

NOREpinephrine

Classification

Alpha- and beta-agonist

Indications

- CCP: Symptomatic bradycardia
- CCP: Shock with hypotension refractory to fluid resuscitation
- CCP: Cardiogenic shock with refractory hypotension

Contraindications

- Mesenteric or peripheral vascular thrombosis
- Pregnancy
- Profound hypoxia
- Hypovolemia

Adult dosages

- CCP: All indications
- 0.1 mcg/kg/minute IV/IO
- Titrate upwards to a maximum of 1 mcg/kg/minute.

NOREpinephrine														
Concentration: 4 mg in 250 mL D5W or normal saline yields 16 mcg/mL														
Dose (mcg/kg/min)	Weight (kg)													
	40 kg	45 kg	50 kg	55 kg	60 kg	65 kg	70 kg	75 kg	80 kg	85 kg	90 kg	100 kg	110 kg	120 kg
0.1	15	16.9	18.8	20.6	23	24.4	26.3	28.1	30	31.9	33.8	37.5	41.3	45
0.15	22.5	25.3	28.1	30.9	34	36.6	39.4	42.2	45	47.8	50.6	56.3	61.9	67.5
0.2	30	33.8	37.5	41.3	45	48.8	52.5	56.3	60	63.8	67.5	75	82.5	90
0.25	37.5	42.2	46.9	51.6	56	60.9	65.6	70.3	75	79.7	84.4	93.8	103.1	112.5
0.3	45	50.6	56.3	61.9	68	73.1	78.8	84.4	90	95.6	101.3	112.5	123.8	135
0.35	52.5	59.1	65.6	72.2	79	85.3	91.9	98.4	105	111.6	118.1	131.3	144.4	157.5
0.4	60	67.5	75	82.5	90	97.5	105	112.5	120	127.5	135	150	165	180
0.45	67.5	75.9	84.4	92.8	101	109.7	118.1	126.6	135	143.4	151.9	168.8	185.6	202.5
0.5	75	84.4	93.8	103.1	113	121.9	131.3	140.6	150	159.4	168.8	187.5	206.3	225
0.55	82.5	92.8	103.1	113.4	124	134.1	144.4	154.7	165	175.3	185.6	206.3	226.9	247.5
0.6	90	101.3	112.5	123.8	135	146.3	157.5	168.8	180	191.3	202.5	225	247.5	270
0.65	97.5	109.7	121.9	134.1	146	158.4	170.6	182.8	195	207.2	219.4	243.8	268.1	292.5
0.7	105	118.1	131.3	144.4	158	170.6	183.8	196.9	210	223.1	236.3	262.5	288.8	315
0.75	112.5	126.6	140.6	154.7	169	182.8	196.9	210.9	225	239.1	253.1	281.3	309.4	337.5
0.8	120	135	150	165	180	195	210	225	240	255	270	300	330	360
0.85	127.5	143.4	159.4	175.3	191	207.2	223.1	239.1	255	270.9	286.9	318.8	350.6	382.5
0.9	135	151.9	168.8	185.6	203	219.4	236.3	253.1	270	286.9	303.8	337.5	371.3	405
0.95	142.5	160.3	178.1	195.9	214	231.6	249.4	267.2	285	302.8	320.6	356.3	391.9	427.5
1	150	168.8	187.5	206.3	225	243.8	262.5	281.3	300	318.8	337.5	375	412.5	450
Infusion rate (mL/hr)														

Pediatric Considerations And Dosing

Follow weight-based dosing.

■ CCP: All indications

- 0.1 mcg/kg/minute IV/IO
- Titrate upwards to a maximum of 1 mcg/kg/minute.

Mechanism Of Action

Stimulates alpha and beta-1 adrenergic receptors causing increased contractility, heart rate, and vasoconstriction.

Pharmacokinetics

Following intravenous administration:

- Onset: very rapid
- Duration: 1-2 minutes
- Half-life: 2-3 minutes

Adverse Effects

Cardiovascular: Bradycardia, cardiac arrhythmia, cardiomyopathy (stress), peripheral vascular insufficiency

Central nervous system: Anxiety, transient headache

Respiratory: Dyspnea

Source: Norepinephrine. In: Lexicomp Online, UpToDate, Waltham, MA. (Accessed November 20, 2020.)

Warning And Precautions

- Correct hypovolemia prior to administering NORepinephrine.
- Hypoxia or hypercarbia may produce ventricular tachycardia or ventricular fibrillation.
- Avoid extravasation of NORepinephrine. Administer into a large vein whenever possible. Monitor catheter and line patency before and during administration.

