HEMODYNAMIC VALUES

^ METHODS TO ELEVATE PARAMETER

v METHODS TO DECREASE PARAMETER

CARDIAC OUTPUT
CO=HR*SV (4-8L/min)

BLOOD PRESSURE
CO*SVR

HEART RATE
60-100 bpm

^ Treat cause, parasympatholytic (Atropine), sympathomimetic (Epinephrine), pacemaker

v Treat cause, antidysrhythmics, Vagal electrical therapy

X

STROKE VOLUME
60-120 mL/beat

PRELOAD
PAOP, CVP

^ Fluids, blood

v Venous vasodilators, diuretics ace inhibitors, ARBs

CONTRACTILITY

^ Cardiac glycosides, Sympathomimetics

v Beta blockers, Ca channel blockers

AFTERLOAD
SVR

^ Vasopressors

v Arterial vasodilators, ACE inhibitors ARBs, IABP

KEY HEMODYNAMIC VALUES (WITH EQUATIONS)

Cardiac Output (CO)	HR x SV	4-8 L/min
Cardiac Index (CI)	CO/BSA	2.5-4 L/min/m2
Central Venous Pressure (CVP)		2-6 mmHg
Mean Arterial Pressure (MAP)	SBP+(2xDBP)/3	70-100 mmHg
Stroke Volume (SV)	EDV - ESV	60-120 ml/beat
Stroke Volume Index (SVI)	SV/BSA	30-65 ml/m^2/beat
Pulmonary Artery Occlusion Pressure (PAOP)		8-12 mmHg
Systemic Vascular Resistance (SVR)	[MAP-RAP) x 80]/CI	800-1400 dynes/sec/cm^{-5}
Central Venous Oxygen Saturation ($ScvO_2$)		65-85%
Oxygen Delivery (DO_2)	CO x CaO_2 x 10	900-1100 ml/min