



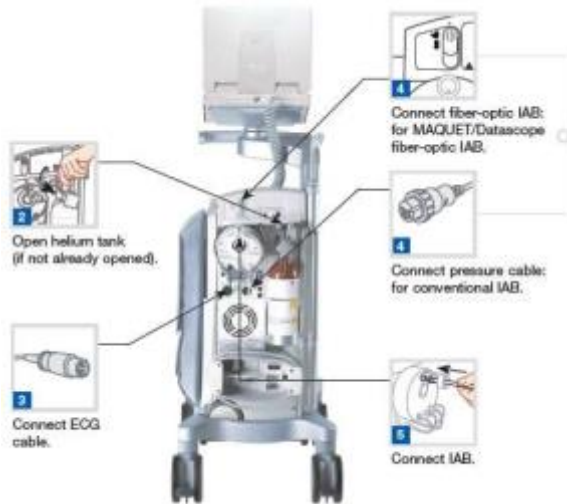
**ACMC IABP Guide**

**Indications:** Refractory angina, Acute MI, Vent failure, Cardiogenic shock, wean from bypass.  
**Contraindications:** Aortic insuff, AAA, severe PVD, Obese w ↑ groin scars (use with a sheath).  
**Insertion:** (Freq) Lt Fem. artery → descend thoracic aorta (CXR tip @ 2<sup>nd</sup> → 3<sup>rd</sup> ICS, base ↑ renals).  
**Complications:** Limb ischemia, bleeding, balloon leak, infection, aortic dissection.

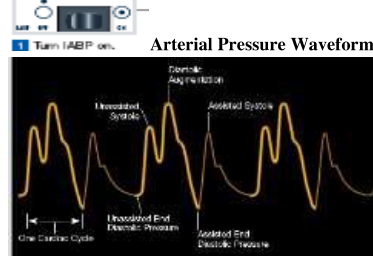
**Inflation** occurs at the onset of diastole (dicrotic notch), when aortic valve closes. Appears as a sharp “V.” Inflation displaces blood in the aorta & ↑ aortic pressure & MAP, ↑ supply of O<sub>2</sub> to the myocardium and ↑ **coronary artery perfusion.**

**Deflation** occurs just prior to systole (before aortic valve opens). Results in a ↓ in (assisted) end diastolic & systolic pressures. ↓ **afterload**, cardiac workload & left ventricular O<sub>2</sub> demand. ↑ C.O.

**CS300 IABP START UP:**



(Top of left side / near back)



- \***Timing** = inflation /deflation of balloon in cardiac cycle
- \***Trigger** = \*Primarily ECG (R wave) vs Pressure (upstroke of AP waveform)
- \***End Points:** ↑ MAP
- Diastolic Augmentation >Systole
- Assist Diastole < Unassist Diastole
- Assist Systole < Unassist Systole

\***SUPPLIES NEEDED:** 60cc syringe, stopcock, scissors & Kelly, 500ml bag NS, pressure bag, ECG & Arterial pressure cable, Pressure tubing & transducer (max 8ft), IABP flowsheet, ? x-tra helium tank if <25%.

\***PT ASSESS:** ✓ radial pulses to assure balloon has not migrated up to Lt SC artery & pedal pulses (limb ischemia), Insertion site (✓ for bleeding), IAB cath tubing (✓ for bld), flush line, U.O.

**TRANSFERRING IABP→IABP:** Turn on IABP, match settings, attach ECG leads next to current leads, transfer IAP line (level/ 0\*\*off-pt/open-air), Press Stand By on active pump, transfer helium line & start transfer IABP. \*Plug IABP in, turn inverter ON. \***Augmentation alarm** set 10mmHg ↓ pt's augmented diastolic pressure.

\*Keep pressure bag w NS (remove air from IV) @ 300mmHg > 3ft above transducer. Level transducer @ phlebostatic axis – mid Axillary. \*\*If fiberoptic (orange cable) ∅ need to zero/level. Internally calibrates.

**MISC INFO:**

- \***Auto mode** = auto lead & trigger select, timing, auto management of irreg rhythms.
- \*If IABP alarms: push silence, push **help** button. ? Call 800# on pump.
- \*Main concern in transport: ∅ disruption of ECG signal, arterial pressure or helium flow.
- \*Must always have ≥ ½ IAB pressure / IAB status (keeps membrane from getting a clot).
- \*IABP Wt = 125#. \*Always put IABP in standby prior to flushing IAP line.

**TROUBLESHOOTING:**



= Normal balloon pressure waveform (\*\*)

- \*If not sensing “R” wave: ↑ gain or change ECG lead.
- \*If IAB kinks: See rounded waveform. ?D/T HOB>30°. Lower HOB until get chair (\*\*) waveform.
- \*If see IAB leak: Turn pump off. Rec. MD to remove within 30mins. Turn pump on q5 mins to prevent clot.
- \*If machine dies: Disconnect at helium extender tubing, attach 3-way stopcock & 60ml syringe, (asp 1st to ✓ for blood), manually inflate & deflate IAB (quickly) w 40-50cc air q5 mins.

**TIMING ISSUES:** ✓Timing in 1:2 “Fiddle to the Middle” ↑inflate/↓deflate time(Semiauto mode)

- Early inflation** = inflation of IAB prior to aortic valve closure (prior to dicrotic notch).  
Effect = ↑ MV02 demand, aortic regurg, ↑ afterload.
- Late inflation** = inflation of IAB after closure of aortic valve (after dicrotic notch), absence of sharp V, sub-optimal augmentation. Effect = sub-optimal coronary artery perfusion.
- Early deflation** = premature deflation of the IAB during the diastolic phase. Effect = sub-optimal coronary perfusion & afterload reduction, angina, ↑ MV02 demand.
- Late deflation** = Assisted = unassisted end-diastolic pressure, diastolic augment may be widened.  
Effect = no afterload reduction, ↑ MV02 consumption.

**RESUSCITATION:**

- \***VF/VT ∅ Pulse:** Auto mode goes to pressure trigger, CPR..., OK to defib (IABP is grounded).
- \***Asystole:** Auto mode → pressure, CPR...etc. Will return to ECG trigger if ROSC. ?mute alarm.
- \***PEA:** If keep in Auto mode, will have ECG rhythm interference. Go to semi-auto mode, change to pressure trigger & restart. CPR...etc.
- \*A Fib: After 16 irreg beats, goes into “Auto R wave” deflate.
- \*If HR too fast: (Pump can keep up to a HR of 200). Treat patient (+) ? change timing to 1:2.
- \*Pacer (V/AV, Atrial): Go to semi-auto mode/select approp. pacer when ECG triggering unsuccessful.
- \*Arrhythmias, Hypotension, Resp distress, Altered LOC...etc : Treat patient!