



Cardiac Care - Quick Reference

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1) VALVES & STRUCTURAL HEART

Open Valve Surgery (general)

What it is: Sternotomy or minimally invasive open surgery to repair/replace a valve

When used: Severe valve disease when patient can tolerate surgery

Why open vs transcatheter:

- **Better durability** in many cases (esp. younger pts)
- Can address multiple problems at once (CABG + valve, other repairs)

Mobility & risks:

- **Sternal precautions** (no heavy pushing/pulling; PT/OT modifies transfers)
- Higher **bleeding, atelectasis, delirium, infection** risk vs cath-based
- Watch for postop **AF**, tamponade, low CO

MVR – Mitral Valve Replacement

What it is: Replacement of mitral valve (mechanical or bioprosthetic)

When used: Severe MR/MS not suitable for repair

Why replacement vs repair: repair preferred when feasible (native valve preservation), replacement when not

Mobility & risks:

- Mobility similar to other open hearts + sternal precautions
- Risks: **stroke, bleeding, HF**, dysrhythmias
- Mechanical valve → **lifelong anticoag** considerations for falls/therapy

TMVR – Transcatheter Mitral Valve Replacement

What it is: Catheter-based mitral replacement (varies by anatomy/approach)

When used: High surgical risk or redo valve situations

Why TMVR vs open MVR:

- Less invasive, faster recovery
- Used when open surgery risk too high

Mobility & risks:

- Access-site restrictions (groin most commonly)
- Risks: vascular bleeding, embolic events, hypotension, rhythm issues



TVR – Tricuspid Valve Repair

What it is: Surgical repair of tricuspid valve

When used: Severe TR (often with RV failure), sometimes with other valve surgery

Why repair: preserves valve + reduces need for long-term anticoag in many cases

Mobility & risks:

- Watch volume status (TR/RV failure = edema, ascites)
- Risks: worsening RHF, arrhythmias, renal congestion
- PT/OT: watch **orthostasis** + fatigue tolerance

TAVR – Transcatheter Aortic Valve Replacement

What it is: Aortic valve replaced via catheter (usually femoral artery)

When used: Severe aortic stenosis (or some AI cases) esp. older pts / higher risk

Why TAVR instead of open AVR:

- **Older / frail / high surgical risk**
- Avoids sternotomy + bypass
- Often **shorter LOS** and quicker functional recovery

Why open AVR instead of TAVR (when that's chosen):

- Younger pts needing long durability
- Anatomy not suitable for TAVR
- Need for other open procedures simultaneously (e.g., CABG)

Mobility & risks:

- **Groin precautions** after sheath removal; then early ambulation
- Big risks: **heart block** → may need **PPM**, stroke, vascular bleeding
- PT/OT: monitor BP, dizziness; watch access-site hematoma



2) AORTA & ANEURYSM

Aortic Arch Repair / Aortic Repair (AORx)

What it is: Surgical repair of diseased aorta (often open)

When used: Dissection, aneurysm, arch pathology

Why open vs endovascular: location/complexity; arch often needs open/hybrid

Mobility & risks:

- Higher neuro risk; watch cognition/strength changes
- Bleeding, spinal cord ischemia (depending on level), renal injury
- PT/OT: neuro checks + gradual activity tolerance

EVAR – Endovascular Aneurysm Repair (abdominal)

What it is: Stent graft placed in abdominal aorta

When used: AAA meeting size/risk criteria or symptomatic aneurysm

Why EVAR vs open AAA repair:

- Less invasive, faster recovery
- Preferred in many higher-risk patients if anatomy allows

Mobility & risks:

- Early mobility after access-site stability
- Risks: **endoleak**, contrast nephropathy, limb ischemia
- Follow-up imaging matters (OT/PT should know it's not "one and done")

TEVAR (your sheet says TVAR) – Thoracic Endovascular Aneurysm Repair

What it is: Endovascular stent graft in thoracic aorta

When used: Thoracic aneurysm/dissection features

Why TEVAR vs open thoracic repair: less invasive, often safer in high risk

Mobility & risks:

- Key risk: **spinal cord ischemia** → new LE weakness, bowel/bladder changes
- Strict BP goals post-op
- PT/OT: **immediately escalate** if new neuro deficits



3) LAA (AFIB STROKE PREVENTION)

LAAE / LAA Clip / Watchman

What it is: Closing off the left atrial appendage (major clot source in Afib)

When used: Afib stroke prevention when anticoagulation is hard/unsafe long term

Why these vs anticoag:

- Bleeding risk, falls, GI bleed history, adherence issues

Mobility & risks:

- Usually early mobility
- Risks: pericardial effusion/tamponade, device embolization (Watchman), stroke
- PT/OT: still consider temporary anticoag early after device placement

4) CORONARY DISEASE & MI

Stent (PCI)

What it is: Balloon + stent to open coronary artery

When used: ACS (STEMI/NSTEMI) or significant CAD

Why PCI vs CABG:

- Faster reperfusion in STEMI
- Less invasive; good for focal lesions

Mobility & risks:

- **Radial access:** quicker mobility, fewer bleeding issues
- **Femoral access:** longer bedrest, higher bleeding risk
- Biggest risk: **stent thrombosis** if DAPT interrupted

CABG

What it is: Bypass grafts around blocked coronaries

When used: Multivessel disease, left main, diabetes + diffuse CAD

Why CABG vs stent:

- Better outcomes for diffuse/multivessel disease in many pts
- Durable revascularization



Mobility & risks:

- Sternal precautions + early ambulation
- Risks: AF, atelectasis, infection, delirium
- PT/OT: teach safe transfers, pacing, breathing strategies

STEMI / NSTEMI

What it is: Myocardial infarction patterns (ST elevation vs not)

When used: Diagnosis of acute coronary syndrome

Why it matters functionally: STEMI needs immediate reperfusion; NSTEMI risk stratifies

Mobility & risks:

- Watch exertional tolerance + arrhythmias
- PT/OT: staged activity; stop for chest pain, diaphoresis, hypotension

ICM vs NICM

ICM: Cardiomyopathy from ischemia (CAD/MI history)

NICM: Cardiomyopathy from non-ischemic causes (viral, alcohol, genetic, chemo, etc.)

Why it matters: influences meds, device candidacy, prognosis

Mobility & risks: reduced EF → orthostasis, low tolerance; monitor for decompensation

5) EP / RHYTHM MANAGEMENT

Ablation

What it is: Catheter energy burns/freeze to eliminate arrhythmia pathways

When used: Afib/flutter/SVT/VT in select cases

Why ablation vs meds: refractory symptoms, med intolerance, rhythm control goals

Mobility & risks: groin precautions, bleeding; watch for recurrence early

Maze Procedure

What it is: Surgical ablation pattern (often with open heart surgery)

When used: Afib during valve/CABG surgery

Why Maze: improves rhythm control long-term in appropriate pts

Mobility & risks: like open heart; rhythm monitoring, anticoag plan



PPM – Permanent Pacemaker

What it is: Device pacing the heart when native conduction fails

When used: symptomatic bradycardia, AV block, some post-TAVR blocks

Why PPM vs “watch and wait”: persistent block/brady + symptoms/hemodynamic impact

Mobility & risks:

- **No lifting arm above shoulder** on implant side ~4–6 weeks (protect leads)
- Risks: hematoma, infection, lead dislodgement
- PT/OT: modify walker use, transfers, overhead tasks

AICD / ICD

What it is: Detects and shocks dangerous ventricular rhythms; may also pace

When used: EF low + risk of sudden cardiac death, history of VT/VF

Why ICD: prevents sudden death; meds alone may not

Mobility & risks: similar arm precautions early; psychosocial impact after shocks

AV Wires

What it is: Temporary epicardial pacing wires after cardiac surgery

When used: Post-op pacing backup

Mobility & risks:

- Secure wires for ambulation
- Risk at removal: bleeding/tamponade → monitor closely post removal

6) MECHANICAL CIRCULATORY SUPPORT (MCS)

IABP

What it is: Balloon in aorta inflates/deflates to improve coronary perfusion + reduce afterload

When used: cardiogenic shock, severe ischemia, bridge to definitive therapy

Why IABP vs Impella/ECMO: less support but simpler/less invasive; pt selection

Mobility & risks: **strict bedrest**, leg straight; limb ischemia, bleeding

Impella

What it is: Pump that unloads LV and increases forward flow

When used: cardiogenic shock, high-risk PCI

Why Impella vs IABP: provides stronger cardiac output support

Mobility & risks: bedrest; hemolysis (tea-colored urine), bleeding, migration



LVAD

What it is: Implanted pump assisting LV output

When used: end-stage HF (bridge or destination)

Why LVAD vs inotropes: durable support, improved survival/QOL in selected pts

Mobility & risks:

- Mobility encouraged with trained staff; manage driveline + controller
- Risks: stroke, driveline infection, bleeding (anticoag), suction events
- PT/OT: MAP-based BP; alarms; never let batteries disconnect

ECMO

What it is: External circuit oxygenates blood and supports heart/lungs

When used: severe cardiac/resp failure refractory to conventional support

Why ECMO vs vent/inotropes alone: last-line support when those fail

Mobility & risks: bedrest; bleeding, thrombosis, limb ischemia, neuro injury; circuit safety

7) HEMODYNAMIC MONITORING & VASCULAR ACCESS

ART line

What it is: continuous BP monitoring + ABGs

When used: vasoactive drips, shock, frequent labs

Why ART vs cuff: accuracy, beat-to-beat trends

Mobility & risks: mobility usually ok; bleeding, dislodgement, infection

CVC (often IJ)

What it is: central access (pressors, CVP, irritant meds)

When used: vasopressors, poor access, central monitoring

Why CVC vs PIV: safe for pressors/vesicants, more reliable

Mobility & risks: ok with secure line; CLABSI, air embolism, thrombosis

Swan-Ganz (PA catheter)

What it is: catheter measuring PA pressures, CO, SvO₂, wedge

When used: complex shock states, advanced HF, transplant/LVAD workups

Why Swan vs CVC/ART: gives *cardiac output* + *filling pressures* not just BP/CVP

Mobility & risks: movement limited; arrhythmias during positioning; rare PA rupture



PICC / Midline / PIV

PICC: longer term IV therapy; **LIMB ALERT**

Midline: longer than PIV but not central

Mobility: generally safe; protect from traction

Risks: thrombosis, infection; PT/OT watch line placement during ROM

8) “Fistula vs PermCath vs Graft vs Trialysis” (Dialysis Access)

AV Fistula

What it is: surgically created artery–vein connection

When used: long-term HD access

Why fistula: best longevity, lowest infection risk

Mobility & risks: protect limb (no BP/IV sticks), thrill/bruit checks

AV Graft

What it is: synthetic conduit between artery and vein

Why graft: faster usable than fistula but more infection/thrombosis than fistula

PermCath (Tunneled dialysis catheter)

What it is: long-term catheter (often IJ) for HD

Why: when fistula/graft not ready/possible

Risks: **high infection** risk; dressing integrity is huge

Trialysis

What it is: large-bore central line for CRRT/HD + extra lumen

When used: ICU renal failure needing CRRT

Mobility: limited; risks = bleeding, infection, line dislodgement



9) CATH LAB PROCEDURES

R Heart Cath

What it is: measures pressures (RA/RV/PA/wedge), CO

When used: pulmonary HTN eval, HF workup, shock characterization

Mobility & risks: access precautions; arrhythmias; bleeding

L Heart Cath

What it is: coronary angiography +/- PCI

When used: ACS, ischemia eval

Mobility & risks: access precautions; contrast nephropathy; bleeding

10) VASCULAR SURGERY / IR

Thrombectomy

What it is: removing a clot (arterial/venous; sometimes stroke)

When used: acute limb ischemia, stroke, occluded access, PE in some contexts

Why: restores perfusion rapidly

Mobility & risks: neurovascular checks, bleeding; watch reperfusion pain/swelling

Endarterectomy (carotid common)

What it is: surgical plaque removal

When used: significant stenosis to prevent stroke

Mobility & risks: neuro checks, neck hematoma/airway risk; BP control

Carotid Stent / Peripheral Stent / Balloon

What it is: endovascular opening of narrowed vessel

Mobility & risks: access precautions, neurovascular checks, bleeding/embolization

Fem-Pop Bypass

What it is: bypass graft around blocked femoral/popliteal segment

When used: severe PAD/critical limb ischemia

Mobility & risks: incision care; pulses; compartment syndrome; graft occlusion



11) CHEST TUBES, DRAINS, ATRIUM

MCT (large chest tube) / Blake / JP

What it is: drains air/blood/fluid (MCT), smaller surgical drainage (Blake/JP)

When used: post-op, pneumothorax, hemothorax, effusions

Why big vs small: big handles thick blood/air; blake is gentler/post-cardiac

Mobility & risks:

- Ambulate if system secured **below chest**
- **Never clamp** unless ordered
- Risks: accidental removal, infection, subQ emphysema

Atrium: suction vs water seal

Water seal: passive drainage; monitors air leaks

Suction: increases evacuation (air/fluid) if ordered

Mobility: ok with secure system; watch for tipping/spillage

12) RESPIRATORY SUPPORT

Nasal Cannula (NC)

What it is: low-flow oxygen

When used: mild hypoxia, stable work of breathing

Why NC: comfortable, allows talking/eating

Mobility & risks: easy mobility; risk = drying/skin breakdown

Simple Mask / Non-Rebreather

Simple mask: moderate O₂ needs

NRB: high O₂ concentration for acute hypoxia

Why NRB vs NC: when you need rapid higher FiO₂

Mobility: limited by tubing and exertion tolerance

Airvo / HFNC

What it is: heated humidified high-flow oxygen

When used: hypoxia needing more support but not full BiPAP/intubation

Why HFNC vs NRB: better tolerance, some PEEP effect, secretion support

Mobility: often doable with planning; watch desats during activity



BiPAP

What it is: noninvasive ventilation with inspiratory + expiratory pressures

When used: hypercapnia (COPD), increased WOB, pulmonary edema

Why BiPAP instead of NC/HFNC:

- **Ventilates** (blows off CO₂) + reduces WOB
- Helps **pulmonary edema** by positive pressure
NC/HFNC mainly improve oxygenation; BiPAP helps ventilation + oxygenation

Mobility & risks:

- Mobility usually **limited during active BiPAP**
- Risks: aspiration (esp. vomiting), skin breakdown, hypotension, intolerance
- PT/OT: coordinate sessions off BiPAP if safe; monitor fatigue/CO₂ signs

CPAP

What it is: continuous pressure (no extra inspiratory boost)

When used: OSA, some pulmonary edema, oxygenation support

Why CPAP vs BiPAP: when oxygenation/PEEP support needed more than ventilation

13) GI/GU DEVICES

Dobhoff / NG / PEG

Dobhoff: small-bore feeding tube

NG: decompression/feeds depending

PEG: long-term feeding access

Mobility & risks: aspiration risk; secure tubing; pause feeds if needed for therapy per protocol

Rectal tube

When used: severe diarrhea/incontinence to protect skin

Risks: mucosal injury; monitor output/skin

Foley / PureWick

Foley: strict I&O, retention, peri-op

PureWick: external female urine management

Mobility & risks: CAUTI (Foley); dislodgement/skin issues (PureWick)