#### **Guide contents:**

- 2 What Is Structural Heart Disease?
- **2** What Happens During Structural Heart Disease?
- **3** Diagnosis
- **3** Treatment Options
- 4 Managing the Condition
- **5** Surgery and Insurance
- **6** Symptom Tracker Form
- 7 Your Team at Orlando Health





Heart Institute

#### What Is Structural Heart Disease?

#### Building an Understanding What You May Experience

Our hearts beat about 42 million times a year. That's pretty incredible. And all that work means we need to ensure we're keeping our tickers in tip-top shape.

Structural heart disease can stand in the way of heart health in a variety of ways. In many cases, the condition is congenital (which means we're bornwith it or it presents itself at birth).

However, structural heart disease can also develop over time due to wear and tear on the heart. It can occur as a result of aging, infection or damage. In some cases, if left untreated, structural heart disease may lead to heart failure, stroke, electrical issues with the heart or even death.

Because structural heart disease can manifest in different ways, there isn't a definitive set of symptoms. However, there are common symptoms people

Patients who have structural heart disease often describe their symptoms

- Simple, daily routines became physically difficult
- Exercise became dramatically harder from one day to the next
- Shortness of breath on exertion, leading to shortness of breath at rest, such as:
  - o Difficulty breathing when lying flat
- Waking up at night with shortness of breath

- Dizziness, fatigue or fainting
- Severe headaches, migraines or fever
- Chest tightening occurred
- Uncharacteristic and rapid weight gain
- Heart began palpitating in a noticeably different way, such as:
  - Rapid beats for no reason
  - o The sensation of quivering or fluttering
  - o Irregular beats, such as heart skipping

However, some people don't share any of these symptoms or were diagnosed without having symptoms at all.

# What Happens During Structural Heart Disease?

#### The Mechanics

When structural heart disease occurs, it compromises the valves, vessels or chambers of the heart. There are multiple ways in which it can occur. The following is background on the most common types of structural heart disease:

**Aortic valve disease** affects blood flow between the left ventricle and the aorta, and causes the valve to narrow (stenosis), close improperly (insufficiency) and/or allows blood to flow backward into the left ventricle (regurgitation).

**Mitral valve disease** develops when the mitral valve flaps between the left chambers of the heart work ineffectively, either by narrowing the valve (stenosis) or by not closing tightly enough, causing blood to leak backward into the left atrium (regurgitation).

**Tricuspid valve disease** occurs when the valve between the right two heart chambers is functioning incorrectly, either by a narrowing of the valve (stenosis), the valve not closing

properly causing blood to move backward (regurgitation), a valve never forming (atresia) or the valve sitting lower than normal (Ebstein anomaly).

**Pulmonic valve disease** is a condition that affects the pulmonary valve, either through narrowing (stenosis), allowing blood to flow backward, or as the result of an unformed valve (atresia). The result is improper flow of blood to your lungs.

Atrial septal defect (ASD) exists when the septal tissue never forms prior to birth, leaving a hole in the wall between the top two chambers of the heart.

Patent foramen ovale (PFO) is similar to ASD, in that there is a hole in the heart — however, even though the septal tissue forms, it doesn't close properly after birth.

Coarctation of the aorta (CoA) occurs when the aorta (the heart's major artery) is narrowed or pinched, affecting blood flow to the body.

# Diagnosis

### To diagnose structural heart disease,

patients may undergo a variety of tests. Each uses equipment to diagnose the heart's effectiveness in greater detail. These can include:

- **Heart catheterization:** inserting a long thin tube called a catheter into an artery or vein, which is then passed into the heart
- Magnetic resonance imaging (MRI): using digital equipment to create still or moving images of the heart
- Computed tomography (CT) scan: taking multiple X-rays to develop a 3-D image of the heart



- **Echocardiogram:** using ultrasound to create images of the heart
- **Pulse oximeter:** fitting a clip to the tip of the finger to measure oxygen saturation

After conducting these tests, your cardiologist will discuss any issues, detail your options and develop a treatment plan tailored to your needs.

# Treatment Options

You may have several treatment options depending on your individual circumstances. No matter which treatment you receive, each patient is cared for by a team of specialized physicians whose focus and expertise is centered on your heart's valvular system and total health. Procedures offered at Orlando Health include:

- Transcatheter aortic valve replacement (TAVR)
- Transcatheter mitral valve repair (TMVR)
- Percutaneous PFO/ASD closure
- Minimally invasive approaches to mitral valve/tricuspid valve surgery
- Open aortic, mitral, tricuspid and pulmonic valve replacement/repair
- Minimally invasive ligation of left atrial appendage
- Less invasive surgery for coronary artery disease

- Left internal mammary artery (LIMA) and coronary stents
- Off-pump coronary artery bypass surgery (CABG)
- High-risk and emergent CABG surgery
- Lead extractions of chronic Pacemaker and internal implanted cardiac defibrillator (ICD) leads
- Variations of hybrid EP procedures for the latest treatment of atrial fibrillation (Afib)
- Surgical ablation

- Hybrid ablation
- Minimally invasive ligation of left atrial appendage
- Hybrid ventricular tachycardia ablation
- Valve surgeries
- Other structural heart therapies

Your cardiologist will discuss all options with you to help you and your care team develop the right treatment plan for you.

# Managing the Condition

Because structural heart disease can develop, change or worsen over time, it's important to have regular checkups and keep open lines of communication with your physician. The following is a list of questions you may want to ask at your next appointment:

- What has changed since my last appointment?
  - Do you expect any changes to be permanent?
- Do you recommend medication or surgery moving forward?
  - o If medication, what kind? Will there be any side effects? Is there a generic brand of the medication?
  - o If surgery, what procedure? How soon? Are there other options? Why are you recommending this approach?
- Would any specific tests give more insight into my condition?
  - What will they be looking for?
- Are there changes I should make in my daily life?

### **My Questions**

Feel free to use this additional space to write down some questions of your own.

# Surgery and Insurance

If your cardiac surgeon has recommended you undergo surgery to correct your structural heart condition, it's important to be prepared before, during and after. Follow these simple steps to help you manage the process.

#### **Before Surgery**

- Set up an information session. Prepare to have a conversation with your cardiac surgeon to ask any additional questions you have about your heart or the procedure you've agreed on. This is your chance to get on the same page as your healthcare team.
- Complete all exams, tests and blood work. Over the course of having structural heart disease, you've probably noticed there is a lot of checking in. That's good! Before surgery, you'll have one more round of appointments to get the most recent gauge of where you are physically.

#### Surgery

- Pay attention to presurgery instructions. As with most surgeries, your surgeon will give you a list of dos and don'ts before surgery. Follow them exactly so your surgery is not compromised or postponed.
- **Preparing for surgery.** Plan on having a friend or family member drive you to and from the hospital before surgery and after you're discharged. Review the information you received about your specific surgery and expect to meet with your doctor prior to the surgery to go over any last questions you may have.

Follow your surgeon's

postponed.

## **After Surgery**

- Plan for recovery. Don't assume you'll be getting right back to your daily routine. Give your body time to heal — and enlist the help of loved ones if necessary.
- Schedule a follow-up. It is certain you'll need to have some after-surgery appointments to see how things are going and to check the status of your heart. Some people find it helpful to schedule these before surgery.

#### Insurance

It's important to check your insurance coverage before surgery. Call your physician's office or check with your insurer to make sure your provider is in-network and that your procedure is covered under your policy.



What medicine were you

# Symptom Tracker

Be an active member of your health and wellness team. Use the following form to track any symptoms that occur and report them to your doctor or health professional at your next appointment.

When did the

How long

What were you doing

what occurred:	at the time?	symptom begin?	did it last?	taking at the time?
Notes				

# Your Orlando Health Team



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