

LEVOSIMENDAN

BRAND NAME	LEVOSIMED, SIMDAX, SIMENDAN
DRUG CLASS	Inotrope, vasodilator
AVAILABILITY	Levosimed vial contains 12.5 mg of levosimendan. ¹ Simdax vial contains 12.5 mg/5 mL or 25 mg/10 mL of levosimendan. Also contains povidone, citric acid and anhydrous ethanol. ² The solution is clear and yellow to orange. ² Simendan vial contains 12.5 mg/5 mL of levosimendan. Also contains povidone, citric acid and anhydrous ethanol. ² The solution is clear and yellow to orange. ³ Available through the Special Access Scheme.
pH	No information
PREPARATION	Levosimed : reconstitute the vial with 5 mL of water for injections or glucose 5% to make a concentration of 2.5 mg/mL. ¹ To prepare the infusion solution dilute 12.5 mg (5 mL of the reconstituted solution) to 500 mL with glucose 5%. The concentration is 25 microgram/mL . ¹ Simdax and Simendan only : dilute 12.5 mg (5 mL) to 250 mL with glucose 5% to make a concentration of 50 microgram/mL . ^{2,3}
STABILITY	Vial: store at 2 to 8 °C. Do not freeze. ¹⁻³ Infusion solution: stable for 24 hours at 25 °C. ¹⁻³
ADMINISTRATION	
IM injection	Not recommended
SUBCUT injection	Not recommended
IV injection	Not recommended
IV infusion	Use an infusion pump. ⁴ Continuous cardiac monitoring is required. ¹⁻³ A central line is preferred. ⁴ May be given into a peripheral line. ¹⁻³ See PREPARATION for how to prepare the infusion solution. Check your local guidelines before proceeding. Local practice may be different. A loading dose of 6–12 microgram/kg infused over 10 minutes, followed by a continuous infusion, is recommended by the manufacturer. However, in practice the loading dose may be omitted due to hypotension. ⁵ Start the infusion at 0.05 microgram/kg/minute and if tolerated, increase to 0.1 microgram/kg/minute after 1 hour. ⁴ The usual dose is 0.05 to 0.2 microgram/kg/minute. ¹⁻³ Use actual body weight up to 120 kg. ⁴ Dose changes take 30 to 60 minutes to take effect. ¹⁻³

Infusion rate guide in mL/hour for a concentration of 25 microgram/mL¹

Weight (kg)	0.05 microgram/kg/minute	0.1 microgram/kg/minute	0.2 microgram/kg/minute
40	5	10	19
50	6	12	24
60	7	14	29
70	8	17	34
80	10	19	38
90	11	22	43
100	12	24	48
110	13	26	53
120	14	29	58

Infusion rate guide in mL/hour for a concentration of 50 microgram/mL (Simdax and Simendan only)²⁻⁴:

Weight (kg)	0.05 microgram/kg/minute	0.1 microgram/kg/minute	0.2 microgram/kg/minute
40	2	5	10
50	3	6	12
60	4	7	14
70	4	8	17
80	5	10	19
90	5	11	22
100	6	12	24
110	7	13	26
120	7	14	29

COMPATIBILITY

Fluids Glucose 5%¹⁻³

Y-site Digoxin¹⁻³, furosemide¹⁻³, glyceryl trinitrate¹⁻³

INCOMPATIBILITY No information

SPECIAL NOTES Onset of action is rapid; duration of effect is up to 9 days after stopping the infusion and half-life is 80 hours (active metabolite).¹⁻⁴

REFERENCES

1. Levosimed. Product information. Mumbai, India: Samarth Life Sciences.
2. Simdax. NZ Product information. Auckland, New Zealand: Pharmacy Retailing (NZ) Limited; May 2019.
3. Simendan. Summary of product characteristics. Ergene, Turkey: Polifarma Pharmaceuticals; 16/07/2021.
4. Standardised inotrope and vasopressor guidelines. Levosimendan. Safer Care Victoria. Updated 04/12/2018. Accessed 14/10/2021.
5. Aidonidis G, Kanonidis I, Koutsimanis V, Nuemann T, Erbel R, Sakadamis G. Efficiency and safety of prolonged levosimendan infusion in patients with acute heart failure. *Cardiol Res Pract* 2011; Mar 31. DOI: 10.4061/2011/342302.