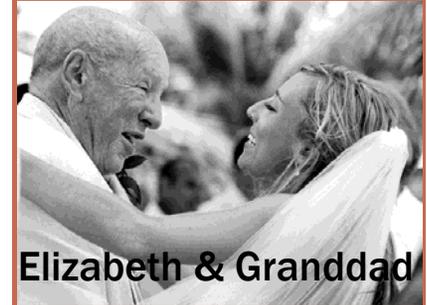


# LIVING WITH HEART FAILURE

Presented by your Advanced Practice Registered  
Nurses (APRN):



Elizabeth & Granddad



# WE WILL TALK ABOUT:

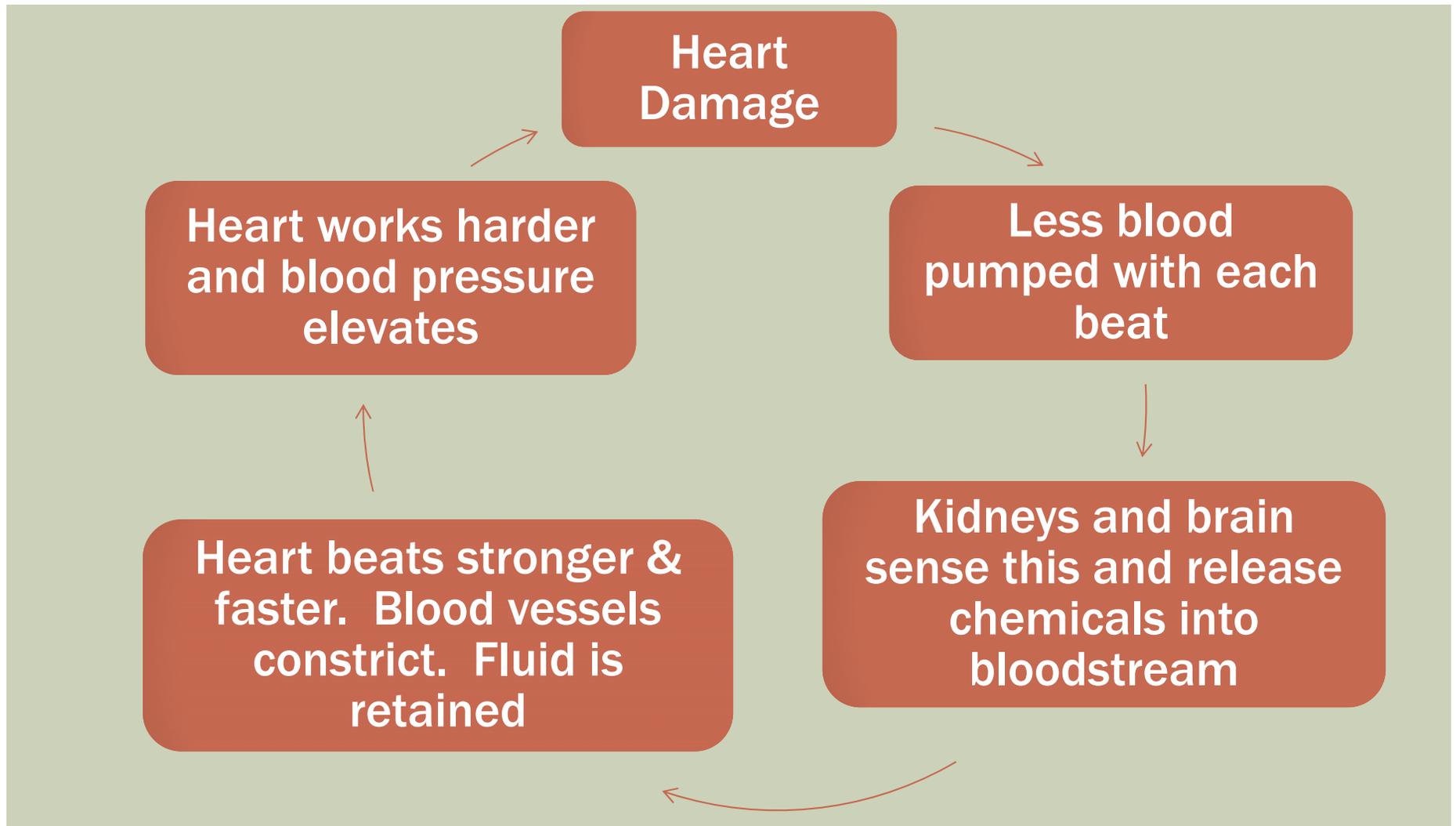
- What is heart failure? Has my heart FAILED?!
- Is it common?
- What causes heart failure?
- How is it diagnosed? What tests can I expect?
- How is this treated?
- Are these pills really necessary??
- How can I prevent heart failure from limiting my lifestyle?

# WHAT CAUSES HEART FAILURE?

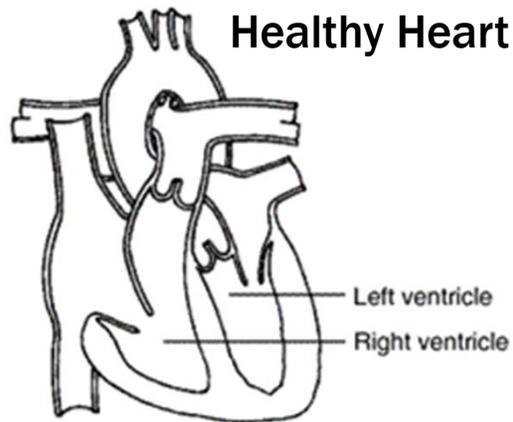
- High Blood Pressure
- Coronary Artery Disease
- Diabetes
- Dyslipidemia
- Heart Failure
- Heart Valve Disease
- Myocarditis
- Chronic Lung Disease (COPD)
- Overactive Thyroid
- Abnormal Heart Rhythms
- Alcohol Use
- Drug Use
- Pregnancy Complications
- Sleep Apnea

Anything that damages the heart muscle, or impairs its ability to properly fill with or pump blood, can cause heart failure

# HEART FAILURE IS A VICIOUS CYCLE



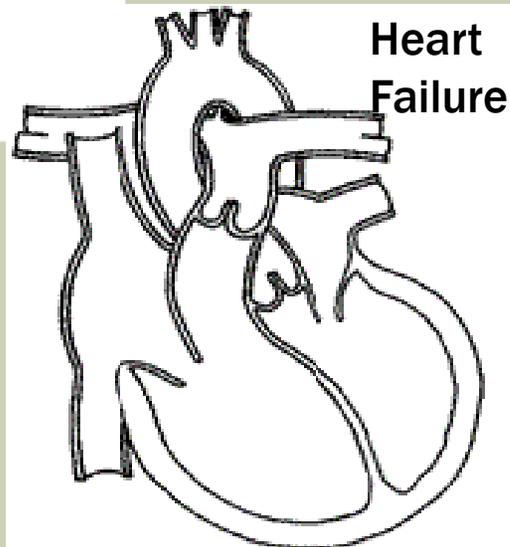
# SO, WHAT IS HEART FAILURE?



Heart chambers relax and fill, then contract and pump.

It means the Heart is failing to work as efficiently as it should

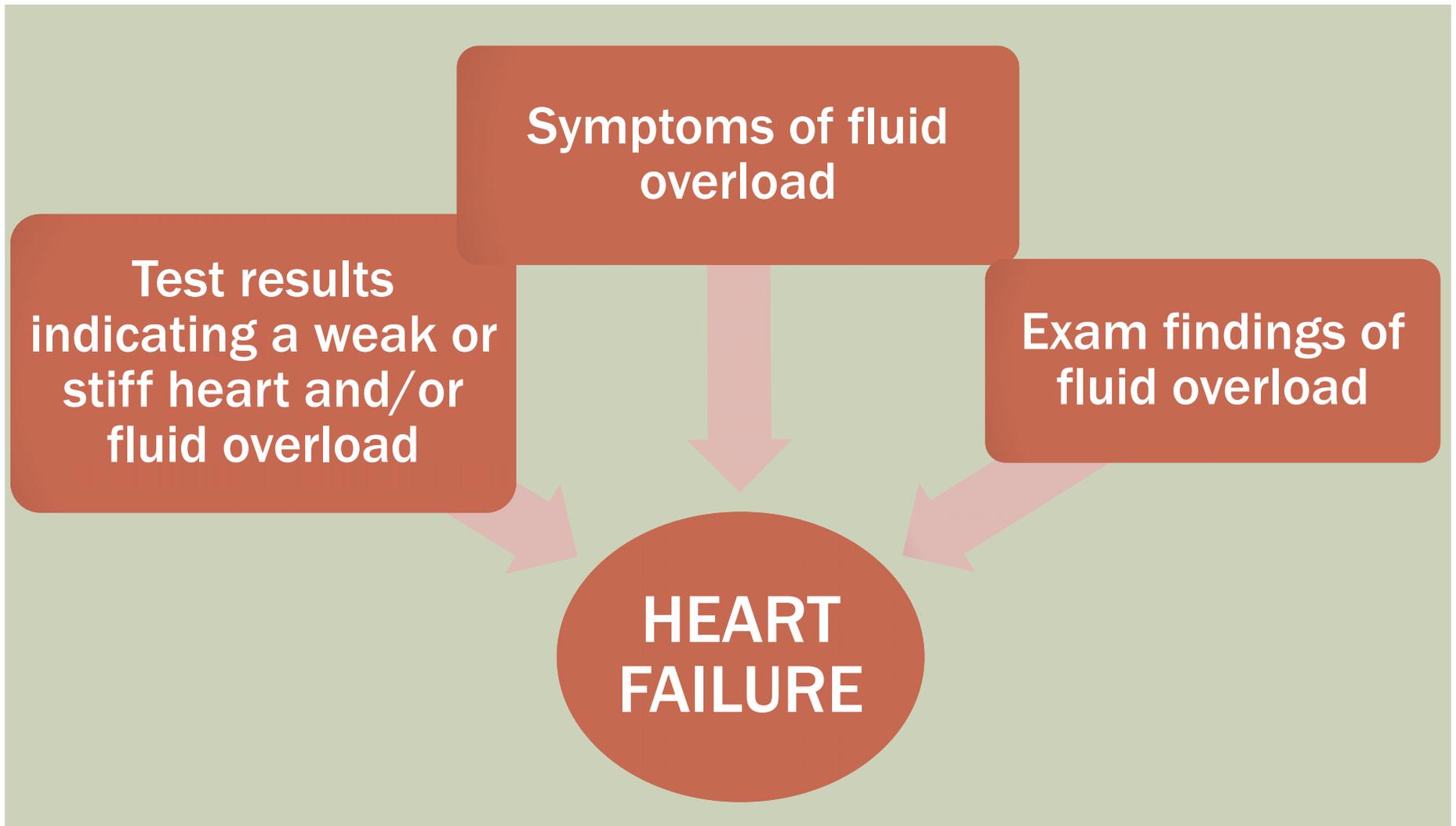
Heart failure does not mean the heart has stopped



Muscle fibers have stretched. Heart chamber enlarges

- The heart is too weak and/or stiff to fill and pump efficiently.
- When the pumping power is inadequate, the blood flows more slowly and backs-up. Fluid overload occurs, causing symptoms.

# DIAGNOSIS OF HEART FAILURE



# THE SYMPTOMS OF FLUID OVERLOAD



*Shortness of breath*



*Swelling of feet & legs*



*Chronic lack of energy*



*Difficulty sleeping at night due to breathing problems*



*Swollen or tender abdomen with loss of appetite*



*Cough with frothy sputum*



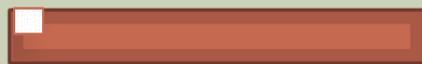
*Increased urination at night*



*Confusion and/or impaired memory*

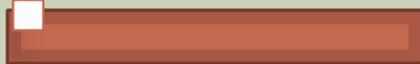
# SO, WHAT TESTS MAY BE NECESSARY?

## Clarification of Cause



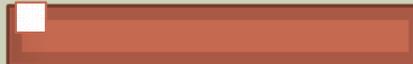
- Stress test
- Heart Cath
- Echo
- PFT's
- Thyroid Panel

## Evaluate Heart Function



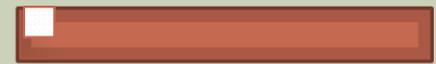
- Echo
- MUGA Scan
- ECG

## Evaluate Fluid Volume Status



- BNP
- Chest X-ray

## Medication Safety



- Chemistry Panel



IS IT COMMON?

Yes!!

- Over 5 million Americans live with it
- More than 500,000 people are diagnosed each year

# HOW IS IT TREATED?

## ■ Treat/manage underlying conditions

- Manage coronary disease
- Manage irregular rhythms
- Fix badly leaking heart valves
- Treat thyroid disease

## ■ Lifestyle Changes

- To be discussed further

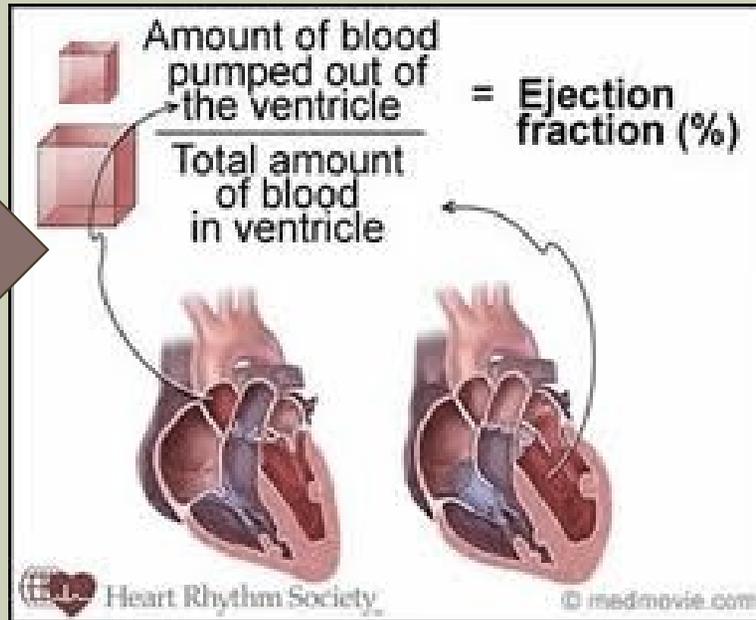
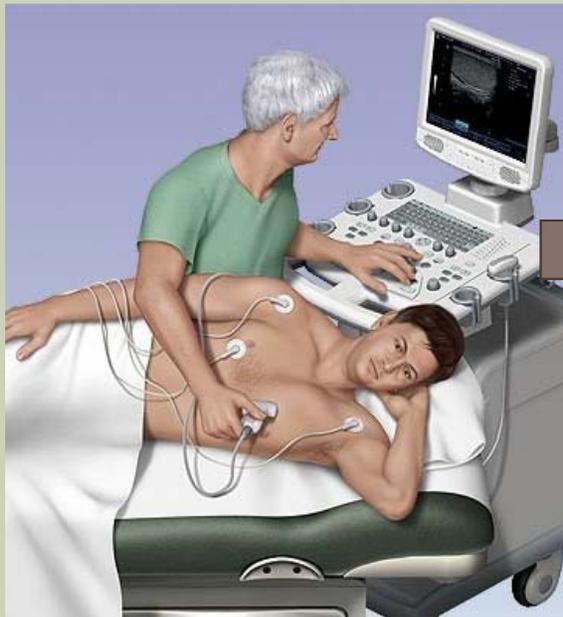
## ■ Medications

- To be discussed further

## ■ Invasive management

- Cardiac resynchronization therapy
- Automatic internal defibrillator
- Heart transplant

# TO UNDERSTAND HEART FAILURE TREATMENT, YOU NEED TO UNDERSTAND YOUR “EF%”



= “squeeze of the heart”

Normal EF = 50% - 75%

An echocardiogram is an ultrasound of the heart. It’s used to determine the “EF”.

The “EF” is the % of blood in the left ventricle that is pumped with each beat.

Beta Blockers keep your heart from looking like this!

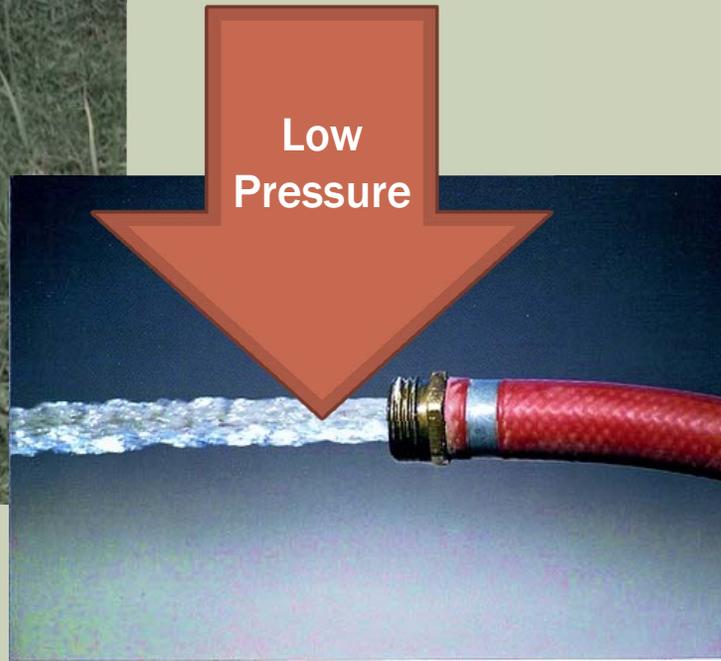


- Beta Blockers reduce the heart's workload
  - Decrease heart rate
  - Lower blood pressure
  - Prevent adrenaline from reaching heart muscle cells, which causes the heart muscle thickening and stiffening

EF < 50%

## BETA BLOCKERS

- ❖ Toprol XL (metoprolol succinate)
- ❖ Coreg (carvedilol)
- ❖ Coreg CR (carvedilol controlled - release)



$EF < 40\%$

- Relax/widen/dilate vessels to help the heart pump better
- Stop body's reaction to hormones that hurt the heart

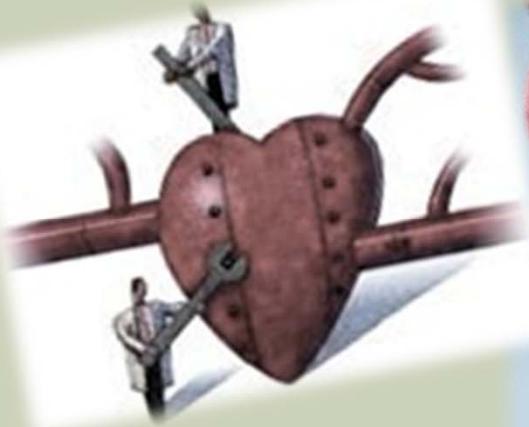
## ACE- INHIBITORS - OR - ARBs

### ACE- INHIBITORS:

- ❖ Lisinopril (Zestril)
- ❖ Captopril (Capoten)
- ❖ Enalapril (Vasotec)

### ARBs:

- ❖ Irbesartan (Avapro)
- ❖ Olmesartan (Benicar)
- ❖ Losartan (Cozaar)
- ❖ Valsartan (Diovan)



# Symptoms + EF < 35%

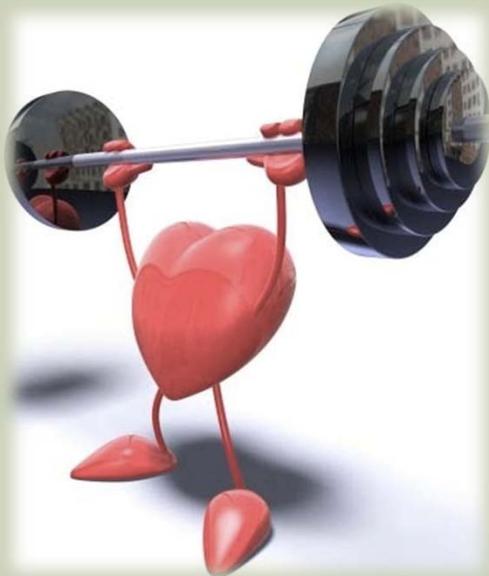
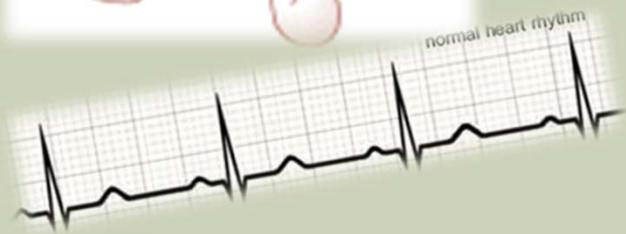
- Block hormones that try to dilate/remodel the heart
- Work on the same system as ACE-inhibitors, but in a different way
- Help the body get rid of extra fluid, while holding onto important electrolytes

## ALDOSTERONE-INHIBITORS

- ◆ Aldactone (spironolactone)
- ◆ Inspra (eplerenone)



Improves heart rhythm



Improves heart strength

## DIGOXIN

- ◆ Lanoxin  
(Digoxin)

- AKA “water pills”
- Increase urination, so that fluid volume in the body decreases
- Decreased volume makes the heart’s job easier
- Removing water makes you feel better



## DIURETICS

- ◆ Lasix (furosemide)
- ◆ Bumex (bumetanide)
- ◆ Demadex (torsemide)
- ◆ Zaroxolyn (metolazone)

# HOW TO LIVE WITH HEART FAILURE

Tips for  
taking  
control

# MEDICINE TIPS



## Always take your pills as directed

- Don't stop because you're feeling better
- Don't make changes unless directed



## Tell us your medication questions

- Bad side effect? Tell us, and we'll make a change
- Confused about what/when to take meds? Call!



## Vaccines

- Get your annual flu vaccine
- Keep your pneumonia vaccine up-to-date

# MAINTAIN HEALTHY FLUID VOLUME TO REDUCE THE HEART'S WORKLOAD



=



Limit daily fluid intake to  
8 cups = 64oz =  
2000mL = 2L

Weight gain = fluid retention!

2 pounds of weight = 1 liter of fluid!!



Weigh daily and call office if:

- Gain for 2 consecutive days
- Notice a gain  $\geq 2$  pounds in a day
- Notice a gain of  $\geq 5$  lbs in a week

# SALT REDUCTION WILL ALSO PREVENT FLUID VOLUME OVERLOAD



Avoid: Tomato/veggie juice, pizza, ham, hot dogs, BBQ sauce, canned foods, frozen entrees, cheese, buttermilk, steak sauce, excess bread, "instant" hot cereals...

## <2,000mg

### Nutrition Facts

Serving Size 1/2 cup (115g)

Servings Per Container About 4

Amount Per Serving

Calories 250

Calories from Fat 130

% Daily Value\*

Total Fat 14g

22%

Saturated Fat 9g

45%

Cholesterol 55mg

18%

Sodium 75mg

3%

Total Carbohydrate 26g

9%

Dietary Fiber 0g

0%

Sugars 26g

Protein 4g

Vitamin A 10%

Vitamin C 0%

Calcium 10%

Iron 0%

\* Percent Daily Values are based on a 2,000 calorie diet.

Look at serving size!  
4 servings x 75 mg = 300mg  
in the package of food



We have heart-healthy cooking classes here at the heart center

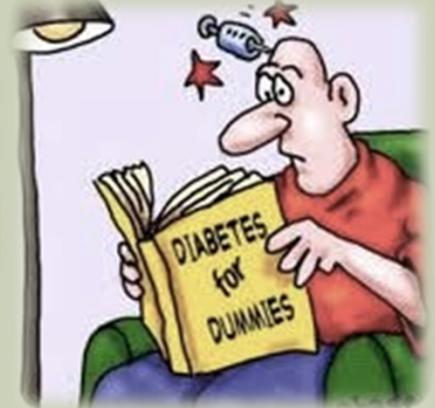
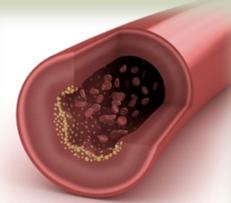
# KEEP HEART FAILURE FROM LIMITING YOUR LIFESTYLE



## Lose Weight.

Excess weight stresses the heart. We have classes to help you lose weight.

## Avoid/Manage Stress.



Actively manage your blood pressure, diabetes, and cholesterol.



## Quit Smoking!



## Exercise to tolerance.

Regular activity strengthens your muscles and heart, making ordinary activities easier.



## Alcohol in Moderation



Rest when needed.

**Dilated pupils**, a sympathetic nervous system response

**Skin pale, gray, or cyanotic**

**Dyspnea**, SOB/OE is early symptom from pulmonary congestion

**Orthopnea**, cannot breathe unless sitting up

**Crackles, wheeze** are adventitious breath sounds

**Cough**, frothy pink or white sputum

**Decreased blood pressure** stimulates sympathetic nervous system, which acts on heart to increase rate and increase force of contraction

**Nausea and vomiting** as peristalsis slows and bile and fluids back up into stomach

**Ascites**, fluid in peritoneal cavity

**Dependent, pitting edema**, in sacrum, legs



If I had just called when this started, I wouldn't be in this mess!

**Anxiety**, gasping from pulmonary congestion

**Falling O<sub>2</sub> saturation**

**Confusion**, unconsciousness from decreased O<sub>2</sub> to brain

**Jugular vein distention** from venous congestion

**Infarct**, may be cause of decreased cardiac output

**Fatigue**, weakness from decreased cardiac output

**S<sub>3</sub> gallop, tachycardia**

**Enlarged spleen and liver** from venous congestion. This causes pressure on breathing

**Decreased urine output**

**Weak pulse**  
**Cool, moist skin**

# A QUICK PHONE CALL CAN KEEP YOU OUT OF THE HOSPITAL

Often, a medication change can be made right over the phone, and then you can be seen 2-3 days later



**Pick up the phone if:**

- Your breathing and/or swelling has worsened
- You've gained weight for 2 consecutive days, have gained 2lbs in 1 day, or 5lbs in 1 week
- You have to prop your head on several pillows to breathe at night
- You just aren't feeling right

**QUESTIONS??????**

Thank you  
for your  
time!