 <b>Waikato</b> District Health Board		Type: <b>Drug Guideline</b>	Document reference: <b>2947</b>	Manual Classification: <b>Waikato DHB Drug Guidelines</b>
Title: <b>Octreotide for neonates</b>			Effective date: <b>26 January 2022</b>	
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## BRIEF ADMINISTRATION GUIDE

For detailed information refer to The New Zealand Formulary for Children [octreotide](#) monograph

**Indications:** • chylothorax

**Route:** Intravenous

- Supplied as octreotide 500 microgram in 1 mL vial  
Note: use the short acting formulation only and ensure concentration is confirmed before dilution (also available as 50 microgram and 100 microgram in 1 mL)
  - Octreotide is not licensed in NZ for chylothorax
  - pH is 3.9 – 4.5

**Dose:** Initially 1 microgram/kg/hour, then titrate upwards as necessary based on reduction in chyle production. Maximum dose 10 microgram/kg/hour.

Note: avoid abrupt withdrawal

### Preparation and administration

**Compatible fluids:** sodium chloride 0.9% (preferred as octreotide inhibits release of insulin and affects blood glucose regulation), glucose 5%

#### Continuous IV infusion

- Select the concentration of octreotide required based on the weight of the infant and in the context of any fluid restrictions (refer to Appendix for assistance) and dilute the appropriate volume of octreotide injection using compatible fluid in accordance with the table below:

*\*Ensure concentration of octreotide vial matches that in table or make adjustments if different*

Final Octreotide Concentration	10 microgram/mL	25 microgram/mL
Volume of octreotide (500* microgram/ 1 mL)	1 mL	1 mL
Volume of compatible fluid	49 mL	19 mL
<b>Total volume</b>	<b>50 mL</b>	<b>20 mL</b>

- Administer at the prescribed rate by continuous IV infusion using a syringe driver with Guardrails settings


$$\text{Rate (mL/hr)} = \frac{\text{Dose (microgram/kg/hr)} \times \text{Weight (kg)}}{\text{Concentration (microgram/mL)}}$$

### Monitoring

- Chyle volumes
- Blood glucose (hyperglycaemia more common, but hypoglycaemia can occur)
- Hepatic function, baseline then weekly

### Storage

- Store unopened injections in a refrigerator between 2 and 8°C. Remove ampoule and wait until it is at room temperature before using
- Discard any unused solution left in the ampoule
- Diluted solution is stable for 24 hours in sodium chloride 0.9%

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## Competency for Administration

This procedure is carried out by, or under, the direct supervision of a registered nurse/registered midwife who holds current Waikato DHB Generic Medicine Management and IV certification plus Guardrails competency (if administering IV) as well as Neonatal specific competency NCV/NAC (if administering via CVAD).

## Guardrails Information

Octreotide will be Guardrail profiled on the CC pump for NICU. Following are the guardrail limits:


Guardrails Drug Name	Octreotide
<b>Concentration (mcg/ml)</b>	
Minimum	4
Maximum	50
<b>Dose rate (mcg/kg/hour)</b>	
Default	1
Soft minimum	0.9
Soft maximum	10
Hard max	10.1

## References

- Truven Health Analytics Inc. Pediatrics and Neofax®. Octreotide monograph. Accessed 25.5.2021. Available from: <http://www.micromedexsolutions.com>.
- New Zealand Formulary for Children (NZFC) v107. Octreotide. Accessed 25.5.2021. Available from <https://www.nzfchildren.org.nz>
- Phelps SJ, Hagemann TM, Lee KR, Thompson AJ. The Teddy Bear Book: Pediatric Injectable Drugs. 11th edition. American Society of Health-System Pharmacists; 2018.
- Canterbury DHB Neonatal Drug Information Sheet Octreotide. Available from <http://www.edu.cdhb.health.nz>
- The Royal Children's Hospital Melbourne. Paediatric Injectable Guidelines. Accessed 2.9.2021. Available from <https://pig.rch.org.au>
- South Australia Neonatal Medication Guideline Octreotide. Available from <http://www.sahealth.sa.gov.au>
- King Edward Memorial Hospital Neonatal Medication Protocol Octreotide. Available from <http://www.kemh.health.wa.gov.au>
- Queensland Health Clinical Guideline Octreotide 2019. Available from <http://health.qld.gov.au>
- Australian Injectable Drugs Handbook 8<sup>th</sup> edition. Society of Hospital Pharmacists of Australia. 2020.

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## Appendix

### Infusion tables

**Table 1:** Infusion rates when using octreotide concentration **10 microgram/mL**  
(most useful for neonates ≤ 2 kg)

Rate (mL/hr)	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
Weight (kg)	<b>Approximate microgram/kg/hour</b>									
0.5	2	4	6	8	10	12	14	16	18	20
1	1	2	3	4	5	6	7	8	9	10
1.5	0.7	1.3	2	2.7	3.3	4	4.7	5.3	6.0	6.7
2	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5.0
2.5	0.4	0.8	1.2	1.6	2	2.4	2.8	3.2	3.6	4
3	0.3	0.7	1	1.3	1.7	2	2.3	2.7	3	3.3
3.5	0.3	0.6	0.9	1.1	1.4	1.7	2	2.3	2.6	2.9
4	0.3	0.5	0.8	1	1.3	1.5	1.8	2	2.3	2.5
4.5	0.2	0.4	0.7	0.9	1.1	1.3	1.6	1.8	2	2.2
5	0.2	0.4	0.6	0.8	1	1.2	1.4	1.6	1.8	2

**Table 2:** Infusion rates when using octreotide concentration **25 microgram/mL**  
(most useful for neonates > 2 kg)

Rate (mL/hr)	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
Weight (kg)	<b>Approximate microgram/kg/hour</b>									
1	2.5	5	8	10	13	15	18	20	23	25
1.5	1.7	3.3	5	6.7	8.3	10	11.7	13.3	15	16.7
2	1.3	3	4	5	6	8	9	10	11	13
2.5	1.0	2	3	4	5	6	7	8	9	10
3	0.8	1.7	2.5	3.3	4.2	5	5.8	6.7	7.5	8.3
3.5	0.7	1.4	2.1	2.9	3.6	4.3	5	5.7	6.4	7.1
4	0.6	1.3	1.9	2.5	3.1	3.8	4.4	5	5.6	6.3
4.5	0.6	1.1	1.7	2.2	2.8	3.3	3.9	4.4	5	5.6
5	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5