

Looking at Heart Failure

**Satellite Conference and Live Webcast
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**Produced by the Alabama Department of Public Health
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Faculty

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Objectives

- **Identify the types of heart failure**
- **Name at least two symptoms that need to be followed up by the healthcare provider**
- **Name three things the patient with heart failure can do to decrease readmission into hospitals**

Objectives

- **Name two things you can do as a healthcare professional to better care for those with heart failure**

Symptoms of Heart Failure

- **Shortness of breath**
- **Coughing or wheezing**
- **Edema**
- **Loss of appetite**
- **Confusion, impaired thinking**
- **Tiredness**
- **Increased heart rate**

Symptoms of Heart Failure

- **Frequent urination**
- **Trouble sleeping**
- **Abdominal changes**

Compensatory Mechanisms in Heart Failure

- Hemodynamic changes
- Neurohormonal changes
- Cellular changes

Neurohormonal Changes

Neurohormonal Changes	Favorable Effect	Unfavorable Effect
↑ Sympathetic activity	↑ HR, ↑ contractility, Vasoconstriction = ↑ V return, ↑ filling	Arteriolar constriction After load ↑ leads to workload ↑ ↑ O ₂ Consumption
↑ Renin-Angiotensin	Salt & Water retention = ↑ VR	Vasoconstriction = ↑ After Load
↑ Aldosterone Vasopressin	Same Effect	Same Effect
↑ Interleukins & TNF-α	May have roles in myocyte hypertrophy	Apoptosis
↑ Endothelin	Vasoconstriction = ↑ VR	↑ After Load

Ventricular Hypertrophy

- Long-term compensatory mechanism
- Increases in size due to increase in work load

Renin-angiotensin Mechanism

- Decreased renal blood flow secondary to low cardiac output triggers renin secretion by the kidneys
 - Aldosterone is released leads to increase in Na⁺ retention leads to water retention

Renin-angiotensin Mechanism

- Preload increases
- Worsening failure

Cellular Changes

- Changes in Ca²⁺ handling
- Changes in adrenergic receptors
- Changes in contractile proteins
- Program cell death
 - Apoptosis
- Increase amount of fibrous tissue

What Is the Key to Decreasing Readmissions?

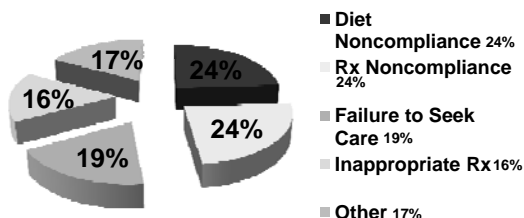
- Medicare has started docking payments for hospitals with high rates on returning patients
- In 2010, 1 in 6 nonsurgical patients were back in the hospital within 30 days of leaving

Hospital Readmissions

- Top three diagnosis seen in patients who have readmissions
 - Heart attacks
 - Pneumonia
 - Congestive Heart Failure

Causes of Hospital Readmission for CHF

Noncompliance is significant cause for readmission



Types of Heart Failure

- Left sided heart failure
- Right sided heart failure
- Congestive heart failure

Types of Left Sided Failure

- Systolic failure
- Diastolic failure

Left Sided Heart Failure

- Paroxysmal nocturnal dyspnoea
- Elevated pulmonary capillary wedge pressure
- Pulmonary congestion
 - Cough
 - Crackles
 - Wheezes
 - Blood-tinged sputum

Left Sided Heart Failure

- Tachypnea
- Restlessness
- Confusion
- Orthopnea
- Tachycardia
- Exertional dyspnea
- Fatigue
- Cyanosis

Right Sided Heart Failure

- Fatigue
- Increased peripheral venous pressure
- Ascites
- Enlarged liver and spleen
- May be secondary to chronic pulmonary problems

Right Sided Heart Failure

- Distended jugular veins
- Anorexia and complaints of GI distress
- Weight gain
- Dependent edema

Possible Causes of Heart Failure

- Coronary artery disease
- High blood pressure
- Past heart attacks
- Faulty heart valves
- Heart defects present at birth
- Lung disease

Possible Causes of Heart Failure

- Diabetes
- Sleep apnea

Things You Need to Report

- Increase in 3-5 pounds of weight within 1 day – 1 week or as defined by healthcare provider
- Shortness of breath while sitting
 - Could patient blow out a candle?
- Wheezing of any kind
- Pitting edema
 - Observe lower extremities

Things You Need to Report

- Using more pillows than normal to breathe while laying down
- Water – fluid restrictions
 - Observe urinary output
- Eating healthy
 - Issues include nausea, shortness of breath, severe fatigue

Things You Need to Report

- Severe fatigue
- Frequent rest periods are needed for all activities

Teaching Heart Strong

- Smoking
 - Increases the heart rate
 - Decreases the amount the heart can pump
 - Decreases the oxygen supply to the heart

Teaching Heart Strong

- Medications
 - Reminders, prompts, and alarms
 - Taken as directed
 - Use a medication box
 - Home health nurse
 - Increase compliance

Teaching Heart Strong

- Frequent rest periods
- Relief of anxiety
 - Often experienced
 - Leads to increase in oxygen demand and cardiac workload
 - Explain what you are doing

Teaching Heart Strong

- Proper handwashing technique
 - Don't forget to wash:
 - Between your fingers
 - Under your nails
 - Tops of your hands

Documentation: Team-based Care

- 50 yo black female with LSHF was observed to have an improved understanding of daily weights and recording in the weight log
 - Noted three days this week were not listed in the log
 - Pt. states, “forgot to weigh those days”

Team-based Care

- Lesson 1
 - Sharing the same direction and working as a team, get us to the destination quicker and easier
 - By helping ourselves, the accomplishments are greater!

Resources

- American Heart Association / American Stroke Association
- Heart Failure Society of America
- www.hfsa.org
- www.abouthf.org

Questions?

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