

# ***Heart Failure***

***monitoring and treating Congestive  
Heart Failure (CHF)***

# *Introduction*

- *The focus of today's presentation is not to define heart failure and treatment but to understand a care process to improve the prevention, recognition, and management of heart failure for long term care*

# *Using Functional Assessment*

## ➤ *Class I*

*No limitations of physical activity. No shortness of breath, fatigue, or heart palpitations with ordinary physical activity.*

## ➤ *Class II*

*Slight limitation of physical activity. SOB, fatigue, heart palpitations. Patient comfortable at rest.*

## ➤ *Class III*

*Symptoms with minimal exertion. SOB, fatigue, heart palpitations. Patients comfortable at rest.*

## ➤ *Class IV*

*Severe to complete limitation of activity. SOB, fatigue, heart palpitations, even at res.*

# *Establish goals*



- *Prolong Life*
- *Prevent worsening*
- *Improve quality of life*
- *Provide comfort care*

# *Things you should know*

- *What is Heart Failure?*
- *What are the symptoms?*
- *Why do the feet, legs, and abdomen swell?*
- *What causes Heart Failure?*
- *What medications are used for heart failure?*
- *When to call the doctor?*

# ***Congestive Heart Failure***

- *A healthy heart pumps blood to all parts of the body.*
- *In congestive heart failure, the heart is not pumping as well as it should.*
- *This may cause fluid to build up in the lungs, legs or the abdomen.*

# *Congestive Heart Failure*

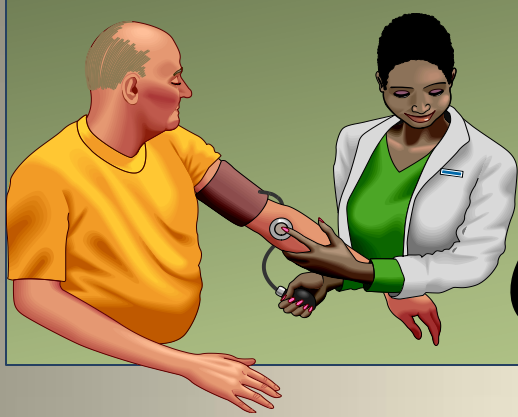
- *Congestive heart failure is a condition in which the heart can no longer pump strongly enough to supply the body with the blood it needs to function normally*
- *In congestive heart failure, **a weakened heart exists along with a buildup of fluid** in the body*
- *Congestive heart failure usually occurs gradually*

# *Causes of Heart Failure*

➤ *Health conditions that may lead to heart failure include:*

- *Hypertension (high blood pressure)*
- *Arrhythmia (irregular heart beat)*
- *Coronary Artery Disease (hardening or narrowing of the arteries)*
- *Heart valve problems*
- *Emphysema (chronic obstructive lung disease)*
- *Previous heart attack*





# ***Hypertension (high blood pressure)***

- *Considered a leading cause of heart failure in the elderly.*
- *Pressure within the blood vessels is too high.*
- *Heart has to pump harder than normal to keep the blood circulating.*
- *Over time the heart's walls thicken and do not relax between contractions causing the heart to pump less efficiently – this is called **Diastolic Dysfunction**.*

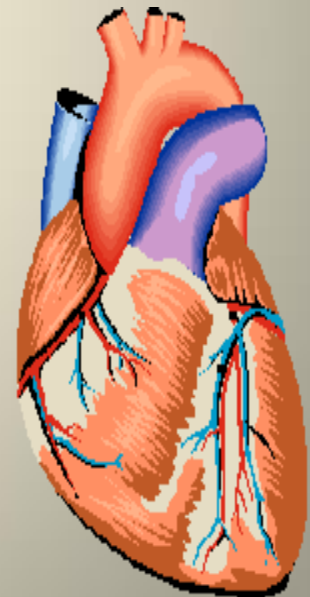
# *Warning!*

- *Do not wait for these symptoms to worsen*
- *Early treatment is the key*
- *Call the doctor!*



# ***Coronary Artery Disease*** ***(hardening or narrowing of the*** ***arteries)***

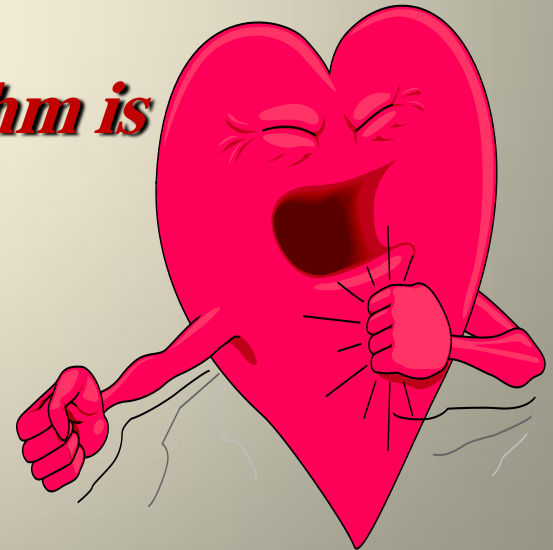
- ***Cholesterol and fatty deposits build up in the heart's arteries.***
- ***Less blood reaches the heart muscle.***
- ***Causes damage to the heart muscle.***
- ***Healthy heart tissue that remains has to work harder.***



# *Arrhythmia*

## *(irregular heart beat)*

- *Heart beats too fast, too slow, or irregularly.*
- *Heart may not be able to pump enough blood for all of the body.*
- *The **most common irregular rhythm is Atrial Fibrillation.***

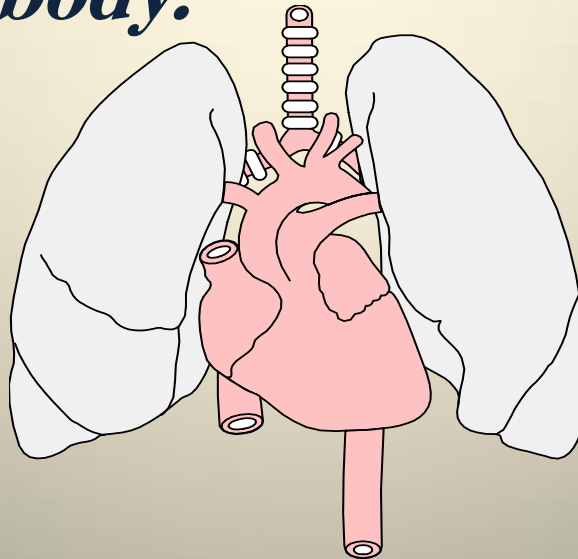


# *Heart Valve Problems*

- *Heart valve problems can result from aging, infection (endocarditis) or a defect present at birth.*
- *When the valves don't open or close completely during each heartbeat, the heart muscle has to pump harder to keep the blood moving.*
- *If the workload becomes too great, heart failure results.*

# ***Emphysema*** ***(chronic obstructive lung disease)***

- ***The lungs don't work as they should***
- ***The heart has to work harder to get oxygen to the rest of the body.***



# ***Prior Heart Attack***

- *May lead to a weakening heart muscle*
- *May cause less efficient pumping of the heart*
- *This is called **Systolic Dysfunction**.*

# *Symptoms of Heart Failure*

- *Most common symptom is shortness of breath (when lying flat or with activity)*
- *Weight gain (2-5 lbs. in 1-4 days)*
- *New or increasing lower-extremity swelling*
- *Abdominal symptoms (nausea, pain, distension)*
- *More difficulty breathing with or without exertion*
- *Unexplained cough*
- *Functional decline and or lethargy*



## *Before you call the doctor:*

- *Listen to lung sounds*
- *Obtain apical heart rate, blood pressure, respiratory rate and pulse oximetry*
- *Obtain a weight*
- *Know the difference between baseline weight and current weight*

# *What can I do to help decrease the swelling?*



- *Elevate legs*
- *Apply support stockings if ordered by doctor*
- *Avoid applying stockings with a tight band*
- *Be sure to notify the doctor as this could be a sign that their heart failure is getting worse*

# *Why do the resident's feet swell?*

- *Swelling of your feet MAY be the first symptom of heart failure.*
- *Swelling of the feet could be from poor valves in the leg veins – the swelling becomes worse with prolonged standing.*

*The correct term for this condition is edema*



# *Tips on Weighing Residents*

- *Weigh resident when you get them up in the morning after urination and before getting dressed.*
- *Always use the same scale after accurately calibrating.*
- *Write down the weight immediately.*
- *Notify the doctor of an increase in weight of (3-5 pounds).*



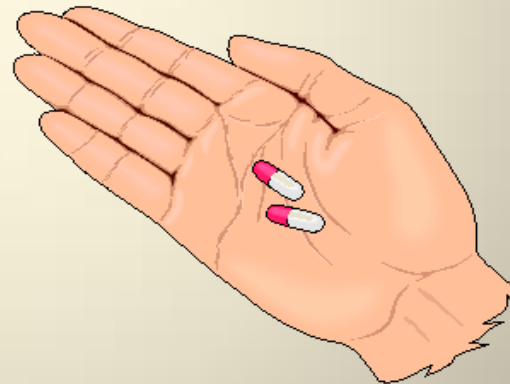
# *Common Types of Medications for Heart Failure*

- *Vasodilators*
- *ACE inhibitor*
- *Beta blockers*
- *Diuretics*



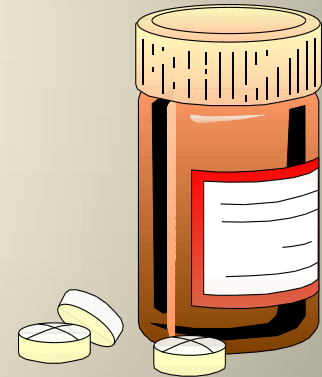
# ***Vasodilators***

- ***These medications help the blood vessels relax the workload of the heart allowing it to pump easier.***
- ***Examples:***
  - ***Nitroglycerin***
  - ***Hydralazine***
  - ***Isosorbide***
  - ***Diltiazem***
- ***Take the blood pressure and pulse rate and call the doctor with complaints of weakness or dizziness.***



# ***ACE inhibitor***

- ***These medications relax the arteries so the heart can pump blood out easier.***
- ***Example:***
  - ***Captopril***
  - ***Enalapril***
  - ***Lisinopril***
- ***Take the blood pressure and pulse rate and call the doctor with complaints of weakness and or dizziness.***



# ***Beta Blockers Medication***

- *These medications are commonly used in heart failure.*
- *They can be used for hypertension (high blood pressure).*
- *They act by reducing the heart's tendency to beat faster which may cause heart failure.*
- ***Take pulse rate** prior to giving medication.*



# *Some Beta Blocker Medications*

- *Carvedilol*
- *Bisoprolol*
- *Metoprolol*



# *Digoxin*

- *Digoxin can also slow certain kinds of rapid heart beats.*



# *Important Reminders about Digoxin*

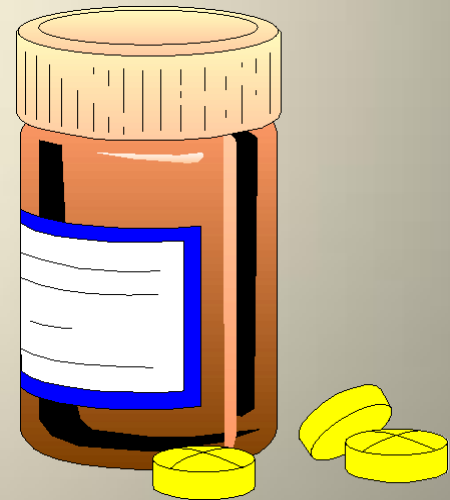
- *Should be taken only once a day.*
- *Take the pulse first and notify doctor if rate is less than 55.*
- *Note if heart rate is regular or irregular.*
- *Serum concentrations do not have to be checked routinely except to exclude for toxicity (concentrations should generally be 1.0 or less).*

# *Diuretics (water pills)*

➤ *Helps the kidneys produce more urine which in turn, reduces stress on the heart.*

➤ *Examples:*

- *Furosemide*
- *Bumetanide*
- *Metolazone*



## *Diuretics (water pills)*

- *This medication is best give first thing in the morning. If dosed twice daily a 6 a.m. and 2 p.m. works nicely.*
- *The effects of the medication start within an hour and usually last less than 6 hours.*
- *The resident may or may not be on a potassium supplement. If the potassium level is low or high call the doctor.*

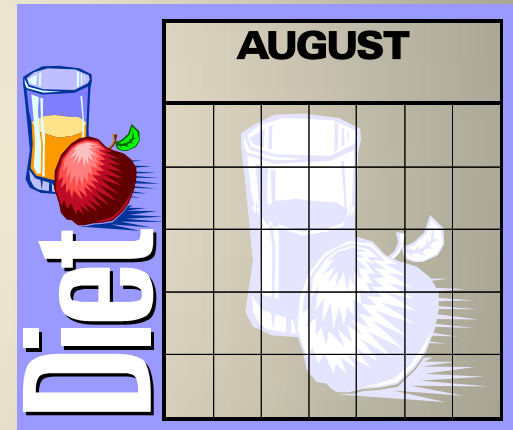
# *Potassium*

- *Potassium is a mineral that helps control heart rhythm.*
- *Too much or too little potassium can be harmful!*



# ***Nutrition Basics***

- ***No added salt***
- ***2 GM sodium***



# ***Review Questions***



# ***Review Questions***

## ***True or False:***

- ***Heart failure is a condition in which the heart can no longer pump strongly enough to supply the body with the blood it needs to function normally.***



***And the answer is...***

***True!***

- ***Heart failure is a condition in which the heart can no longer pump strongly as it should. There is not enough circulation to supply the body with the blood it needs to function normally. This may also result in a backup of fluids in the body.***

# *Multiple Choice*

➤ *Common causes of heart failure include all of the following **EXCEPT**:*

*A. Prolonged high blood pressure*

*B. Heart valve disease*

*C. Coronary artery disease (Hardening or narrowing of the arteries)*

*D. Exercise*

***The correct answer is D***

➤ *Health conditions that may lead to heart failure include:*

- *Hypertension (high blood pressure)*
- *Arrhythmia (irregular heart beat)*
- *Coronary Artery Disease (hardening or narrowing of the arteries)*
- *Heart valve problems*
- *Emphysema (chronic obstructive lung disease)*

# *True or False*

- *Understanding about heart failure and its early warning signs is frightening.*



*And the answer is...*

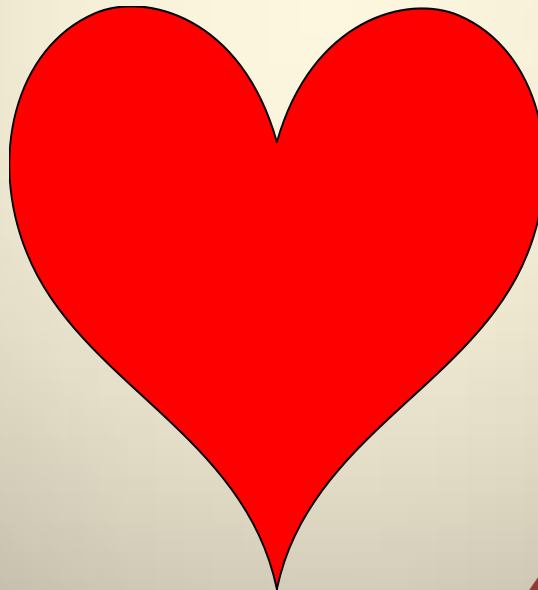


***False!***

- *Understanding about heart failure and its early warning signs will help the resident stay out of the hospital and improve their quality of life.*
- *Understanding heart failure could help resident and family to participate in the resident care.*

## *True or False*

- *Exercise is bad for congestive heart failure.*



*And the answer is...*





***False!***

- *A reasonable exercise program has been shown to actually **improve** the functioning of the heart.*

# *Multiple Choice*

➤ *Which of the following are signs of heart failure?  
(identify all that apply)*

*A. Weight gain (2-5 lbs. in 1-4 days)*

*B. Shortness of breath (when lying flat or with activity)*

*C. Swelling of ankles and/or legs*

*D. Not eating enough*

*E. Not sleeping unless propped on pillow*

*F. Frequent dry, hacking cough*    *And the answer is...*



***All of the choices are correct!***

- ***Any or all of these symptoms can occur with congestive heart failure.***

## *Multiple Choice*

- *The single most common symptom of congestive heart failure is:*
  - A. Nausea*
  - B. Shortness of breath*
  - C. Confusion*
  - D. Dizziness*

*And the answer is...*



*The correct answer is **B***

- *The single **Most Common** symptom of congestive heart failure is **Shortness of breath**.*

# *Multiple Choice*

- *When the heart can no longer pump strongly enough to function naturally, fluid buildup happens in what areas of the body?*
  - A. Ankles, feet and abdomen*
  - B. Around the throat*
  - C. Inner ear and eyes*
  - D. Tongue and gums*

*And the answer is...*



*The correct answer is **A***

- *A healthy heart pumps blood to all parts of the body.*
- *In congestive heart failure, the heart is not pumping as well as it should.*
- *This may cause fluid to build up in the lungs, legs or the abdomen.*

# *Multiple Choice*

- *This fluid buildup is called:*

*A. Cirrhosis*

*B. Liposis*

*C. Edema*

*D. Hydroma*

*And the answer is...*





*The correct answer is C*

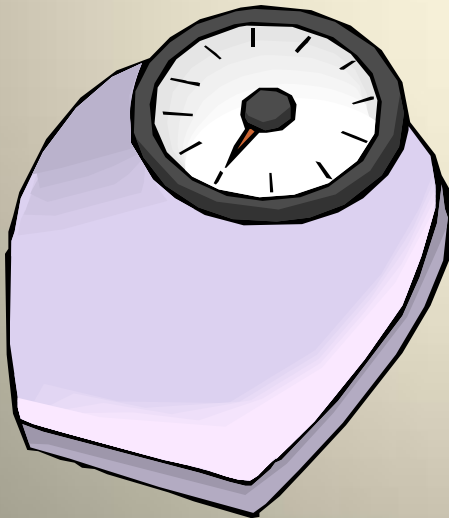
- *Swelling of your feet may be the first symptom of heart failure.*
- *Swelling of the feet could be from poor valves in the leg veins – the swelling becomes worse with prolonged standing. It is important to know if the edema does not improve with elevation it is more likely from heart failure.*

*The correct term for this condition is edema*



# *True or False*

- *The best time to weigh the resident is in the evening before going to bed.*



*And the answer is...*



# ***False***

- ***Weigh the resident in the morning after toileting***
  - ***Always use the same scale***
  - ***No shoes***
  - ***Same clothing***
  - ***Write down the weight***
  - ***Notify the physician if weight increase is greater than 2 pounds occurs in 1-4 days***

# *Multiple Choice*

- *Congestive heart failure can occur when the heart muscle becomes thickened and does not relax between contractions. This type of CHF is called:*
  - A. Diastolic dysfunction*
  - B. Diabetic dysfunction*
  - C. Systolic dysfunction*
  - D. Systemic dysfunction*

*And the answer is...*



## *The correct answer is A*

- *High blood pressure causes pressure within the blood vessels is too high.*
- *The heart has to pump harder than normal to keep the blood circulating.*
- *Over time the heart's walls thicken and do not relax between contractions causing the heart to pump less efficiently – this is called **Diastolic Dysfunction**.*

# *Multiple Choice*

- *Congestive heart failure that occurs when the heart muscle weakens and pump fails is called:*
  - A. Diastolic dysfunction*
  - B. Diabetic dysfunction*
  - C. Systolic dysfunction*
  - D. Systemic dysfunction*

*And the answer is...*

*The correct answer is C*

- *A prior heart attack may lead to a weakening heart muscle.*
- *This may cause less efficient pumping of the heart.*
- *This is called **Systolic Dysfunction**.*

# *Multiple Choice*

- *Types of medication prescribed for congestive heart failure may include all of the following **EXCEPT**:*

*A. Diuretics*

*B. ACE inhibitors*

*C. Sedatives*

*D. Beta blockers*

*And the answer is...*





*The correct answer is C*

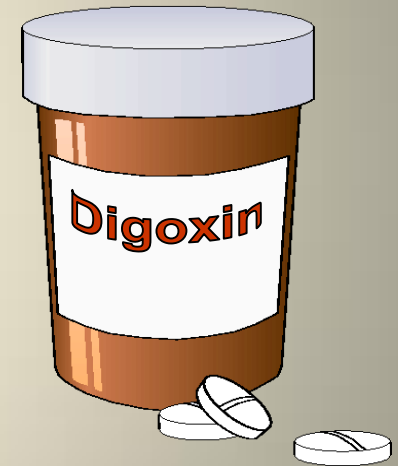
➤ *Common Types of Medications for Heart Failure*

- *Vasodilators*
- *ACE inhibitor*
- *Beta blockers*
- *Diuretics*



# *True or False*

- *Digoxin can be given twice a day*



*And the answer is...*



***False!***

- ***Digoxin should be given only once a day.***

# *Multiple Choice*

- *Beta blockers help heart condition by:*
  - A. Blocking blood flow back to the heart*
  - B. Opening up more air passages in the lungs*
  - C. Making the heart pump harder*
  - D. Slowing the heart rate and lowering the blood pressure*

*And the answer is...*



*The correct answer is **D***

- *These medications can be used in systolic heart failure.*
- *They can be used for hypertension (high blood pressure).*
- *They act by reducing the heart's tendency to beat faster.*
- ***Pulse rate** should be taken regularly.*

## ***True or False***

- ***If a resident is receiving a diuretic (water pill) you should give a potassium supplement only if the doctor prescribes one***

***And the answer is...***



# *True!*

- *Potassium supplement **ONLY** if prescribed by the doctor.*
- *Potassium is a mineral that helps control heart rhythm.*
- *Too much or too little potassium can be harmful!*

# *Multiple Choice*

- *The form of physical exercise most often recommended for people with congestive heart failure is:*
  - A. Absolutely none to minimize risk of further damage*
  - B. Minimal - no elevation of breathing or heart rate*
  - C. Mild to moderate – walking*
  - D. Strenuous –activities that push you to your limits*



*The correct answer is C*

- *Walking can help maintain strength*
- *Therapist will design an exercise program*
- *Strength and endurance can be maintained maximizing independence*



# *Important!*

- *Each medication has its own side effects.*
- *It is important that to know if the medication should be taken before, with or after meals.*
- *Call the pharmacist for concerns or specific instructions.*

# ***Danger!!!***

## ***➤ Remember these Warning Signs!!***

- Weight gain (2-5 lbs. in 1-4 days).***
- Shortness of breath (when lying flat or with activity).***
- Swelling of ankles and/or legs.***
- Disturbed sleep (unless propped on pillow).***
- Unexplained cough.***