

Normal Hemodynamic Parameters – Adult

PARAMETER	EQUATION	NORMAL RANGE
Arterial Blood Pressure (BP)	Systolic (SBP) Diastolic (DBP)	90 – 140 mm Hg 60 – 90 mm Hg
Mean Arterial Pressure (MAP)	$SBP + 2DBP/3$	10 – 150 mm Hg
Right Atrial Pressure (RAP)		
Right Ventricular Pressure (RVP)	Systolic (RVSP) Diastolic (RVDP)	15 – 25 mm Hg 0 – 8 mm Hg
Pulmonary Artery Pressure (PAP)	Systolic (PASP) Diastolic (PADP)	15 – 25 mm Hg 8 – 15 mm Hg
Mean Pulmonary Artery Pressure (MPAP)	$PASP + (2 \times PADP)/3$	10 – 20 mm Hg
Pulmonary Artery Wedge Pressure (PAWP)		6 – 12 mm Hg
Left Atrial Pressure (LAP)		6 – 12 mm Hg
Cardiac Output (CO)	$HR \times SV/1000$	4.0 – 8.0 L/min
Cardiac Index (CI)	CO/BSA	2.5 – 4.0 L/min/m ²
Stroke Volume (SV)	$CO/HR \times 1000$	60 – 100 ml/beat
Stroke Volume Index (SVI)	$CI/HR \times 1000$	33 – 47 ml/m ² /beat
Systemic Vascular Resistance (SVR)	$80 \times (MAP - RAP)/CO$	800 – 1200 dynes•sec/cm ⁵
Systemic Vascular Resistance Index (SVRI)	$80 \times (MAP - RAP)/CI$	1970 – 2390 dynes•sec/cm ⁵ /m ²
Pulmonary Vascular Resistance (PVR)	$80 \times (MPAP - PAWP)/CO$	<250 dynes•sec/cm ⁵
Pulmonary Vascular Resistance Index (PVRI)	$80 \times (MPAP - PAWP)/CI$	255 – 285 dynes•sec/cm ⁵
Left Ventricular Stroke Work (LVSW)	$SV \times (MAP - PAWP) \times 0.0136$	58 – 104 gm-m/beat
Left Ventricular Stroke Work Index (LVSWI)	$SVI \times (MAP - PAWP) \times 0.0136$	50 – 62 gm-m/m ² /beat
Right Ventricular Stroke Work (RVSW)	$SV \times (MPAP - RAP) \times 0.0136$	8 – 16 gm-m/beat
Right Ventricular Stroke Work Index (RVSWI)	$SVI \times (MPAP - RAP) \times 0.0136$	5 – 10 gm-m/m ² /beat
Coronary Artery Perfusion Pressure (CPP)	Diastolic BP-PAWP	60 – 80 mm Hg
Right Ventricular End-Diastolic Volume (RVEDV)	SV/EF	100 – 160 ml
Right Ventricular End-Systolic Volume (RVESV)	EDV – SV	50 – 100 ml
Right Ventricular Ejection Fraction (RVEF)	SV/EDV	40 – 60%