



Heart Failure



**NATIONWIDE
CHILDREN'S**

When your child needs a hospital, everything matters.SM

Heart Failure

The Heart Center at Nationwide Children's Hospital provides comprehensive care to infants, children and even adults with heart failure. The program is recognized by United Network for Organ Sharing (UNOS) as a nationally accredited center. The first heart transplant at Nationwide Children's was performed in April 2003. Since then, our program has grown to gain national and international recognition. The Heart Center received international recognition for performing a domino transplant involving the youngest living donor.

What is heart failure?

Heart failure, also called congestive heart failure, is a life-threatening condition in which the heart's ability to squeeze is weaker than normal. As a result, the heart works less efficiently and cannot pump enough oxygen and nutrients to meet the body's needs.

Reasons for heart failure may include:

- Complex congenital heart disease with no option of surgical repair
- Complex congenital heart disease where surgical repair has failed
- Cardiomyopathy or weakness of the heart muscle

What are common symptoms?

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| • Difficulty breathing | • Vomiting |
| • Sweating with bottle feedings | • Diarrhea |
| • Decreased appetite and/or bottle feedings | • Irritability |
| • Poor weight gain | • Cough |
| • Fast breathing | • Dizziness |
| • Decreased activity | • Fluid retention |
| • Swelling of lower legs | • Pronounced neck veins |
| • Swelling of the abdomen | • Irregular or rapid pulse |
| • Nausea | • Inability to sleep laying flat |



Regional Services Available

The Heart Center offers patient evaluation for infants, children and adolescents, as well as the following services:

- ECG, echocardiography
- Evaluation of murmurs
- Evaluation of chest pain and syncope with possible cardiovascular causes
- Cardiology clearance for school sports participation
- Follow-up visits for cardiac patients

More Information

Visit us at NationwideChildrens.org/HeartCenter for more information, including:

- Custom driving directions for your patients
- Downloadable fact sheets
- Physician information



Testing

A physical examination may reveal either an irregular or a rapid heartbeat. In infants, there may be failure to thrive, tachypnea, retractions, enlarged liver, peri-orbital edema and cool extremities. In children and adolescents, one may find peripheral edema, resting increased heart rate, and signs of excessive fluid within the lungs (pulmonary edema). Testing could include the following:

- Blood tests
- ECG
- Echocardiogram
- Heart catheterization
- Chest X-ray/CT scan
- Cardiac MRI

Non-Surgical and Surgical Options

Most patients can be treated with medications, including diuretic therapy, afterload reduction using ACE inhibitors and other agents like Coreg® (carvedilol). These patients need to be followed regularly and monitored for changes in their symptoms.

Non-Surgical

Patients are treated with diuretic therapy to maintain a balance of water in the body and reduce the signs of heart failure like peripheral edema. ACE inhibitors, like enalapril, are used as an afterload reduction and also to help the heart remodel to better function as a pump.

Surgical

With progression of symptoms, patients may require heart transplantation. Before heart transplant is considered, children and adults with heart failure may be managed with many medications. These medications work together to optimize heart function. It is important to take these medications as ordered and to watch for signs and symptoms of heart failure. For patients with rapidly progressive deterioration patients may benefit from mechanical support. Depending on the age of the patients, several different devices are available and have to be matched to the patient's age and size.

Referrals and Consultations

Online: [NationwideChildrens.org/HeartCenter](https://www.NationwideChildrens.org/HeartCenter)

Phone: (614) 722-6200 or (877) 722-6220 | Fax: (614) 722-4000

Physician Direct Connect Line for 24-hour urgent physician consultations: (614) 355-0221 or (877) 355-0221.