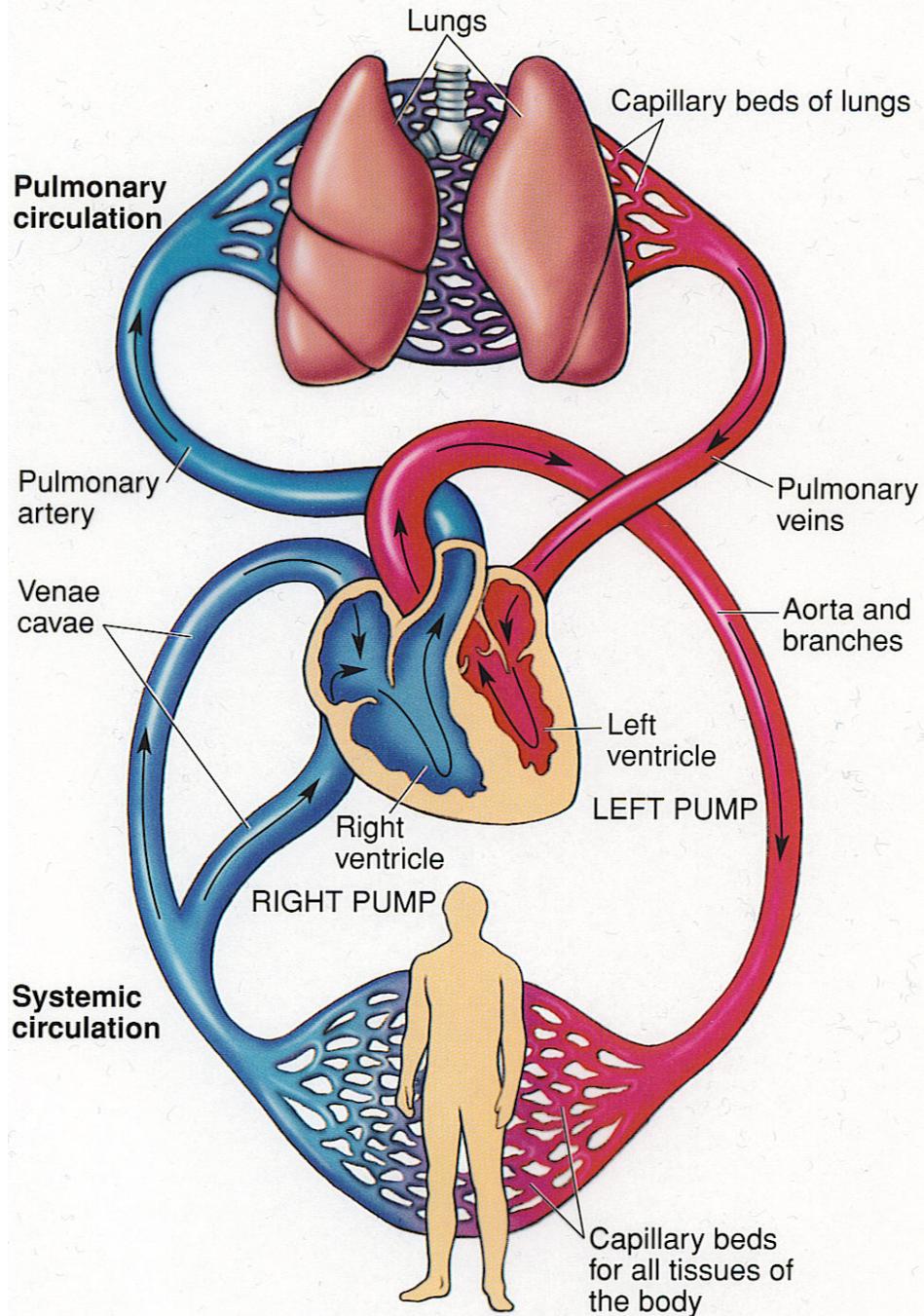
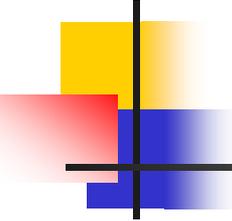


Heart Failure

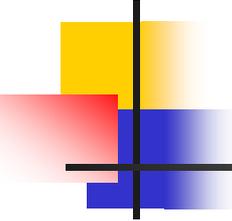
Chapter 21
Williams & Hopper





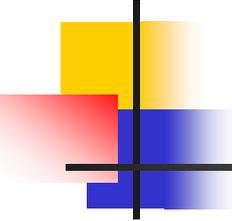
Heart Failure

- Inability of heart to pump enough blood to meet needs of body
- Results of HF
 - decreased tissue perfusion
 - fatigue
 - fluid volume overload
 - Reduced quality/length of life



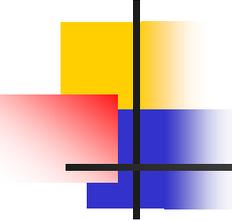
Left Sided Heart Failure

- Impaired left ventricular functioning
- Terms:
 - Afterload – force that must be generated by the left ventricle to eject blood through the aorta
 - Peripheral vascular resistance (PVR) – pressure within the aorta and arteries



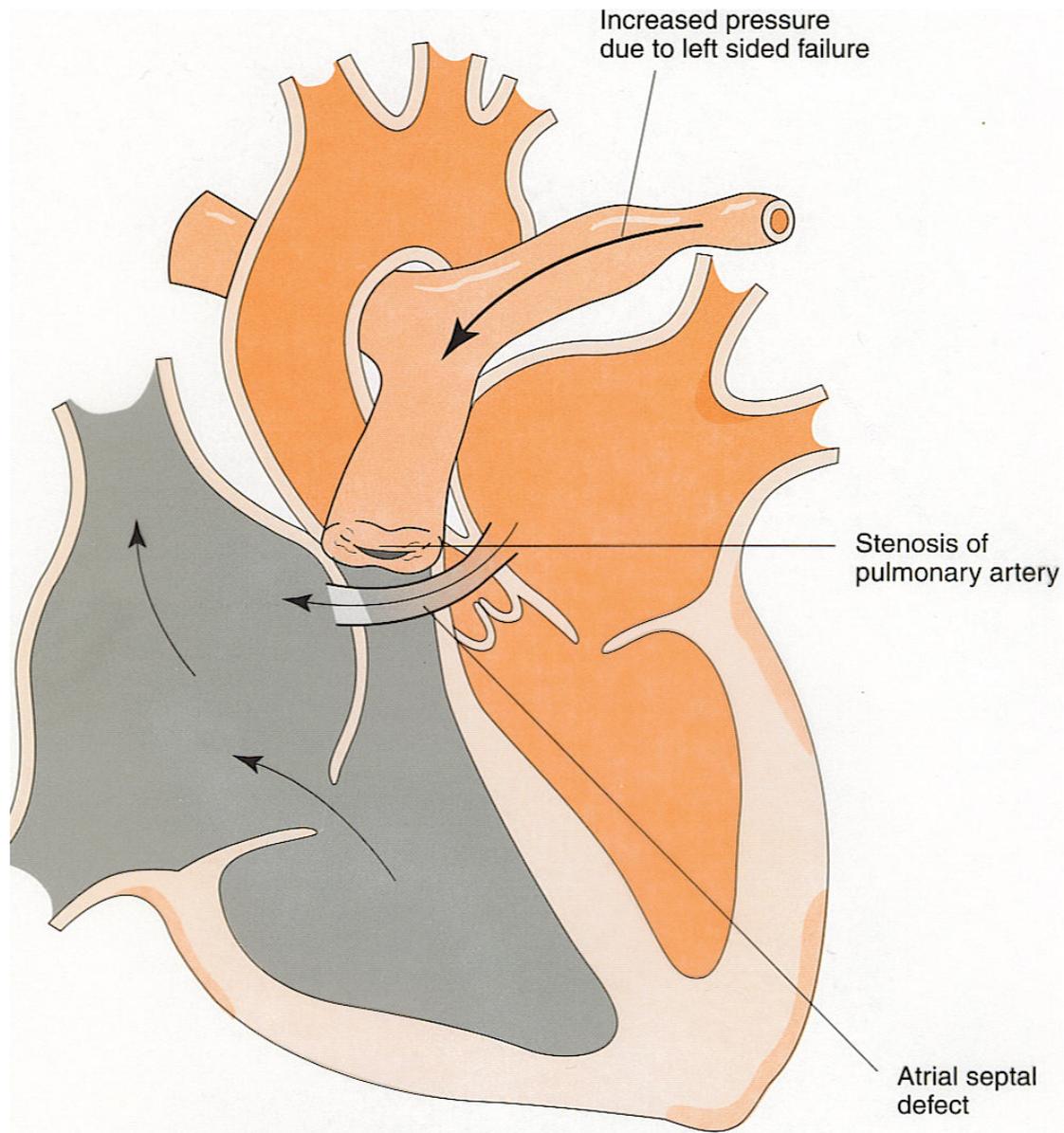
Signs and symptoms

- Shortness of breath
- Cyanosis
- Pulmonary edema or fluid in lungs



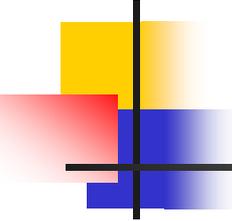
Right Sided Failure

- Impaired right ventricular functioning
- Major cause is left sided heart failure
 - Fluid in lungs and increased pulm pressure
 - Continued resistance the right ventricle pumps against
 - Right sided heart failure



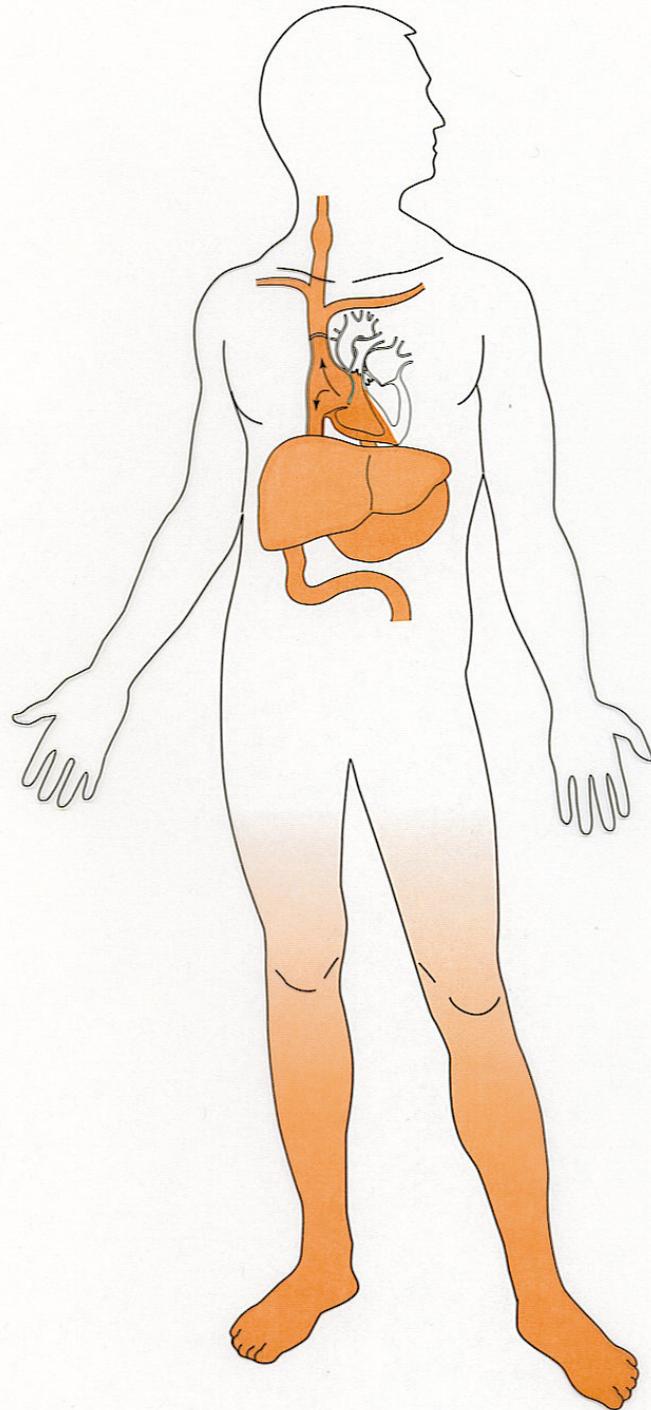
Major causes of right-sided heart failure.

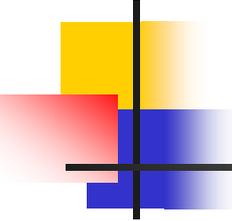
Figure 21-3. Causes of right-sided heart failure.



Signs & Symptoms

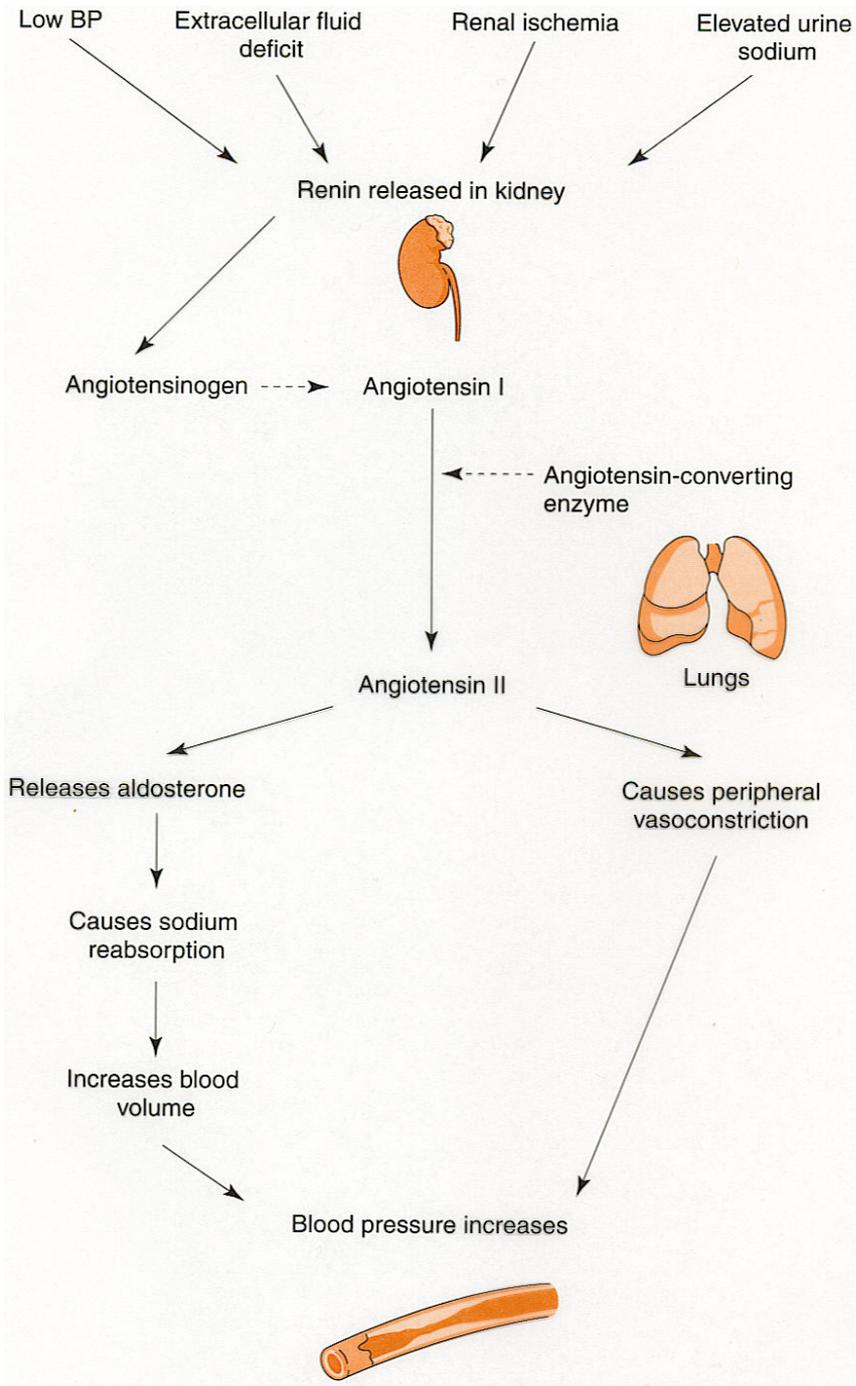
- Distended jugular veins
- Peripheral edema
- Anorexia, nausea and abd pain
 - Congestion in GI tract
- Hepatomegaly/splenomegally

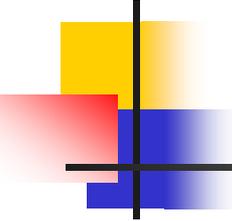




Compensatory Mechanisms

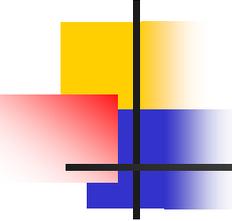
- Increased heart rate
- Activation of the renin-angiotensin-aldosterone system
 - ↓ urine output
- Dilatation and hypertrophy of cardiac muscle





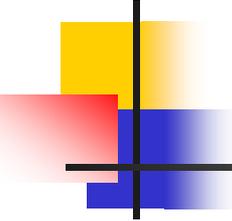
Acute Heart Failure (Pulmonary Edema)

- Congestion of alveoli
- Life threatening condition
- Compensatory mechanisms fail



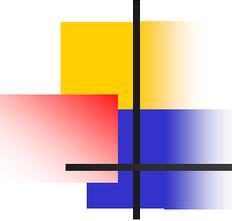
Signs & Symptoms

- Anxiety, restlessness
- Pale skin/mucous membranes
- Clammy and cold skin
- Sever dyspnea – **orthopnea**
- Coughing, pink frothy sputum
- Crackles and wheezes



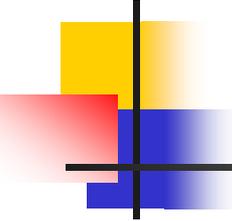
Treatment

- Medical emergency
 - Pt will drown in own secretions
- Intensive care unit
- Treat underlying cause



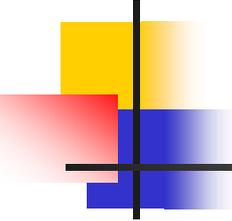
Treatment (cont.)

- Semi or high-Fowlers position
- Oxygen – ET intubation if severe
- Medications
 - MSO4 IV
 - Diuretics
 - Inotropic agents
- Frequent VS, daily wts, urinary output, pulmonary pressure



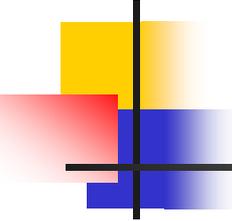
Chronic Heart Failure

- Progressive disorder
- s/s worsen over time
- Can be right sided or left sided
 - Williams & Hopper (Table 21-4 pg. 390)



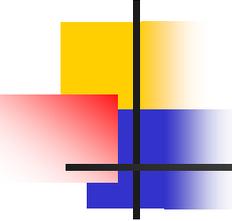
Signs & Symptoms

- Fatigue and weakness
- Dyspnea – orthopnea
- Cough
- Crackles and wheezes
- Tachycardia
- Chest pain



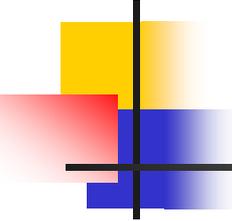
Signs & Symptoms (cont.)

- Cheyne-Stokes Respiration
- Edema
- Nocturia
- Cyanosis
- Altered mental status
- Malnutrition



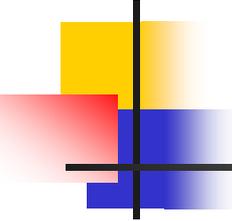
Complications

- Hepatomegaly
- Splenomegaly
- Pleural effusion
- Left ventricular thrombus and emboli
- Cardiogenic shock



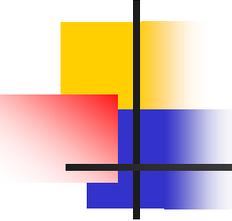
Diagnostic Tests

- CXR
- EKG
- Stress testing/nuclear imaging
- Echocardiography
- Cardiac catheterization
- Hemodynamic monitoring
- Laboratory testing



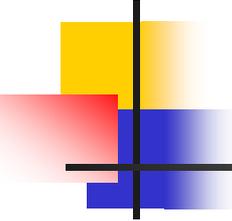
Treatment

- Oxygen
- Activity
 - Regular exercise if patient stable
- Sodium restricted diet



Treatment (cont.)

- Drug therapy
 - Diuretics
 - Inotropic agents
 - Vasodilator drugs
- Mechanical Assistive Devices
 - Intra-Aortic Balloon Pump
 - Ventricular assist devices
- Surgical Management



Nursing Process

- Assessment
- Nursing diagnosis
- Planning
- Nursing interventions
- Evaluation