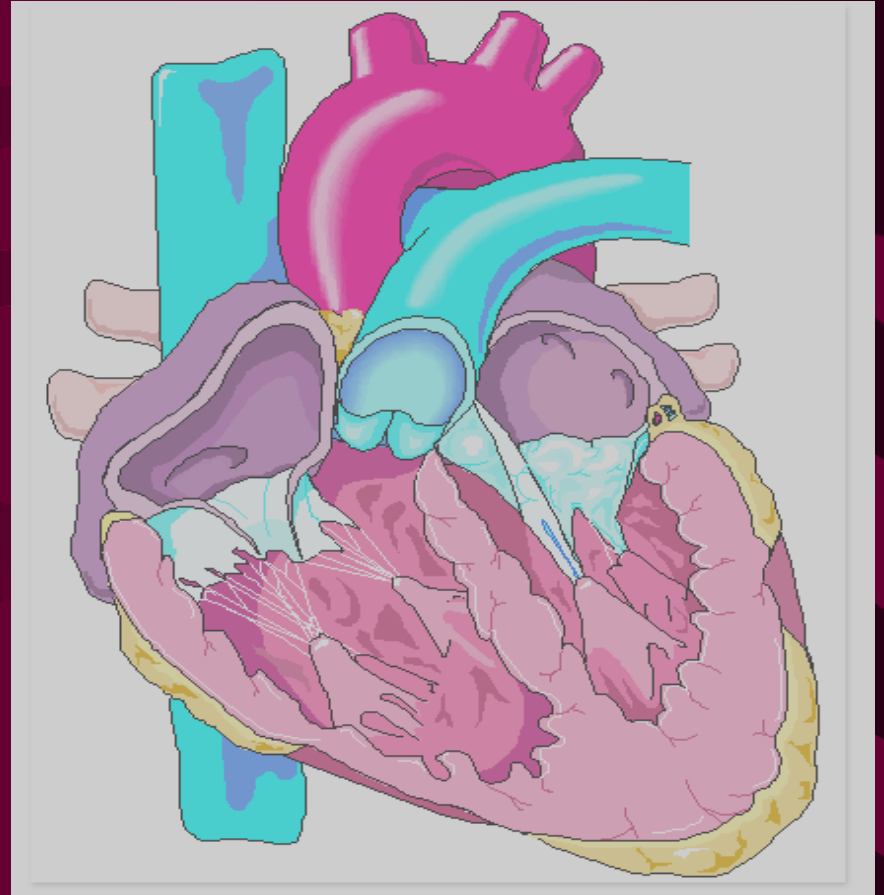


# Congestive Heart Failure

Randy C. Randall, MD, MA, FACC

# Basic Definition

- Heart failure is a medical term that describes an inability of the heart to keep up its work load of pumping blood to the lungs and to the rest of the body.



# Types of CHF

- Heart muscle weakness
- Heart muscle stiffness
- Valve leakage or stenosis

# Statistic

- It is estimated that as many as two million Americans suffer from congestive heart failure and that up to 29,000 die annually from this chronic disorder.

# Symptoms

- Swelling of the ankles, legs, and hands
- Orthopnea, or the shortness of breath when lying flat
- Shortness of breath during exertion
- Fatigue or weakness

# Symptoms

- Cyanosis, or a bluish color that is seen in the lips and fingernails from a lack of oxygen
- Rapid or irregular heart beat
- Changes of behavior such as restlessness, confusion, and decreased attention span

# Symptoms

- Unexplained or unintentional weight gain (from extra fluid)
- Chronic cough
- Increased urination
- Distended neck veins
- Loss of appetite or indigestion

# Congestive heart failure can be caused by multiple underlying diseases such as:

- Congenital heart disease
- Coronary Artery Disease or previous heart attack
  - Rheumatic fever
- Cardiomyopathy (due to viral infection or other causes)
  - Left or right-sided failure
    - Hypertension
  - Prolonged alcohol or drug addiction
    - Valve disorders

# The body tries to overcome heart failure automatically but usually only worsens the condition

- If the blood meant for less essential organs instead flows to the brain and other vital organs the heart has to work harder to get it to all parts of the body.
- When the activity of the heart is increased, a more forceful contraction causes an increased heart rate.

# Treatment

- When a treatable underlying cause of congestive heart failure exists, correcting the cause may resolve, or at least greatly improve, the degree of heart failure

# Drug Therapy

- Diuretics (fluids pills)
- ACE inhibitors (BP control)
- ARB's (BP control)
- Beta-blockers (control heart rate and BP)
- Digoxin

# Other Therapies

- If EF is  $<35\%$ , then a 2 chamber pacemaker may help (biventricular pacemaker or ICD).
- If there is underlying CAD, then bypass surgery or stents may help.
- If there is a valve problem (either leakage or stenosis), then valve surgery may help.



ETMC  
Cardiovascular Institute