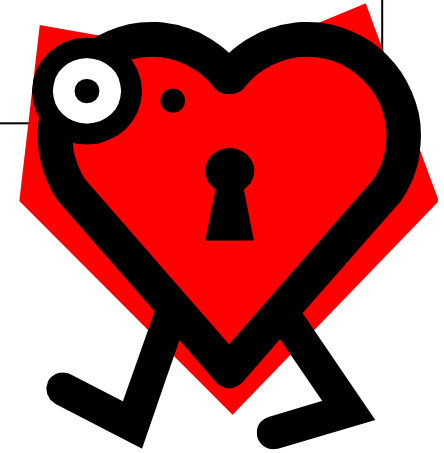


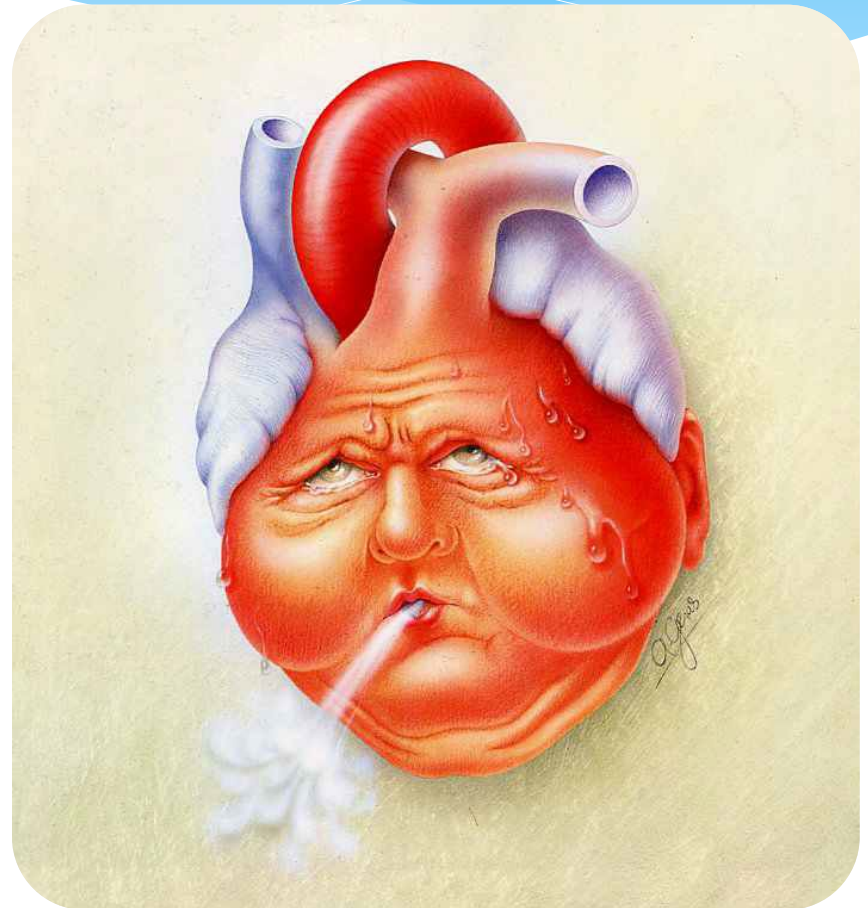
# Who Gets Heart Failure?



CSU Sacramento  
Cardiovascular Wellness Program

# What is Heart Failure?

Heart failure is the heart's inability to pump effectively



# Heart Failure Facts

- 6.5 million Americans have Heart Failure
- Every year in the United States over 960,000 people are newly diagnosed with Heart Failure
- Lifetime risk is 1 in 5 of developing Heart Failure
- Heart Failure is the **most common** discharge diagnosis for patients older than 65 years

# Making a Difference

Heart Failure Awareness Week Theme 2023:  
**Detect the Undetected Patients**

“Intervening early can make the biggest difference to people's lives and outcomes”. May 1, 2023

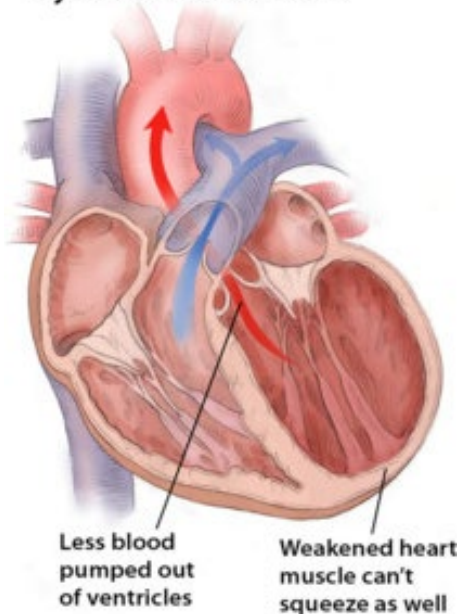
*Once diagnosed with Heart Failure, your chance of dying within 5 years is 50 %*

But with detection and treatment you can STOP it or SLOW it down or PREVENT it

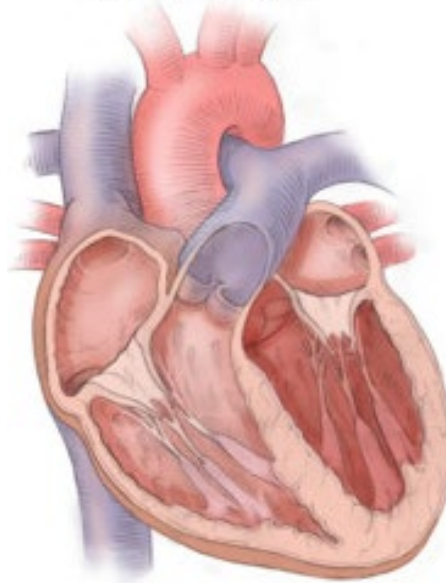
# Two Main Types of Heart Failure

HFrEF (EF% 40% or less)

**Systolic Heart Failure**

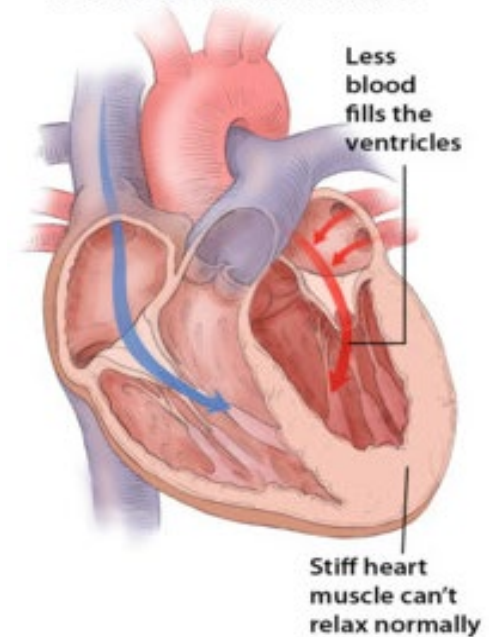


**Normal Heart**



HFpEF (EF 50% or higher)

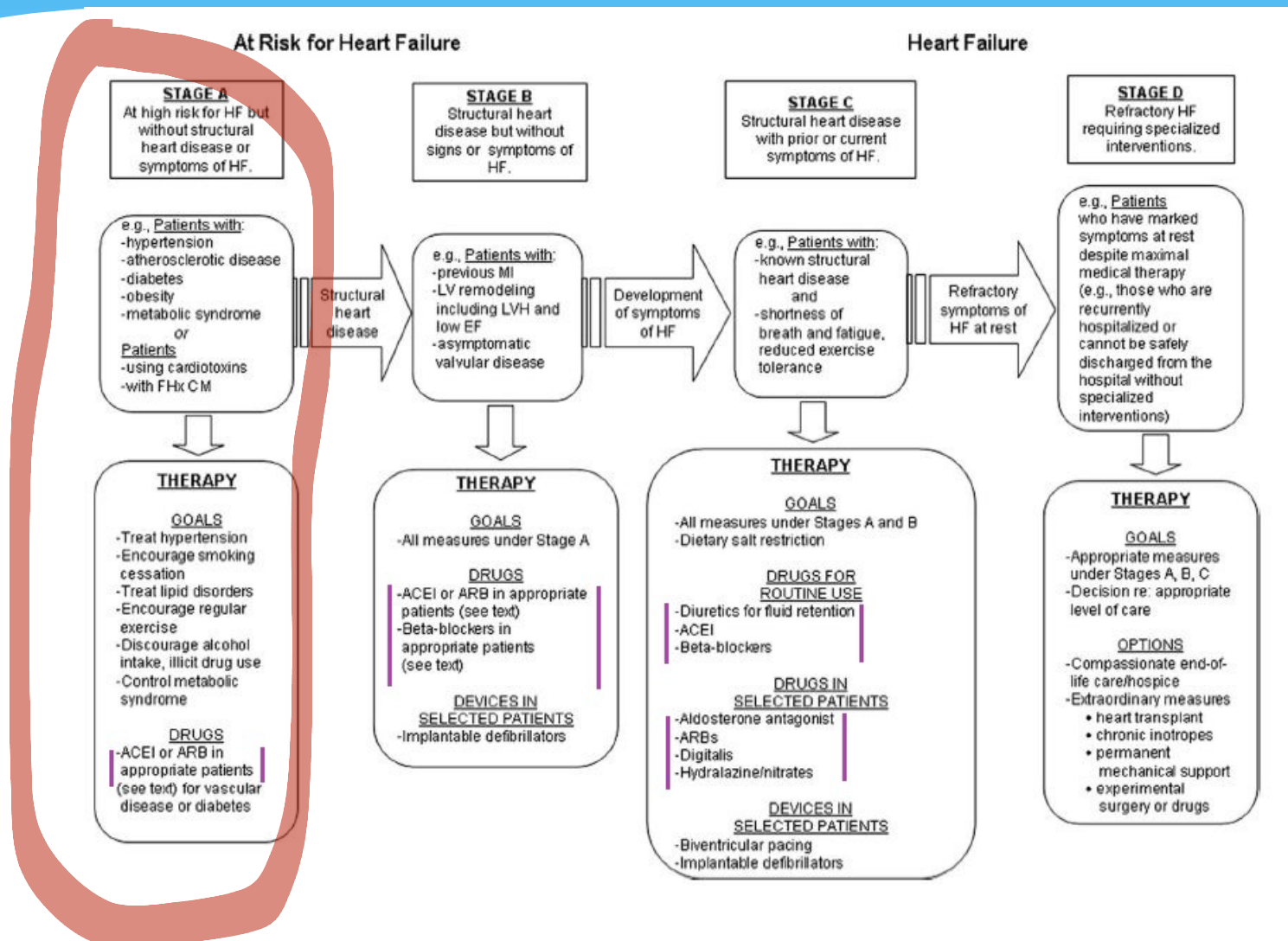
**Diastolic Heart Failure**



# Causes of Heart Failure

- Heart attack or coronary artery disease
- High blood pressure
- Heart valve disease
- Genetic Cardiomyopathies
- Endocrine-Diabetes, Hyperthyroidism/Hypothyroidism
- Arrhythmias- e.g. atrial fibrillation, SVT...
- Viral- Infectious/Inflammatory illnesses
- Peripartum Cardiomyopathies
- Toxins (e.g. alcohol, chemotherapy, smoking, illicit drugs, radiation)
- Obesity – BMI 30 or higher
- Obstructive Sleep Apnea
- Smoking/Vaping- \*Risk of getting HF is increased by 47%
- Idiopathic – (unknown)

# Stages of Heart Failure



# How Does Heart Failure Happen?

## Insult to the Heart

e.g. heart attack, atrial fibrillation, high blood pressure



## Change Happens...Chemicals Released

Activation of RAAS, SNS, ET, Pro-inflammatory cytokines, myocytes...



**Remodeling** of the heart and  
Progressive worsening of the heart function



**Symptoms:** SOB,  
swelling, tiredness, poor  
memory, wt gain etc.



# Observe for Warning Signs of Heart Failure

- Sudden weight gain
- Increased cough and /or wheezing
- Increased weakness or fatigue
- Increase shortness of breath with activity
- Increase number of pillows at night or sleeping in recliner
- Swelling of feet, ankles, stomach area, hands, face
- Bloating sensation and/or loss of appetite
- New sensation of an irregular heart beat
- Chest pain or discomfort
- Waking up in the night with shortness of breath
- Needing to use more oxygen to breath well
- Others??

# How to Slow the Progression or Reverse Heart Failure

# Initial Insult to the Heart

Change Happens... Chemicals Released

Activation of RAAS, SNS, ET, Proinflammatory cytokines, myocytes...

Heart Failure

**Symptoms:** SOB, swelling, tiredness, poor memory, wt. gain, poor exercise tolerance, can't lay flat

**Remodeling** of the heart  
Progressive worsening of the heart function



**SELF CARE**

# How To Prevent Heart Failure

- Manage Diabetes- Maintain healthy glucose and A1C levels
- Manage Thyroid Disease
- Obesity- Maintain healthy body weight
- Heart Arrhythmias- Awareness and management
- Coronary Blockages (CAD)- Good follow-up with cardiologist
- Manage your Cholesterol and Triglyceride Levels
- Treat Obstructive Sleep Apnea
- Stop Smoking
- Maintain Healthy Blood Pressure
- Avoid Heart Toxins

# Manage Your Blood Pressure

Age group	Office SBP treatment target ranges (mmHg)					Office DBP treatment target range (mmHg)
	Hypertension	+ Diabetes	+ CKD	+ CAD	+ Stroke <sup>a</sup> /TIA	
18-65 years	<b>Target to 130</b> <i>or lower if tolerated</i> <b>Not &lt;120</b>	<b>Target to 130</b> <i>or lower if tolerated</i> <b>Not &lt;120</b>	<b>Target to &lt;140 to 130</b> <i>if tolerated</i>	<b>Target to 130</b> <i>or lower if tolerated</i> <b>Not &lt;120</b>	<b>Target to 130</b> <i>or lower if tolerated</i> <b>Not &lt;120</b>	70-79
65-79 years <sup>b</sup>	<b>Target to 130-139</b> <i>if tolerated</i>	<b>Target to 130-139</b> <i>if tolerated</i>	<b>Target to 130-139</b> <i>if tolerated</i>	<b>Target to 130-139</b> <i>if tolerated</i>	<b>Target to 130-139</b> <i>if tolerated</i>	70-79
≥80 years <sup>b</sup>	<b>Target to 130-139</b> <i>if tolerated</i>	<b>Target to 130-139</b> <i>if tolerated</i>	<b>Target to 130-139</b> <i>if tolerated</i>	<b>Target to 130-139</b> <i>if tolerated</i>	<b>Target to 130-139</b> <i>if tolerated</i>	70-79
Office DBP treatment target range (mmHg)	70-79	70-79	70-79	70-79	70-79	

# High Blood Pressure and Risk of Heart Failure

- Men with high blood pressure have a 2 x greater risk of developing Heart Failure (JAMA 1996)
- Women with high blood pressure have a 3 x greater risk of developing Heart Failure (JAMA 1996)
- 75% of those with Heart Failure had pre-existing high Blood pressure (Circ 2002)

# Avoid Heart Toxins: Alcohol

The AHA does not recommend alcohol intake for heart disease prevention.

- No more than 1-2 drinks a day for men
- No more than 1 drink a day for women

A drink is equal to 4 oz wine or 12 oz of beer or 1-1.5 ounces of hard liquor

# Avoid Heart Toxins: Other Toxins

- Methamphetamine
- Cocaine
- Ecstasy
- Chemotherapy and Radiation
- Cigarette smoking/vaping



# A Positive Thing: Exercise

- Helps you feel better emotionally
  - Decreases depression and anxiety
- Reduces your risk of having a heart attack or stroke and Heart Failure
- Increases your strength, endurance, flexibility, and balance and helps you get back to doing the things you want to do in life
- Assists in reducing and managing your blood pressure, weight, and cholesterol levels

# Exercise Lowers Risk of Heart Failure

- California Men's Health Study showed lower physical activity and more sedentary time is associated with high risk of HF (Circ 2015)
- In both the Physicians Health Study (JAMA 2009) and the Women's Health Initiative (JAMA 2014) a moderate level of physical activity was one of several healthy lifestyle factors associated with a lower risk of HF.

# Exercise for Those with Heart Failure

*HF- Action Trial, JAMA 2009*

*People **with heart failure** who exercise for about two hours a week on top of optimal treatment may decrease mortality and heart failure hospitalizations*

# Exercise

## Type of Exercise

- **Cardiovascular Conditioning (aerobic) Activities**

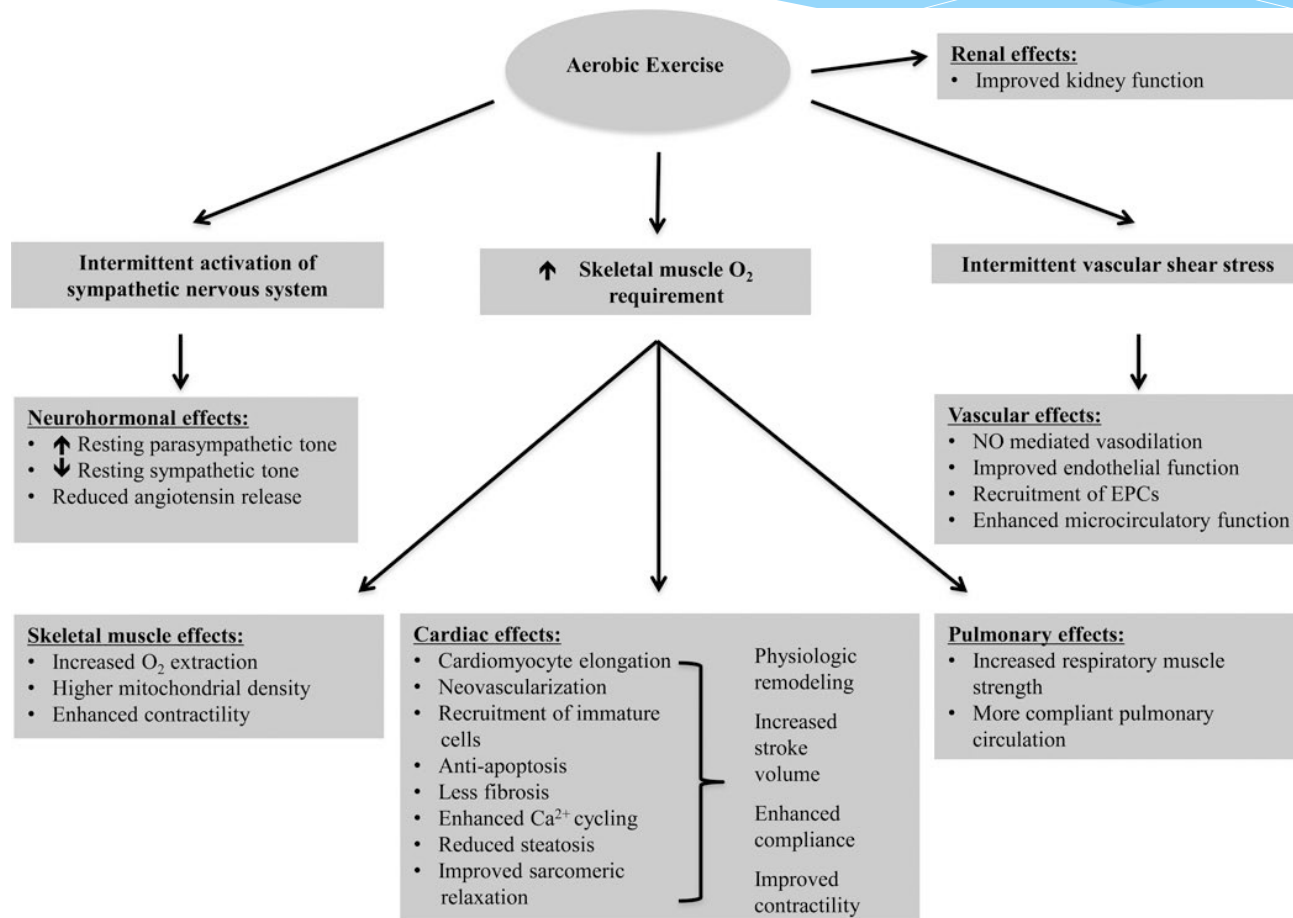
Walking, Biking, Rowing, Elliptical, Nu-Step, Tennis, Pickleball  
Stairmaster, Gardening, Swimming, Chair Aerobics

- **Strength Training**

Dumbbells, Elastic Bands, Weight Machines, Body-  
Weight Activities

\*European Society of Cardiology recommends both aerobic conditioning and strength training for individuals with Heart Failure (Euro Heart J, 2018)

# Aerobic Exercise Summary



# Aerobic Exercise- How Often, How Much, and How Hard?

**Aerobic exercise** 5 or more days a week for 30 minutes each session at a “moderate” level

- Start at a length of time you feel comfortable with and increase by 1-2 minutes every 2 days until you reach 30 minutes.
- Slowly build up to 30 minutes- Can be split into different activities to avoid overuse injuries
- **Moderate** means it should feel “somewhat hard” or you may have a “target heart rate”(64–76% of their age predicted maximal heart rate (220-age)).

# Strength Training- How Often, How Much, How Hard?

**Strength Training** (Recommended by the ACSM, ACC, AHA as part of a heart disease prevention program)

- 2-3 times a week
- 12-15 repetitions
- Use weight machines, free weights(dumbbells), elastic bands or body weight
- Train the front and back of major muscle groups (e.g., chest/back and biceps/triceps, hamstrings and quadriceps)

# Stop and Rest

## If you experience:

- Severe shortness of breath
- Dizziness
- Chest pain or pressure
- Nausea
- Excessive fatigue



*Tell your doctor if you experience any of these symptoms*



# Medications

- Just a reminder to take medications as instructed
- Medications can be key to better managing conditions that cause Heart Failure
- Discuss side effects with your physician
- Try to understand/see the connection between the medicine you are taking and any improvements happening in your health

# Start Today...

Every day is a fresh start. It's never too late or too early to invest in your heart health

When we take care of our hearts we reduce our risk of heart disease

Make yourself a priority