

# HEART FAILURE

Dr. BALINT, HAJNALKA

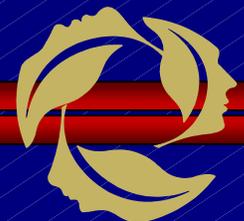
Research/ Clinical Fellow

Congenital Cardiac Centre for Adults

University Health Network

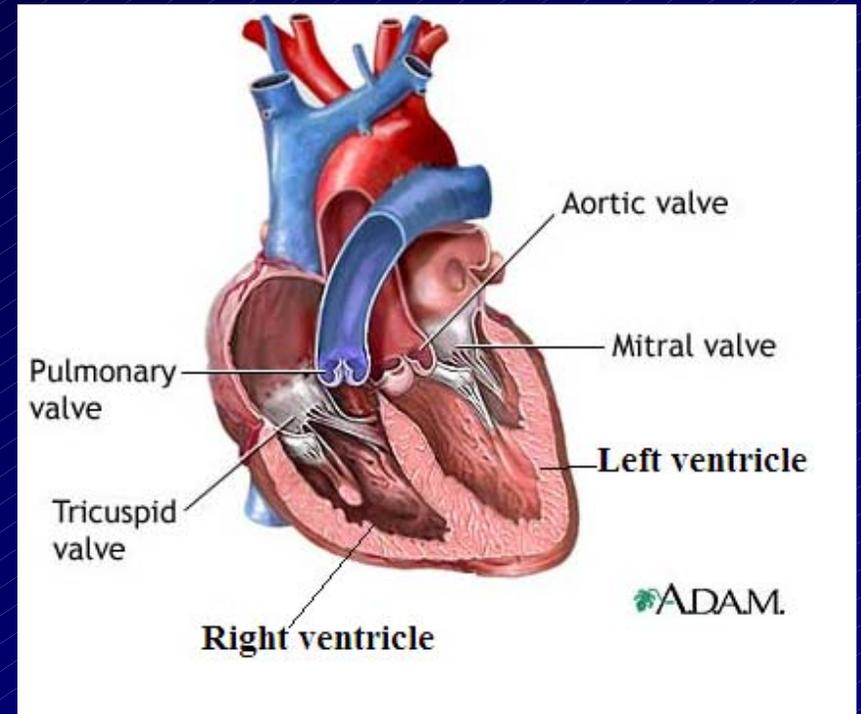
Peter Munk Cardiac Centre / Toronto General Hospital

Toronto, ON, Canada



# Heart job

- ♥ to contract vs. relax
- ♥ as it works, it forces the blood through the heart into the lung to pick up oxygen
- ♥ the blood with oxygen from your lungs returns to the heart and is pumped into the rest of the body through blood vessels
- ♥ to do its work, your heart must beat 60-90 times per minute. A healthy heart can pump 5 litres of blood every minute of your life.



# When the heart job fails

## ~HEART FAILURE~

- ♥ The heart can't pump enough blood throughout the body.
- ♥ Heart failure does not mean that your heart has stopped or is about to stop working.



# Heart failure causes

- ♥ Heart failure can result from any **structural** or **functional** cardiac disorder that impairs the ability of the ventricle to fill with or eject blood.



# Heart failure - type

- ♥ Heart failure is almost always a **chronic**, long-term condition, although it can sometimes develop suddenly (**acute**).
- ♥ This condition may affect the **right side**, the **left side**, or **both sides** of the heart.



# Sign, Symptoms

The weakening of the heart's pumping ability causes:

- ♥ Blood and fluid to back up into the lungs:  
eg. **shortness of breath, cough**
- ♥ The buildup of fluid in the feet, ankles and legs, eg.  
eg. **legs swelling** (edema)
- ♥ **Inability to perform simple exercise**, including grocery shopping or climbing a few stairs
- ♥ **Palpitations** (usually a symptom of irregular heartbeat, or **arrhythmia**)



# Tests performed when you are diagnosed

- ♥ Echocardiogram
- ♥ Chest x-ray
- ♥ Cardio-pulmonary test (CPT)
- ♥ Cardiac MRI or / and Chest CT scan
- ♥ ECG, which may also show arrhythmias
  
- ♥ Heart catheterization
- ♥ Nuclear heart scans (MUGA, RNV)



# Heart Failure

1. Prevention
2. Treatment



# 1. Prevention

♥ Lifestyle change

♥ Diet

♥ Sport



# Choose a healthy lifestyle

- ♥ avoid smoking, using drugs
- ♥ restrict alcohol
- ♥ maintain a healthy weight
- ♥ use of social support structures.



# Watch what you eat

lower your **salt** and **sodium** intake

- ♥ Look for foods that are labeled "low-sodium," "sodium-free," "no salt added," or "unsalted."
- ♥ Don't cook with salt or add salt to what you are eating.



# Watch how much you drink

- ♥ Usually no more than 8 glasses per day
- ♥ sometimes you may get more severe restriction in fluid intake per day



# Track your weight

Fluid overload:

- ♥ on a daily basis: at the same time  
on the same scale  
with little to no clothes on.
- ♥ weight gain: eg. 3 pounds in 2 days

Overweight:

- ♥ Try to lose weight



# Stay active

- ♥ Walk or ride a stationary bicycle
- ♥ Ask your doctor how much exercise is safe for you, basen on your degree of heart failure and how well you do on tests that check the strength and function of your heart.
- ♥ DO NOT exercise on days that your weight has gone up from fluid retention or you are not feeling well.



# Rest enough

- ♥ Get enough rest, including after exercise, eating, or other activities. This allows your heart to rest as well.
- ♥ Keep your feet elevated to decrease swelling.



# Comfort tips

Two of the most common symptoms of heart failure are shortness of breath and edema.

- Some patients find it easier to breathe at night if they **sleep with a couple of pillows** behind their backs.
- Also, **support stockings** may help alleviate edema in the ankles and legs during the day. Make sure that the elastic is not so tight that it restricts your circulation.



## 2. Treatment

- ♥ Medications
- ♥ Risk factor control: elevated blood pressure, *diabetes mellitus*
- ♥ Heart rhythm (arrhythmia) control, pacemakers
- ♥ Interventional or surgical correction



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# Medications

♥ **Diuretics** eg. Lasix (Furosemide)

- there are several types and they help rid your body of fluid and sodium.

♥ **ACE inhibitors** eg. Enalapril, Ramipril

- these medications open up blood vessels and decrease the work load of the heart. These have become an important part of treatment



# Medications

- ♥ **Beta-blockers** eg. Metoprolol, bisoprolol
  - this is particularly useful for those with high heart rate or a history of coronary artery disease
- ♥ **Digitalis glycosides** – Digoxin
  - increase the ability of the heart muscle to contract properly; prevent heart rhythm disturbances



# Possible side effects of medications include

- ♥ Low blood pressure (hypotension)
- ♥ Light-headedness and fainting
- ♥ Headache
- ♥ Gastrointestinal upset (such as nausea, heartburn, diarrhea)
- ♥ Cough
- ♥ Muscle cramps
- ♥ Digitalis toxicity



# Hospitalization

- ♥ Sometimes is required for **acute CHF**.
- ♥ Hospitalized patients may receive oxygen and **intravenous medications** such as vasodilators and diuretics.
- ♥ Sometimes you may need medicines called **inotropic agents** help improve the heart's ability to pump blood.  
eg. Dobutamine- is given by IV.



# Outlook (Prognosis)

- ♥ Heart failure is a serious disorder, that in advanced stage carries a decrease in life expectancy.
- ♥ Many forms of heart failure **can be controlled** with medication, lifestyle change, and correction of any underlying disorder.



# Possible Complications

- ♥ Pulmonary edema
- ♥ Total failure of the heart to function (circulatory collapse)
- ♥ Arrhythmias including lethal arrhythmias



# When to Contact a Medical Professional

- ♥ **Call your health care provider** if: weakness, increased cough or sputum production, sudden weight gain or swelling, or other new or unexplained symptoms develop.
- ♥ **Go to the emergency room or call the local emergency number (such as 911)** if you experience severe crushing chest pain, fainting, or rapid and irregular heartbeat (particularly if other symptoms accompany a rapid and irregular heartbeat).



# In summary

- **Get checked** in case of signs or heart failure
- Take the **meds** regularly
- Follow the **check-up** plan
- Try to have a healthy **lifestyle: be active**
- Watch your **weight** and **do not eat salty**
- Get yearly **flu- shot**, every 5 year pneumovax

