

## Who can administer

Administration restricted- see [appendix 1](#)

## Important information

Doses in the literature are usually given as Isoprenaline **hydrochloride**.

Doses are not equivalent for isoprenaline **sulphate**. Take care to use the correct version, or doses would have to be adjusted.

## Available preparations

Isoprenaline **hydrochloride** 1mg in 5ml (0.2mg in 1ml, 200 micrograms in 1ml) Macure

Isoprenaline **hydrochloride** (Isoprenalina cloridrato monico) 0.2mg in 1ml (200 micrograms in 1ml) (unlicensed)

## Reconstitution

Already in solution

**Draw up using a 5 micron filter needle**

## Infusion fluids

Glucose 5% (preferred<sup>(ref 2)</sup>) or Sodium chloride 0.9%

## Methods of intravenous administration

**Intravenous infusion (administer using an electronically controlled infusion device)**

- Not fluid restricted
  - Add **2mg** (= 10mL of 0.2mg/1mL injection solution) **to 490mL** infusion fluid
  - This produces a solution containing **4 microgram per ml**
- **Fluid restriction** <sup>(ref 2)</sup>
  - Add 4mg (= 20mL of 0.2mg/1mL injection solution) to 30mL infusion fluid (= 4mg in 50mL)
  - This produces a solution containing **80microgram per ml**
  - **Central venous access** required for this concentration

## Dose in adults

**Bradycardia due to AV block**

**Continuous IV infusion**

- **Starting dose:** 0.01mcg/kg/minute
- Increase in 0.01mcg/kg/minute increments, to a maximum dose of 0.15mcg/kg/minute, adjusted to achieve a heart rate of 50 to 60 beats per minute

- See tables below (different infusion volume strengths)

Dosage table for Bradycardia due to AV block - using a 4mcg per mL solution										
Dose(mcg/kg/min)	Weight 55kg	Weight 60kg	Weight 65kg	Weight 70kg	Weight 75kg	Weight 80kg	Weight 85kg	Weight 90kg	Weight 95kg	Weight 100kg
Rate in ml/hour of a 4microgram/ml solution prepared as above										
<b>0.01</b>	8.3	9	9.8	10.5	11.3	12	12.8	13.5	14.3	15
<b>0.02</b>	16.5	18	19.5	21	22.5	24	25.5	27	28.5	30
<b>0.03</b>	24.8	27	29.3	31.5	33.8	36	38.3	40.5	42.8	45
<b>0.04</b>	33	36	39	42	45	48	51	54	57	60
<b>0.05</b>	41.3	45	48.8	52.5	56.3	60	63.8	67.5	71.3	75
<b>0.1</b>	82.5	90	97.5	105	112.5	120	127.5	135	142.5	150
<b>0.15</b>	123.8	135	146.3	157.5	168.8	180	191.3	202.5	213.8	225

Dosage table for Bradycardia due to AV block - using an 80mcg per mL solution										
Dose(mcg/kg/min)	Weight 55kg	Weight 60kg	Weight 65kg	Weight 70kg	Weight 75kg	Weight 80kg	Weight 85kg	Weight 90kg	Weight 95kg	Weight 100kg
Rate in ml/hour of an 80 microgram/ml solution prepared as above										
<b>0.01</b>	0.41	0.45	0.49	0.53	0.56	0.6	0.64	0.68	0.71	0.75
<b>0.03</b>	1.24	1.35	1.46	1.58	1.69	1.8	1.91	2.02	2.14	2.25
<b>0.05</b>	2.06	2.25	2.44	2.62	2.81	3	3.19	3.38	3.56	3.75
<b>0.07</b>	2.89	3.15	3.41	3.68	3.94	4.2	4.46	4.72	4.99	5.25
<b>0.09</b>	3.71	4.05	4.39	4.72	5.06	5.4	5.74	6.08	6.41	6.75
<b>0.11</b>	4.54	4.95	5.36	5.78	6.19	6.6	7.01	7.43	7.84	8.25
<b>0.13</b>	5.36	5.85	6.34	6.83	7.31	7.8	8.29	8.78	9.26	9.75
<b>0.15</b>	6.19	6.75	7.31	7.88	8.44	9	9.56	10.13	10.69	11.25

Titrate to patient response.

## Monitoring

- Monitor ECG continuously

## Further information

Search synonym: Isoproterenol

## Storage

- Macure brand: Store in refrigerator 2-8<sup>0</sup>C
- Unlicensed brand: Store <15<sup>0</sup>C. (ref 1)
- Do not use if solution is coloured (pink to pinky-brown) or a precipitate is present.

## References

SPC (Macure pharma) June 2022

1: SPC (translated) document downloaded 7th Feb 2019

2. Injectable medicines guide, downloaded from Medusa 17/02/2025

## Therapeutic classification

Adrenergic and dopaminergic agent. Inotrope sympathomimetic