

# Systole

# Diastole

Aortic valve → opened      Mitral Valve → closed

Aortic valve → closed      Mitral Valve → opened

If the opposite happens we get a **systolic** murmur:  
i.e. (aortic stenosis)  
(mitral regurgitation)

If the opposite happens we get a **diastolic** murmur:  
i.e. (aortic regurgitation)  
(mitral stenosis)

S1

S2

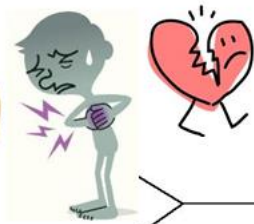
S1

**Parvus et Tardus S4!**

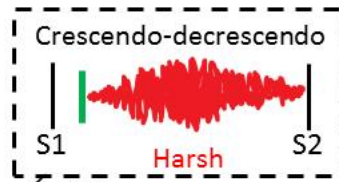
## Aortic Stenosis



Left Ventricular Hypertrophy



1- Angina 2- Syncope 3- HF



Radiates to "carotid" a.

## Mitral Stenosis

Most common cause:

**RF!**

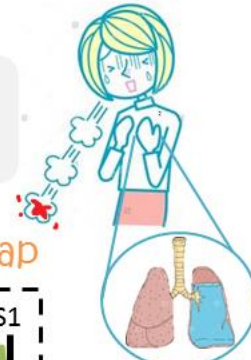


"Fish mouth"-shaped orifice



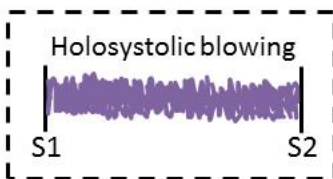
-diuretics -β blockers  
anticoagulants -SBE prophylaxis

Opening Snap



- Dyspnea  
- Palpitations  
- Hemoptysis  
- Fatigue

## Mitral Regurgitation



**S3!**

**MVP**



Right-sided HF

Fatigue  
Dysnea



Diagnosis:  
Echo 2D/color doppler  
The choice for all

## Aortic Regurgitation

Widened Pulse Pressure



"water-hammer" (Corrigan) pulse

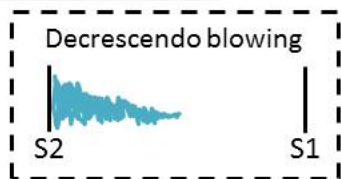


Austin  
"Flint"stones murmur



Causes:

• "Leaflets" abnormalities  
• Aortic annulus dilation



Asymptomatic → medical  
Symptomatic → surgical



**S3, S4**  
Advanced AR

