

Dopamine

Indication: Shock & cardiopulmonary resuscitation

Available in 250ml premix bag of D5W at a concentration of 1.6mg/ml

Dosing:

Initiate at 2-5mcg/kg/min (1mcg/kg/min for patients with occlusive vascular disease)

Increase in increments of 1-4mcg/kg/min (5-10mcg/kg/min in severely ill patients) Q 10-30 minutes

MAX 50mcg/kg/min (Norepinephrine should be considered if dose exceeds 20mcg/kg/min)

Dosing Chart:

Patient Weight (kg)	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120
1mcg/kg/min (ml/hr)	1.7	1.9	2.1	2.3	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.8	3.9	4.1	4.3	4.5
2mcg/kg/min (ml/hr)	3.4	3.8	4.1	4.5	4.9	5.3	5.6	6.0	6.4	6.8	7.1	7.5	7.9	8.3	8.6	9.0
3mcg/kg/min (ml/hr)	5.1	5.6	6.2	6.8	7.3	7.9	8.4	9.0	9.6	10.1	10.7	11.3	11.8	12.4	12.9	13.5
4mcg/kg/min (ml/hr)	6.8	7.5	8.3	9.0	9.8	10.5	11.3	12.0	12.8	13.5	14.3	15.0	15.8	16.5	17.3	18.0
5mcg/kg/min (ml/hr)	8.4	9.4	10.3	11.3	12.2	13.1	14.1	15.0	15.9	16.9	17.8	18.8	19.7	20.6	21.6	22.5
6mcg/kg/min (ml/hr)	10.1	11.3	12.4	13.5	14.6	15.8	16.9	18.0	19.1	20.3	21.4	22.5	23.6	24.8	25.9	27.0
7mcg/kg/min (ml/hr)	11.8	13.1	14.4	15.8	17.1	18.4	19.7	21.0	22.3	23.6	24.9	26.3	27.6	28.9	30.2	31.5
8mcg/kg/min (ml/hr)	13.5	15.0	16.5	18.0	19.5	21.0	22.5	24.0	25.5	27.0	28.5	30.0	31.5	33.0	34.5	36.0
9mcg/kg/min (ml/hr)	15.2	16.9	18.6	20.3	21.9	23.6	25.3	27.0	28.7	30.4	32.1	33.8	35.4	37.1	38.8	40.5
10mcg/kg/min (ml/hr)	16.9	18.8	20.6	22.5	24.4	26.3	28.1	30.0	31.9	33.8	35.6	37.5	39.4	41.3	43.1	45.0
11mcg/kg/min (ml/hr)	18.6	20.6	22.7	24.8	26.8	28.9	30.9	33.0	35.1	37.1	39.2	41.3	43.3	45.4	47.4	49.5
12mcg/kg/min (ml/hr)	20.3	22.5	24.8	27.0	29.3	31.5	33.8	36.0	38.3	40.5	42.8	45.0	47.3	49.5	51.8	54.0
13mcg/kg/min (ml/hr)	21.9	24.4	26.8	29.3	31.7	34.1	36.6	39.0	41.4	43.9	46.3	48.8	51.2	53.6	56.1	58.5
14mcg/kg/min (ml/hr)	23.6	26.3	28.9	31.5	34.1	36.8	39.4	42.0	44.6	47.3	49.9	52.5	55.1	57.8	60.4	63.0
15mcg/kg/min (ml/hr)	25.3	28.1	30.9	33.8	36.6	39.4	42.2	45.0	47.8	50.6	53.4	56.3	59.1	61.9	64.7	67.5
16mcg/kg/min (ml/hr)	27.0	30.0	33.0	36.0	39.0	42.0	45.0	48.0	51.0	54.0	57.0	60.0	63.0	66.0	69.0	72.0
17mcg/kg/min (ml/hr)	28.7	31.9	35.1	38.3	41.4	44.6	47.8	51.0	54.2	57.4	60.6	63.8	66.9	70.1	73.3	76.5
18mcg/kg/min (ml/hr)	30.4	33.8	37.1	40.5	43.9	47.3	50.6	54.0	57.4	60.8	64.1	67.5	70.9	74.3	77.6	81.0
19mcg/kg/min (ml/hr)	32.1	35.6	39.2	42.8	46.3	49.9	53.4	57.0	60.6	64.1	67.7	71.3	74.8	78.4	81.9	85.5
20mcg/kg/min (ml/hr)	33.8	37.5	41.3	45.0	48.8	52.5	56.3	60.0	63.8	67.5	71.3	75.0	78.8	82.5	86.3	90.0

Adverse effects: Extravasation necrosis (treat with phentolamine), asthma exacerbation, hypotension, tachycardia, nausea, vomiting, vasoconstriction, conduction abnormalities.

Drug interactions: Ergot alkaloids (dangerous hypertension); procarbazine (antineoplastic agent) and MAOI's prolong and intensify Dopamine's cardiac stimulation and vasopressor effects (Dopamine should NOT be administered within 14 days of receiving an MAOI)

Contraindications: hypovolaemia, pheochromocytoma, ventricular fibrillation, ventricular tachycardia

Nursing considerations:

1. Monitor BP, ECG, HR
2. Monitor peripheral pulses
3. Monitor urine output
4. Monitor IV site: phlebitis (if extravasation occurs, treat with phentolamine)
5. Phentolamine administration: Dilute 10mg with 10ml 0.9% NaCl and inject into the affected area.