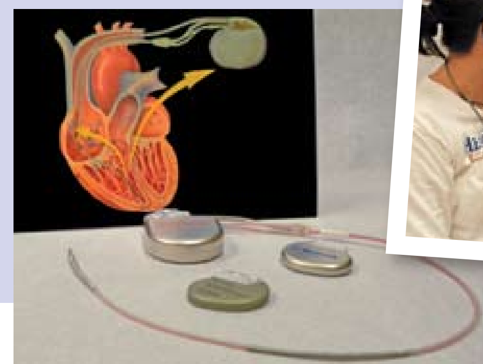


The Heart Specialists of Sarasota established the Heart Failure Clinic to provide comprehensive expert care in order to meet the special and unique needs of their patients with heart failure. The clinic provides the patient and their family with personalized care and utilizes the most advanced technology and treatments available.

The team is comprised of the cardiologist, advanced registered nurse practitioners (ARNP), registered nurses and medical assistants. The clinic's goal is to improve the quality of life while closely monitoring the clinical status of the patient and providing ongoing education to manage symptoms of heart failure. It is imperative that the patient and their family actively participate along with the team in managing their healthcare.

Pacer Clinic

Pacemaker patients should schedule a follow-up visit with their cardiologist approximately six weeks after the surgery. During this visit, the doctor will make any necessary adjustments to the settings of the pacemaker. Pacemakers are programmed externally with a handheld electromagnetic device. Pacemaker batteries must be checked regularly. Some pacing systems allow patients to monitor battery life through a special telephone monitoring service that can read pacemaker signals.



Doctor's Choice Home Care, Inc.

CONGESTIVE HEART FAILURE

Heart failure means that the heart muscle is weakened and may not be strong enough to pump an adequate amount of blood out of its chambers. To compensate for its diminished pumping capacity, the heart may enlarge. Commonly, the heart's pumping inefficiency causes a buildup of blood in the lungs, a condition called pulmonary congestion.

Focusing on Congestive Heart Failure

More than 5 million people in the US have some form of heart failure and nearly 550,00 new cases are diagnosed each year, according to the American Heart Association. The risk of developing heart failure increases with age and it is estimated that one out of every 100 people over the age of 65 will be diagnosed.

Risk factors for congestive heart failure include:

- Heart attacks
- Uncontrolled or long-standing high blood pressure
- Viral or bacterial infections
- Complications during pregnancy
- Chronic alcohol abuse
- Damage to the mitral and aortic valves
- Aortic valve disease
- Cancer therapies
- Certain courses of treatment for AIDS

SYMPTOMS OF HEART FAILURE

- Sudden weight gain
- Shortness of breath while at rest, not related to exercise or exhertion
- Increased swelling of the lower legs or ankles
- Trouble sleeping(awakening short of breath, using more pillows)
- Frequent dry, hacking cough
- Loss of appetite
- Increased fatigue or feeling tired all the time

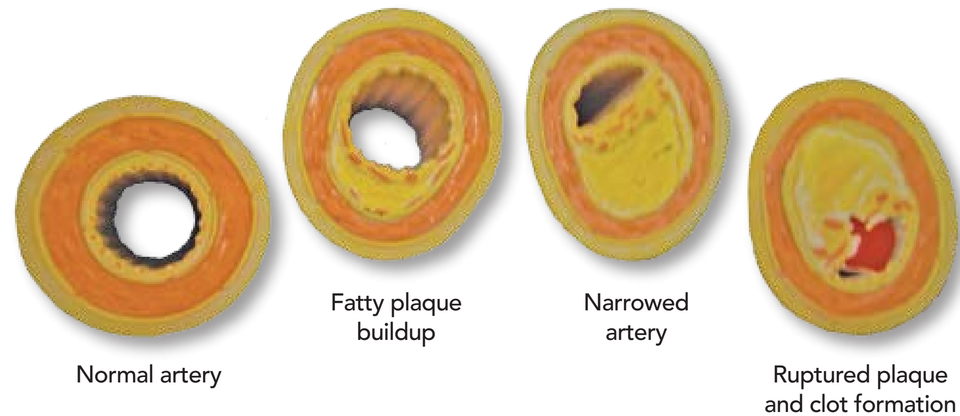
A HOME HEALTH CARE PROVIDER

Sarasota 941-925-5900 • Englewood 941-474-5911
Bradenton 941-727-4100 • Port Charlotte 941-235-1202
www.doctorschoicefl.com

Doctor's Choice Home Care...

...works with the physicians at Heart Specialists of Sarasota in providing:

- Continuity of care with one nurse following a patient
- A web-based documentation system that allows working closely with the physicians in communication a patient's progress.
- 24 hours a day availability
- Variety of services with a special program designed just for CHF patients



WHAT IS CARDIAC CATHERIZATION?

A cardiac catherization is a test that uses dye and fluoroscopy to show the inside of your coronary arteries. The coronary arteries supply blood and oxygen to your heart and when a material called plaque builds up on the inside walls, this causes them to narrow. This is referred to as coronary artery disease (CAD). CAD can prevent enough blood from flowing to your heart and can lead to angina and heart attack.

Symptoms and diagnoses that may lead to performing this procedure include:

- Chest pain – prolonged heavy pressure or a squeezing pain
- Abnormal treadmill stress test
- Myocardial infarction
- Congenital heart defects, or heart problems that originated from birth
- A diagnosis of valvular heart disease
- A need to measure the heart muscle's ability to pump blood.

Most of the time, the coronary arteries can't be seen on an X-ray, so, with cardiac catherization, a special dye is injected into the bloodstream for the coronary arteries to be visible with fluoroscopy.

To deliver the dye to your coronary arteries, a long, thin, flexible tube called a catheter is put into a blood vessel in your groin, or wrist. The tube is then threaded into your coronary arteries, and the dye is injected into your bloodstream. Special X-rays are taken while the dye is flowing through the coronary arteries.

Our Cardiologists perform these outpatient cardiac caths at the Heart & Vascular Institute or Sarasota Memorial Hospital. We make all arrangements and obtain authorizations for these procedures. We will provide specific instructions and detail of the arrangements necessary for our patients.

CATHETER ABLATION

Catheter Ablation is a procedure used to selectively destroy areas of the heart that are causing a heart rhythm problem. During this procedure, thin, flexible wires are inserted into a blood vessel in the thigh, groin, neck, or elbow and threaded up through the blood vessel and into the heart under X-ray guidance. The wires allow the doctor to record the electrical activity of your heart and determine what kind of heart rhythm problem you have. Through these wires, electrical energy (radio waves) can be sent to a specific area of your heart. This will destroy (ablate) the tiny part of your heart that is causing its rhythm problem.

Catheter ablation that uses radio waves is called radiofrequency catheter ablation. The radio waves cause a tiny area of heart muscle to be heated and selectively destroyed (ablated). New energy sources for catheter ablation such as liquid nitrogen (cryoablation) are being used.

Catheter ablation is often used for people with persistent or recurrent fast heart rates that do not respond to drug therapy, or are intolerant to the medication.

This procedure is generally done in a hospital where the person can be carefully monitored. The procedure is done after an electrophysiology (EP) study, which allows the cardiologist to pinpoint exactly what tiny area of heart muscle to destroy.

A local anesthetic is used at the site where the catheter is inserted. The person usually stays awake during the procedure but may be sedated.

Did you know?

The primary reason for conducting a cardiac catherization is to diagnose and manage persons known or suspected to have heart disease, a frequently fatal condition that leads to 1.5 million heart attacks annually in the United States.

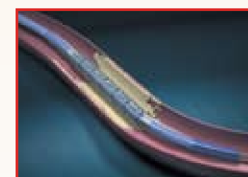
Stent

When a blockage within an artery is severe enough to warrant a surgical intervention, a stent may be used instead of - or along with an angioplasty or arthrectomy. Stents are used depending on the size of the artery and where the blockage is located. A stent is a wire mesh tube used to keep open an artery that's recently been cleared using angioplasty. The stent stays in the artery permanently to hold it open, to improve blood flow to the heart muscle, and to relieve symptoms (usually chest pain).

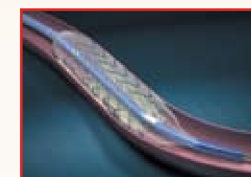
It is possible to redevelop plaque within a stented artery (called restenosis), so precautions are taken to reduce the risk of this happening, such as medication use. Patients who've had a stent procedure must take one or more blood-thinning agents (anti-platelet). Examples are aspirin, Ticlid, or Plavix. Aspirin is used indefinitely. The other medications are used either short-term or long-term, depending on a patient's cardiac history. It is very important to consult with your cardiologist prior to stopping any of these medications.

Abbott Vascular, a division of Abbott Laboratories, is focused on advancing coronary and endovascular technology that physicians utilize in their treatment for patients suffering from vascular disease...hence, *improving patient's lives.* Their commitment to customer service is noted with offering unique educational and financial programs that differentiate them from other companies.

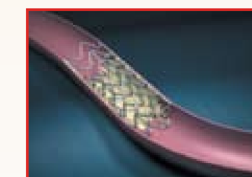
Many of the procedures used with Abbott Vascular products are short, minimally invasive procedures from which you may recover quickly such as in angioplasty and stent implantation. Stent implantation includes three major steps:



1. The stent is introduced into the blood vessel on a balloon catheter.



2. The doctor maneuvers the balloon catheter to the blocked area of the artery and inflates the balloon. The inflation causes the stent to expand.



3. The balloon is deflated and withdrawn. The stent stays in place permanently, holding the vessel open and improving the flow of blood.

ANGIOPLASTY (CORONARY)

Percutaneous transluminal coronary angioplasty (PTCA), or angioplasty, is an invasive procedure performed to reduce or eliminate blockages in coronary arteries. The goal of PTCA is to restore blood flow to blood-deprived heart tissue, reduce the need for medication, and eliminate or reduce the number of episodes of angina (chest pain). Opening a blockage, or a plaque, in a coronary artery typically involves the use of an angioplasty balloon. When the blockage is calcified or so dense that a balloon cannot be placed, other devices are used. Plaque can be cut out, ablated with a laser, or bored out using a surgical drill bit. Often, a stent is implanted after angioplasty to keep the artery open and prevent restenosis (regrowth of plaque).

The arteries are accessed through a needle puncture made in the groin (femoral artery) or arm (brachial artery). Usually the femoral artery is used. More than one blockage can be treated during a single session, depending on the location of the blockages and the patient's condition. The procedure can take 30 minutes to several hours, depending on the number of blockages being treated.

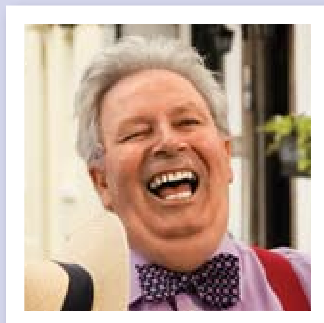
INDICATIONS: Angioplasty is recommended for patients with one or more of the following symptoms:

- Blockage (stenosis) of one or more coronary arteries
- Angina not well controlled with medication
- Angina that disrupts daily activities, occurs at rest (i.e., without exercise or exertion), or recurs after heart attack

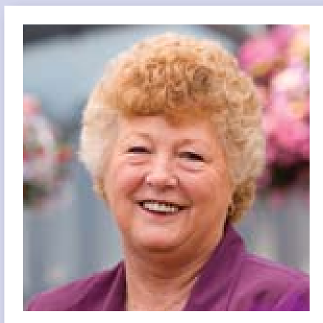
Medtronic

STAYING FOCUSED ON WHAT MATTERS...
...YOUR PATIENTS' CARDIAC HEALTH

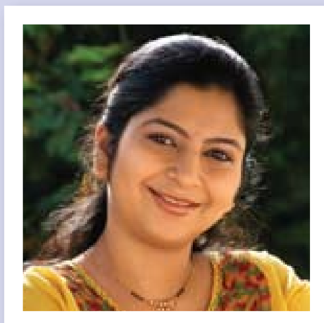
At Medtronic, we're changing the face of chronic disease. By working closely with physicians around the world, we create therapies to help patients do things they never thought possible.



Like the business owner in England with Parkinson's disease who could finally feed himself again.



Or the preschool teacher in America with coronary artery disease who was able to ride her motorcycle again.



Or the dietitian in India who was able to control her diabetes well enough to have a baby.

Our medical technologies help make it possible for millions of people to resume everyday activities, return to work, and live better, longer. We focus our efforts around a condition or therapy type offering Cardiac Rhythm Disease Management, Spinal and Biologics, CardioVascular, Neuromodulation, Diabetes, and Surgical Technologies.

The following information is brought to you by an educational grant given by Medtronic as part of their committment to the advancement and education in cardiac health.

Heart Failure Therapy

LIVING WITH CONGESTIVE HEART FAILURE

About two-thirds of all patients die within five years of diagnosis. People with heart failure are also at risk for sudden death. However, most cases of mild and moderate congestive heart failure are treatable and some patients live for many years. The outlook for an individual patient depends on the patient's age, severity of heart failure, overall health, and a number of other factors including the desire and ability to make lifestyle changes and take prescribed medications. To improve the chances of surviving with heart failure and to enhance quality of life, patients must make lifestyle changes and take care of themselves.

As heart failure progresses, the effects can become quite severe, and patients can lose the ability to perform even modest physical activity. Eventually, the heart's reduced pumping capacity may interfere with routine functions, and patients may become unable to care for themselves. The loss in functional ability can occur quickly if the heart is further weakened by heart attacks and other conditions that affect heart failure, such as diabetes or coronary heart disease. Heart failure patients also have an increased risk of cardiac arrest caused by an irregular heartbeat.

The best defense against heart failure is the prevention of heart disease. Almost all of the major coronary risk factors can either be controlled or eliminated: smoking, high cholesterol, high blood pressure, diabetes, and obesity.

WHAT IS A CARDIAC RESYNCHRONIZATION THERAPY DEVICE?

Medtronic cardiac resynchronization therapy (CRT) heart devices help the lower chambers of the heart to beat in a more coordinated fashion, so that blood pumps more efficiently to the body. Some CRT devices can also treat dangerously fast heart rhythms by delivering a life-saving shock to restore the heart to a more normal rate.

A CRT device sends small, undetectable electrical impulses to both lower chambers of the heart to help them beat together in a more synchronized pattern. This improves the heart's ability to pump blood and oxygen to the body.

The heart device itself is actually a tiny computer, plus a battery, contained in a small titanium metal case that is about the size of a pocket watch. It weighs about 3 ounces.

Cardiac resynchronization therapy heart devices send tiny electrical pulses to the lower chambers of your heart, helping it pump blood more efficiently.

BENEFITS:

Cardiac resynchronization therapy, in combination with a complete program of therapy, has proven to improve the quality of life for many patients by reducing symptoms of heart failure, increasing exercise capacity and allowing individuals to resume many daily activities. It is not a replacement for drug therapy, and it is recommended that cardiac resynchronization therapy patients also continue taking medication as determined by their physician.

Defibrillators (Implantable)

Medtronic's implantable cardioverter defibrillators (ICDs) continuously monitor your heart to treat tachycardia (fast heart beats) and prevent sudden cardiac death. If a dangerously fast heart rate is detected, a small, painless electrical signal is sent to correct it. If the faster heart rate continues, the ICD is designed to deliver a life-saving shock and restore the heart to a more normal rate.

Implantable cardioverter defibrillators are the front-line defense against sudden cardiac death. Implanting this device doesn't require open-heart surgery. You are sedated throughout the procedure and a local anesthetic is used.

WILL I HAVE TO CHANGE MY LIFESTYLE?

An implantable heart device allows many individuals to return to the activities they enjoy. Your doctor will provide more information on activities you may need to avoid, but people typically resume their normal daily activities after full recovery from surgery.

ABOUT PACEMAKERS

A pacemaker sends electrical impulses to restore the heart's rhythm. Today's streamlined pacemakers, like the market-leading options from Medtronic, weigh about 1 ounce. But this small device has helped millions of people live more active lives.

Bradycardia is a slow or irregular heart rhythm, usually fewer than 60 beats per minute. At this rate, the heart is not able to pump enough oxygen-rich blood to your body during normal activity or exercise. As a result, you may feel dizzy or have chronic lack of energy, shortness of breath, or even fainting spells.

GETTING A PACEMAKER

If your doctor has advised you that a pacemaker is the best course of treatment for your slow heartbeat (bradycardia), you may have a variety of questions and concerns. Here are some common topics of interest to individuals considering an implantable heart device:

What should I expect during pacemaker therapy surgery? The procedure to implant a pacemaker is usually quick, and typically done under local anesthesia. It does not require open-heart surgery, and most people go home within 24 hours.

Your doctor will provide more detailed information, but most individuals can expect to gradually return to their everyday activities shortly after the procedure.

Will the device affect my appearance? Sometimes individuals wonder if there will be a noticeable bulge where the heart device was implanted. In general, you may notice a slight bump under your skin where your pacemaker is located.

THE FOLLOW UP CLINIC

What kind of follow-up care can I expect after my device is implanted? A schedule of post-implant checkups, as prescribed by your physician, soon becomes a regular part of your life after receiving a pacemaker or defibrillator (also called implantable cardioverter-defibrillator, or ICD). Because your pacemaker or ICD contains a computer chip, your physician or clinician is able to use a special computer called a programmer to check (interrogate) your device. Routine checkups and monitoring help ensure that your device is meeting your health requirements. During these routine checkups, the physician or clinician is able to:

1. Review any heart rhythm events that may have occurred since your last checkup.
2. Check that your device functions are set to levels appropriate for your needs and make any "fine tuning" adjustments if necessary.
3. Check the status of the battery that powers your device.
4. Assess your medical condition.
5. Answer any questions you may have.

Your doctor determines the frequency of your follow-up visits.

Tools and equipment that use electricity and magnets have electromagnetic fields around them. The good news is that Medtronic pacemakers and implantable defibrillators (ICDs) have built in features that protect them from many types of electrical interference. However, some home power tools and machine shop equipment have the potential to interfere with the function of your device.

Medtronic

This information as well as additional topics can be found at www.medtronic.com

ELECTROPHYSIOLOGY (EP) LABS

Cardiac Electrophysiology is the study of the electrical system of the heart. The world of cardiac electrophysiology continues to change with advanced technology.

HAVING AN EP STUDY

What's Involved?

An EP study is considered a minimally invasive diagnostic test that produces data that makes it possible to:

- Diagnose the source of arrhythmias
- Evaluate the effectiveness of specific medications in controlling the arrhythmia
- Predict the risk of sudden cardiac death
- Assess the need for an implantable device or a catheter ablation

The rhythmic pumping action of the heart, which is essentially a muscle, is the result of electrical impulses traveling throughout the walls of the four heart chambers. These impulses originate in the sinoatrial (SA) node, which are specialized cells situated in the top right chamber of the heart: the right atrium. Normally, the SA node, acting like a spark plug, spontaneously generates the impulses, which travel through specific pathways throughout the atria to the atrioventricular (AV) node. The AV node is a relay station, sending the impulses to more specialized muscle fibers throughout the bottom chambers of the heart: the ventricles. If these pathways become damaged or blocked or if abnormal pathways exist, the heart's rhythm may be altered (perhaps too slow, too fast, or irregular), which can seriously affect the heart's pumping ability.

The study is performed after being given a local anesthesia and conscious sedation with medicine through an IV to be as comfortable as possible. The procedure involves inserting one or more catheters—narrow, flexible tubes attached to monitoring electrodes—into a blood vessel. This is done through a site in the groin or neck, and passing the catheter wire up into the heart by navigating the catheter using fluoroscopy.

Once the catheter reaches the heart, electrodes at its tip gather data with a variety of electrical measurements being tabulated. This data helps to pinpoint the location of the faulty electrical site in your heart. During this electrical mapping, the electrophysiologist may instigate, through pacing (the use of tiny electrical impulses), some of the arrhythmias that are the underlying problem. These induced events are safely completed by the well trained physician and team experts.

Once the damaged site or sites are confirmed, the electrophysiologist may administer different medications or electrical impulses to determine their ability to halt the arrhythmia and restore normal heart rhythm. Based on this data, as well as other information gathered before the study, the electrophysiologist may choose to place an implantable cardioverter defibrilator (ICD), a pacemaker, or he may perform a radiofrequency ablation.

Throughout the procedure, the patient is sedated but awake and remaining still. Patients rarely report pain, more often describing what they feel as discomfort. Some patients watch the procedure on monitors and occasionally ask questions. Other patients sleep. The procedure usually takes about 2 hours. The patient remains still for 4 to 6 hours afterward to ensure that the entry point incision begins to heal properly. Once mobile again, patients may feel stiff and achy from lying still for so long.

Cardioversion

Cardioversion refers to the process of restoring the heart's normal rhythm by applying a controlled electric shock to the exterior of the chest. When the heart beats too fast, blood no longer circulates effectively in the body. Cardioversion is used to stop this abnormal beating so that the heart can begin normal rhythm and pump more efficiently.

Elective cardioversion is usually scheduled ahead of time. An intravenous (IV) catheter will be placed in the arm and oxygen will be given through a face mask. A short-acting anesthetic will be administered through the vein. During the two or three minutes of anesthesia, the doctor will apply two paddles to the exterior of the chest and administer the electric shock. It may be necessary to give the shock two or three times to obtain normal rhythm.

The medical team at Heart Specialists will monitor the heart rhythm for a few hours, after which you will be allowed to go home. It is advisable to arrange for transportation home, because drowsiness may last several hours. Our physicians may prescribe an anti-arrhythmic medication to prevent the abnormal rhythm from returning.

Pacemaker

A pacemaker is a small device that sends electrical impulses to the heart muscle to maintain a suitable heart rate. Your doctor programs the pacemaker to help to control your abnormal heart rate or rhythm.

Approximately 500,000 Americans have an implantable permanent pacemaker device. A pacemaker implantation is performed under local anesthesia in a hospital by a surgeon assisted by a cardiologist. An insulated wire called a lead is inserted into an incision above the collarbone and guided through a large vein into the chambers of the heart. Depending on the configuration of the pacemaker and the clinical needs of the patient, as many as three leads may be used in a pacing system. Current pacemakers have a double, or bipolar, electrode attached to the end of each lead. The electrodes deliver an electrical charge to the heart to regulate the heartbeat. They are positioned on the areas of the heart that require stimulation. The leads are then attached to the pacemaker device, which is implanted under the skin of the patient's chest.

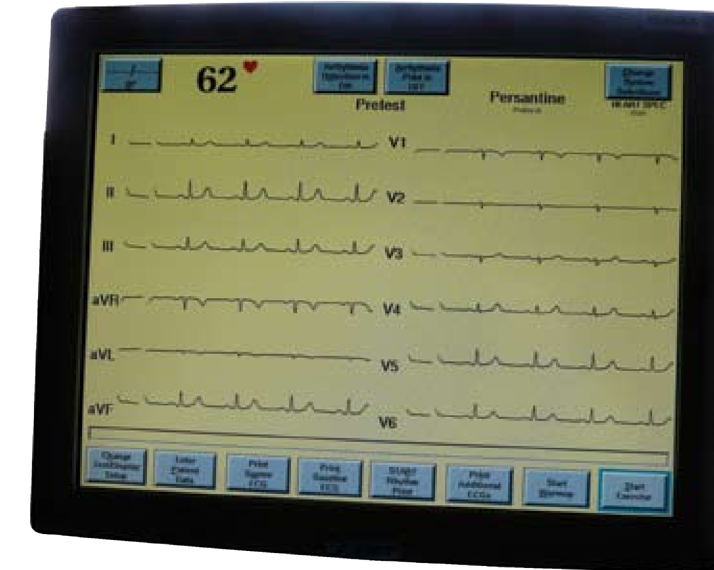
Patients undergoing surgical pacemaker implantation usually stay in the hospital overnight. Once the procedure is complete, the patient's vital signs are monitored and a chest x ray is taken to ensure that the pacemaker and leads are properly positioned.

Modern pacemakers have sophisticated programming capabilities and are extremely compact. The smallest weigh less than 13 grams (under half an ounce) and are the size of two stacked silver dollars. The actual pacing device contains a pulse generator, circuitry programmed to monitor heart rate and deliver stimulation, and a lithium-iodide battery. Battery life typically ranges from 7-15 years, depending on the number of leads the pacemaker is configured with and how much energy the pacemaker uses. When a new battery is required, the unit can be exchanged in a simple outpatient procedure.

Our Cardiologist programs the minimum heart rate. When your heart rate drops below the set rate, your pacemaker fires to generate an impulse that passes through the lead wire to the heart muscle. This causes the heart muscle to contract, creating a heart beat.

Pacemakers are also used to treat:

Bradyarrhythmias (Too slow)
Heart failure / Heart Block
Hypertrophic cardiomyopathy



WHAT ARE HEART RHYTHM DISORDERS?

Heart rhythm disorders (also known as arrhythmias) encompass any number of conditions that can cause a heart to beat too quickly (tachycardia), too slowly (bradycardia), or irregularly.

The heart's electrical system is regulated by the sinus node, which acts like a natural pacemaker. It slows the heart rate down during such times as sleep, and increases the heart rate during periods of exercise, etc. With an abnormal heart rhythm, the sinus node is not doing its job regulating the heart's electrical system. The exact cause of an abnormal heart rhythm can be difficult to diagnose. That's when EP Studies are done to determine the cause of the abnormal heart rhythm and to initiate treatment.

When a patient is suffering from a heart rhythm disorder, they may experience symptoms such as fatigue, lightheadedness or dizziness, chest pain, a fluttering sensation in the chest, or, in more severe cases, syncope/fainting or sudden cardiac death. There are times, however, when a patient is completely asymptomatic.

These disorders don't discriminate, affecting men and women as well as infants and children. Some types of arrhythmias can be life-threatening if not treated properly. Rhythm disorders can predispose an individual to a heart attack, stroke, or sudden cardiac death. Therefore, an arrhythmia should never be ignored.

Fortunately, most arrhythmias are treatable and if the cardiologist determines that lifestyle changes or medication are not the best treatment options, then surgical procedures or ablation may be considered.

Tachycardia/Bradycardia

Tachycardia refers to a fast heartbeat (more than 100 beats per minute). This can interfer with the pumping of oxygenated blood throughout the body.

Bradycardia is a slow heartbeat (less than 60 beats per minute). There may be a problem in your SA node, AV node or His bundle that doesn't allow the heart beat to travel through your heart in a normal fashion

Bradycardia and tachycardia can produce the following symptoms:

- Palpitations
- Dizziness
- Lightheadedness
- Fainting or near fainting
- Fatigue

Slow heartbeats (bradycardia) may be treated when symptoms occur. A pacemaker is sometimes implanted to prevent the heart from beating too slowly. Some fast heartbeats may be treated with medications or with a procedure called an ablation. During an ablation, the abnormal heart tissue is located and destroyed using special catheters inserted into the heart through the veins. No surgery is required and ablations are often done as a same-day procedure.

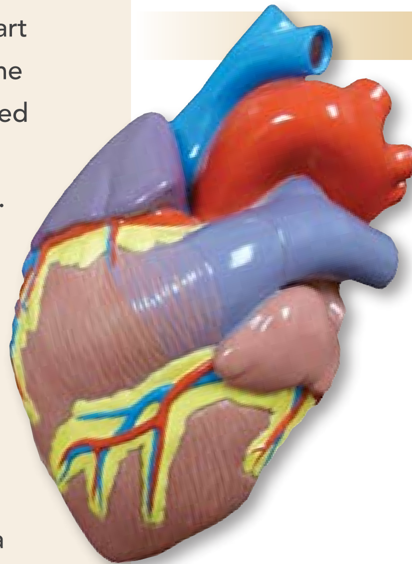
SUPRAVENTRICULAR TACHYCARDIA

When this occurs, there are abnormal fast rhythms from the top chambers of the heart. There are many causes including heart disease, aging, metabolic imbalances and other medical problems. Some people are born with the problem even though it may not be evident until later in life.

VENTRICULAR TACHYCARDIA/FIBRILLATION

A rapid heart rate in the ventricles, called **ventricular tachycardia**, can be life-threatening. However, the most serious cardiac rhythm disturbance is ventricular fibrillation, where the heart can't pump any blood. Collapse and sudden death can follow unless medical help is provided immediately. If treated in time, ventricular tachycardia and ventricular fibrillation can be converted into a normal rhythm with a high voltage electrical shock.

For patients felt to be at high risk for sudden cardiac arrest, we can implant a special device called an **implantable cardioverter-defibrillator (ICD)**. This device monitors a patient's heart beat and delivers an electric shock when it discovers a life-threatening heart rhythm such as ventricular fibrillation. The ICD has been proven to help prevent sudden cardiac death in patients with weak hearts, congestive heart failure and in patients who have survived a previous cardiac arrest.



HEART BLOCK

Heart block is a condition in which the electrical signal cannot travel normally down the special pathways to the ventricles. For example, the signal from the atria to the ventricles may be:

- delayed, but each one conducted
- delayed with only some getting through
- completely interrupted
- if there is no conduction, the beat generally originates from the ventricles and is very slow

With proper attention and treatment, persons who have suffered from arrhythmia's can still lead a long and healthy life.

Did you know?

Atrial fibrillation is the most common heart rhythm disturbance that we see, affecting more than 2 million people in the U.S. In fact, about 160,000 new cases are diagnosed each year!

ATRIAL FIBRILLATION

Atrial Fibrillation, also called AFib, is a common heart rhythm disorder caused by a problem in the conduction of electrical impulses in the upper chambers, or atria, of the heart. AFib causes the heart to beat irregularly and sometimes rapidly. Normally, the heart's rhythm is controlled by a group of cells called the sinoatrial node (SA node). These cells are found in the top chambers of the heart (the atria) and they function as our own natural pacemaker. With atrial fibrillation, the SA node is no longer in control and the top chambers of the heart beat erratically and rapidly. Fortunately our hearts have another group of cells, called the atrioventricular node (or the AV node) which keeps all of these erratic impulses from making it to the main lower chambers of the heart (the ventricles).

Atrial fibrillation is seen in all age groups. The likelihood of developing the condition, however, increases as we get older. Atrial fibrillation is more common in people who already have heart disease (such as an old heart attack, hypertension or leaky valves) but it can also be seen in people without any signs of heart disease at all.

Signs and Symptoms

The most common symptoms of atrial fibrillation are:

- Palpitations
- Shortness of breath
- Fatigue
- Chest pain
- Dizziness or fainting

COMMON CAUSES

Damage, abnormalities, and diseases to the heart's valves or pumping system are the most common causes of atrial fibrillation. Such causes can be a factor of:

- Heart attacks
- High blood pressure
- Overactive thyroid
- Congenital heart defects
- Abnormal heart valves
- Exposure to stimulants, caffeine, alcohol, medications
- Sick sinus syndrome - the heart's natural pacemaker stops functioning properly
- Lung diseases
- Viral infections
- Sleep apnea

Increased risk of strokes

Even if the symptoms are minimal, atrial fibrillation may still cause serious problems, including a stroke. The top chambers no longer beat effectively, which reduces the flow of blood through these chambers. This, in turn, can allow the blood to form clots inside the heart and these clots may travel out of the heart and lodge in a small artery in the brain, causing a stroke.

Atrial fibrillation may cause the heart to weaken over time, which may cause congestive heart failure or shortness of breath due to a weak heart. It is important to know that these complications of atrial fibrillation can be prevented!

ATRIAL FIBRILLATION TREATMENT

The major focus is to prevent a stroke in patients at risk for this dreaded complication with the use of a blood thinner called Coumadin. **If you have atrial fibrillation and you have one of the following risk factors for a stroke, then you should discuss using Coumadin with your doctor:**

- Congestive heart failure
- Hypertension (high blood pressure)
- Age 75 or older
- Diabetes
- Previous stroke or TIA ("mini-stroke")

Secondly, the cardiologist will focus on keeping the heart from beating too quickly. A rapid heartbeat, if left untreated, can lead to a weakening of the heart muscle.

Several approaches are used including:

- Medications to slow down the rapid heart rate
- Electrical Cardioversion to help restore a normal heart rhythm using an electric shock delivered under anesthesia
- Radiofrequency Ablation
- Open heart surgery
- Pacemakers implanted to help produce a more normal heart rhythm

Because atrial fibrillation is so common, new treatments are frequently introduced. New medications are being developed which may be more effective with fewer side effects. Special pacemakers help to record recurrences of atrial fibrillation and can even help to prevent recurrences of atrial fibrillation.

About St. Jude Medical

At St. Jude, our mission is to develop medical technology and services that put more control into the hands of those who treat cardiac, neurological and chronic pain patients, worldwide. We do this because we are dedicated to advancing the practice of medicine by reducing risk wherever possible and contributing to successful outcomes for every patient.

The following information is brought to you through an educational grant provided by St. Jude Medical.

ANN HULETT:
SURVIVOR AND ADVOCATE FOR WOMEN'S HEALTH

While in her early 40s, Ann Hulett went to the hospital twice complaining of tightness of the chest, shortness of breath and jaw pain. What no one knew at the time was that Ann was actually experiencing a heart attack. Both times she was sent home because her cardiac enzymes were normal. The third time she suffered a heart attack, Ann didn't even bother going to the hospital.

When Ann turned 50, her doctor preformed an EKG during a routine physical. She was a long-time smoker with a stressful job, had high blood pressure and had high cholesterol. Not pleased with the results of her exam, Anne's physician scheduled a stress test to determine the health of her heart. Three minutes into the test they were forced to stop because Ann was in Atrial Fibrillation, a cardiac arrhythmia in which the heart beats more 350 beats per minute.

In a flurry, Ann was rushed to the hospital where she underwent immediate surgery to bypass the six blockages in her heart. In the years that followed, Ann was treated using pharmacological therapy. However, her heart disease continued to worsen.

"WHEN YOU HAVE A LIFE THREATENING DISEASE YOU BECOME MORE FOCUSED..."
- ANN HULETT

Better informed about her condition and concerned about the threat of sudden cardiac arrest (SCA), Ann spoke with her cardiologist about other therapy options. In January 2007, she had surgery to receive an Atlas® HF Implantable Cardiac Defibrillator (ICD) from St. Jude Medical, which would help restore the normal rhythm of her heart and protect her from SCA.

Following her ICD implant, Ann's quality of life has improved dramatically. She goes for regular check ups every three months and spends her spare time gardening, riding her bike and exercising. Ann is also a WomenHeart Champion spokesperson for WomenHeart: The National Coalition for Women with Heart Disease, and speaks to women about the myths and truths of heart disease.

TRUTH: 1 IN 4 WOMEN WILL DIE OF HEART DISEASE
MYTH: HEART DISEASE IS A MAN'S DISEASE

For other stories like Ann's or more information on women's inherent risk of heart disease, visit www.womenheart.org. WomenHeart is the nation's only education, support and advocacy organization for women living with heart disease and those at risk.

Did you know?

About two thirds of unexpected cardiac arrests occur without prior indication of heart disease.

SUDDEN CARDIAC ARREST

Sudden Cardiac Arrest (SCA), also called Sudden Cardiac Death (SCD), occurs when the lower chambers of the heart, called ventricles, stop beating normally and start quivering very quickly and chaotic. This is called ventricular fibrillation or VF. When the ventricles fibrillate, they do not contract normally, making it difficult to pump blood or oxygen to the body. Often, VF can become so erratic that it can result in SCA. If SCA is not corrected immediately via a shock from an external defibrillator or an implantable cardioverter defibrillator (ICD), there is little chance of survival.

According to the European Society of Cardiology, SCA is the single most important cause of death among adults of the industrialized world. The American Heart Association states that everyday in the U.S., almost 900 people experience Sudden Cardiac Arrest – that's more than 325,000 people a year. If an individual is not treated within four to six minutes from the onset of SCA, the results can be fatal.

SCA usually occurs without any warning. However, symptoms include sudden collapse, loss of consciousness, abnormal breathing, an inability to find a pulse and loss of blood pressure.

RESPONSES TO SUDDEN CARDIAC ARREST

Unlike many other medical conditions, survival from SCA, depends on immediate intervention by bystanders. These individuals are typically laypersons with no medical training who lack an understanding about their vital role in determining whether people who experience SCA live or die.

Immediate treatment for Sudden Cardiac Arrest involves cardiopulmonary resuscitation (CPR) to help keep blood pumping. A shock from either an automated external defibrillator (AED) or an implantable cardiac defibrillator (ICD) is also necessary to shock the heart back to normal rhythm. If a patient has an ICD, CPR is not required to terminate SCA. However, it should be noted that people who have an ICD do not always recover from SCA.

Visit www.insidecardiacarrest.com for more information.

WOMEN & HEART DISEASE FACT SHEET

According to the fact sheet taken from WomenHeart: The National Women Coalition for Women with Heart Disease, an estimated 41 million American women live with or are at risk of heart disease, but too many are unaware of the threat they face. The following illustrates the urgent need for greater awareness of heart disease in women and for immediate efforts to eliminate the disparities in women's heart care.

HEART DISEASE IS THE #1 KILLER OF AMERICAN WOMEN.

- Nearly one-third (27.2 percent) of all female deaths each year are from heart disease.
- Of the 500,000 annual deaths from cardiovascular disease, 267,000 women die from heart attacks—six times as many women as will die from breast cancer.
- The rate of sudden cardiac death in women in their 30s and 40s is increasing much faster than in men the same age—rising 30 percent in the last decade.
- The majority of Americans that die from congestive heart failure are women—more than 30,000 each year.

HEART DISEASE IS MORE DEADLY FOR MINORITIES AND OTHER WOMEN AT RISK.

- Women who are minorities, have diabetes, are overweight, smoke, have high blood pressure or high cholesterol are all at greater risk of heart disease.
- For African American women, the age-adjusted rate of heart disease is 72 percent higher than for white women. A majority of Hispanic women over 20 years old have border line high or high cholesterol levels.
- American Indian women are 1.4 times more likely to be obese.
- Women with diabetes are two-to-three times more likely to have heart attacks.
- Women who smoke have heart attacks nearly 20 years earlier than non-smoking women.

HEART DISEASE IS MORE LIKELY TO BE TREATED ACCURATELY IN MEN THAN WOMEN.

- A study published in the May 2008 issue of the *Heart Journal* showed that among heart patients, women were less likely than men to receive medications such as beta blockers, statins and ACE inhibitors—which are crucial to prevent further heart problems.
- Women are also less like to receive ICDs (an implanted device that helps to control irregular heartbeats) or even aspirin, following a heart health event.

NO MORE EXCUSES

Women delay getting medical care for heart attacks more so than men. This happens for several reasons:

- Most frequently, they don't know the heart attack warning signs and symptoms
- The mistakenly think crushing chest pain is the only heart attack symptom
- They falsely believe that only men and very old people have heart attacks
- They are pre-occupied with family responsibilities, can't get childcare or transportation, or don't want to impose their needs on others
- They are depressed, fatalistic about their health, or resigned to suffering

Don't become a heart attack statistic - learn all you can about heart attack warning signs and symptoms. If you are having symptoms, call 911, take an aspirin to prevent further blood clotting, and demand that the emergency room staff take your complaints seriously. Make sure the doctor gives you an EKG and/or blood enzyme test to see if you are having a heart attack.

For more information and additional facts, visit www.womenheart.org.