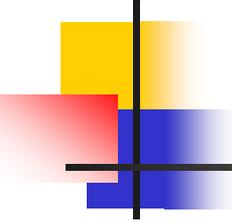


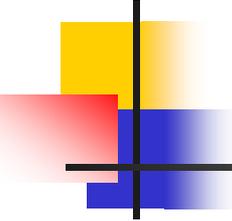
Cardiovascular Surgery

Chapter 22
Williams & Hopper



Preparation

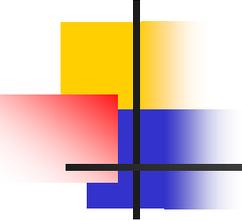
- Admitted 1-3 days prior to surgery
- Baseline nursing assessment
- Routine meds held
 - Coumadin – stopped 4-5 days
 - Heparin – stopped 4 hrs
 - Diuretics
 - Insulin/oral hypoglycemics
- Pre-op teaching



Cardiopulmonary Bypass

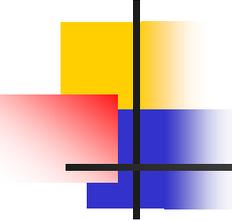
- Blood temporarily diverted
 - Special pump
 - Performs function of heart
 - Bloodless operating field
 - Motionless operating field





Coronary Artery Bypass Graft (CABG)

- Bypass of occluded coronary artery (revascularization)
- One or more bypasses can be performed
- Graft
 - Saphenous vein from leg
 - Internal mammary (LIMA or RIMA)

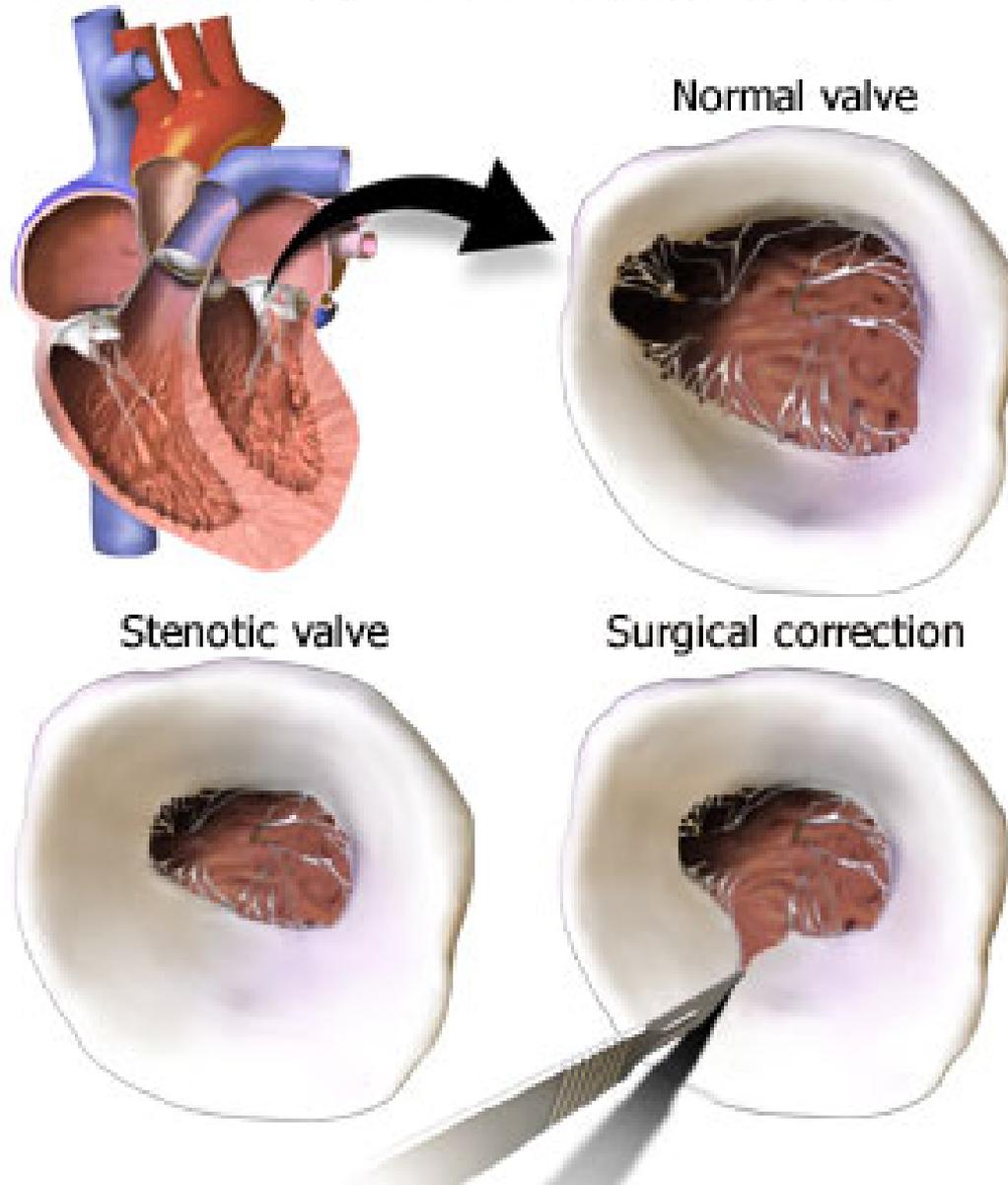


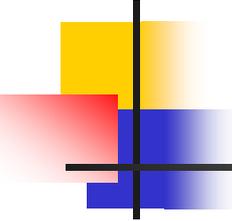
Heart Valve Repair

- Commissurotomy
 - Valve cusps incised with a knife or broken apart with a dilator
- Annuloplasty
 - Sutures or a ring is placed in the valve annulus
 - Improves closure of leaflets
 - Mitral valve most common valve repaired

Commissurotomy

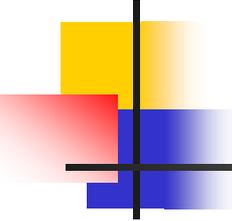
A surgical procedure performed to open a stenotic (narrowed) valve. A stenotic valve restricts the flow of blood. A scalpel incision widens the valve.





Heart Valve Replacement

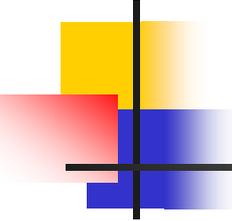
- Mechanical
 - Durable
 - Turbulent blood flow
 - Hemolysis
- Biological
 - 3 sources
 - Porcine (pig), bovine (cow), allografts (human)
 - Low incidence of thrombus formation
 - Not as durable as mechanical



Ventricular Aneurysm Repair

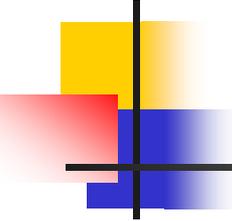
- Indications

- Persistent angina
- s/s heart failure
- Left ventricular failure
- Tachydysrhythmias



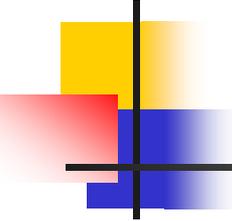
Cardiomyoplasty

- Pt's own skeletal muscle attached to heart
 - Muscle stimulated by cardiomyostimulator
- Benefits
 - Improved contractility – failing heart
 - Reduce need of transplant



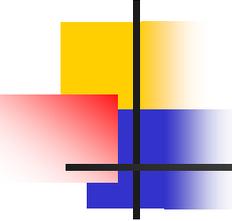
Cardiac Trauma

- Nonpenetrating
 - Cardiac contusions
 - Bedrest and observation
 - Bleeding in pericardial sac – cardiac tamponade
 - Pericardiocentesis
- Penetrating
 - Obvious external injury



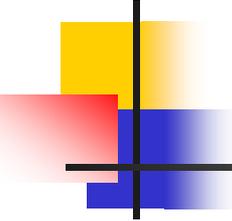
Cardiac Tumors

- Primary and secondary
- Benign
 - Myxoma
 - Soft, gelatinous, intracavitary mass attached to endocardium by peduncle
 - Good prognosis with removal
- Malignant
 - Sarcomas – majority of malignant cardiac tumors
 - Secondary carcinomas metastasized



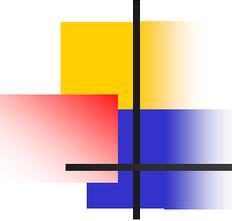
Complications of Cardiac Sx

- Cardiovascular
- Pulmonary
- Renal
- Gastrointestinal
- Immune & Humoral Systems
- Neurological
- Psychological



Cardiac Transplantation

- End-staged cardiac dx
- Strict criteria (Williams & Hopper, Table 22-2, pg 412)
- Immunosuppressive therapy – begins pre-operatively
 - Risk for rejection is highest immediately after sx



Vascular Surgeries

- Embolectomy & Thrombectomy
- Vascular bypasses and grafts
 - AV shunts/fistulas
 - Provide easy circulatory access
 - hemodialysis
- Endarterectomy