

## USE OF ISOPRENALINE IN THE EMERGENCY DEPARTMENT

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### INDICATIONS

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Symptomatic bradycardia resistant to atropine and in beta-blocker overdose resistant to atropine and glucagon

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### DOSAGE

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Add one ampoule of Isoprenaline Sulphate 2.25mg in 2ml to 500ml of 5% Glucose to make a 4.5micrograms/ml solution. This should preferably be given centrally as it is irritant.

Dose 0.5-10 micrograms/minute (6.7-133 ml/hr)

0.5 microgram/min	6.7ml/hr
1 microgram/min	13.3 ml/hr
2 microgram/min	26.7 ml/hr
3 microgram/min	40 ml/hr
4 microgram/min	66.7 ml/hr
5 microgram/min	80 ml/hr
6 microgram/min	
7 microgram/min	93 ml/hr
8 microgram/min	107 ml/hr
9 microgram/min	120 ml/hr
10 microgram/min	133 ml/hr

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### PATIENT MONITORING

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The patient must be attached to a cardiac monitor and have continuous heart rate, minimum of 3 lead monitoring, oxygen saturations. Blood pressure should be measured every 15 minutes for the first hour, every 30 minutes for the second hour and then hourly. If the heart rate fails to increase then an urgent medical review is required.

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## **FLUSHING**

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Do not flush the vascular access device. After the infusion is discontinued, disconnect the giving set, aspirate the cannula contents and then flush with sodium chloride 0.9% or glucose 5%.

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## **SIDE EFFECTS**

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Tachycardia, cardiac arrhythmias, palpitations, hypotension, tremors, headache, sweating, reduced coronary diastolic perfusion pressure, NOT to be used with myocardial ischaemia as may extend the ischaemic area.

# Isoprenaline Hydrochloride 2mg / 2ml

Add 2mg to 500ml 5% Dextrose (4micrograms/ml solution)

Dose 0.5 – 10 mcg / min (7.5 – 150 ml / hour)

## Isoprenaline Hydrochloride

<i>0.5 mcg / min</i>	<i>7.5 ml / hour</i>
<i>1 mcg / min</i>	<i>15 ml / hour</i>
<i>2 mcg / min</i>	<i>30 ml / hour</i>
<i>3 mcg / min</i>	<i>45 ml / hour</i>
<i>4 mcg / min</i>	<i>60 ml / hour</i>
<i>5 mcg / min</i>	<i>75 ml / hour</i>
<i>6 mcg / min</i>	<i>90 ml / hour</i>
<i>7 mcg / min</i>	<i>105 ml / hour</i>
<i>8 mcg / min</i>	<i>120 ml / hour</i>
<i>9 mcg / min</i>	<i>135 ml / hour</i>
<i>10 mcg / min</i>	<i>150 ml / hour</i>

# Isoprenaline Sulphate 2.25mg / 2ml

Add 2.25mg to 500ml 5% Dextrose (4.5micrograms/ml solution)

Dose 0.5 – 10 mcg / min (6.7 – 133 ml / hour)

## Isoprenaline Sulphate

<i>0.5 mcg / min</i>	<i>6.7 ml / hour</i>
<i>1 mcg / min</i>	<i>13.3 ml / hour</i>
<i>2 mcg / min</i>	<i>26.7 ml / hour</i>
<i>3 mcg / min</i>	<i>40 ml / hour</i>
<i>4 mcg / min</i>	<i>53.2 ml / hour</i>
<i>5 mcg / min</i>	<i>66.7 ml / hour</i>
<i>6 mcg / min</i>	<i>80 ml / hour</i>
<i>7 mcg / min</i>	<i>93 ml / hour</i>
<i>8 mcg / min</i>	<i>107 ml / hour</i>
<i>9 mcg / min</i>	<i>120 ml / hour</i>
<i>10 mcg / min</i>	<i>133 ml / hour</i>