

## Ibuprofen for neonates

### BRIEF ADMINISTRATION GUIDE

For detailed information refer to [The Australasian Neonatal Medicines Formulary \(ANMF\) Ibuprofen guideline](#)

#### 1. Medicine

##### 1.1. Indications

Closure of patent ductus arteriosus (PDA) - first line

##### 1.2. Route and Presentation

Oral or intravenous

Note: Oral route recommended as long as neonate tolerating at least a minimum oral feed rate of 0.5 mL/hr

- Oral supplied as ibuprofen 100mg/5mL oral suspension
- Injection supplied as ibuprofen 10mg/2mL vial (powder for reconstitution)  
An unapproved medicine, available under Section 29 of the Medicines Act
  - pH of ibuprofen is 7

##### 1.3. Dose

Single daily dose as follows:

Post-natal Age	Day 1	Day 2	Day 3
< 72 hr	10 mg/kg/dose	5 mg/kg/dose	5 mg/kg/dose
≥ 72 hr (higher dose)	20 mg/kg/dose	10 mg/kg/dose	10 mg/kg/dose
≥ 72 hr (lower dose)	10 mg/kg/dose	5 mg/kg/dose	5 mg/kg/dose

A full course of ibuprofen may not be necessary if ductal constriction or closure is demonstrated.

A repeat course may be considered if appropriate

#### 2. Preparation and Administration

##### 2.1. Compatible fluids

Sodium chloride 0.9%, glucose 5%

##### 2.2. Administration Method

###### Intermittent IV Infusion

- Draw up required dose (undiluted 5mg/mL) from vial
- Administer by intravenous infusion **over 15 minutes** via a Guardrails profiled syringe driver
- Flush the line before and after the infusion with compatible fluid

###### Oral

- Shake the bottle well prior to use then draw up the prescribed dose in an oral syringe
- Administer with feeds to reduce gastric irritation

##### 2.3. Monitoring

- Assess for ductal closure
- Monitor renal function, electrolytes, platelets, liver function tests
- Monitor blood pressure, heart rate, respiratory rate and oxygen saturation during treatment
- Monitor for signs of bleeding
- Monitor urine output and withhold treatment if urine output falls below 0.6 mL/kg/hr
- Monitor IV site for signs of extravasation

##### 2.4. Storage and Stability

- Store vials at room temperature (below 25° C) and protect from light
- Discard any remaining solution in the vial
- Store oral suspension at room temperature and discard after expiry date on bottle

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### 2.5. Competency for Administration

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

### 2.6. Guardrails

Ibuprofen is Guardrail profiled on the CC syringe driver for NICU. Following are the guardrail limits:

Guardrails Drug Name	Ibuprofen*
<b>Concentration(mg/mL)</b>	
Minimum	2.5
Maximum	10
<b>Dose rate (mg/kg/h)</b>	
Default	20
Soft minimum	19
Soft maximum	40
Hard max	80

### 3. Associated Documents

- Management of the Haemodynamically Significant Patient Ductus Arteriosus, Waikato NICU guideline #6488

### 4. References

- Australian Neonatal Medicines Formulary. Ibuprofen Drug Guideline. 2021. Available from: [www.anmfonline.org/wp-content/uploads/2022/06/Ibuprofen\\_ANMFv3.0\\_full\\_20210923.pdf](http://www.anmfonline.org/wp-content/uploads/2022/06/Ibuprofen_ANMFv3.0_full_20210923.pdf)
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- Australian Injectable Drugs Handbook 8<sup>th</sup> edition, 2020. Society of Hospital Pharmacists of Australia.

### Document Ownership

<b>Document Authorisor:</b>	John Barnard	Chair Medicines & Therapeutics Committee
<b>Document Authorisor:</b>	Jutta van den Boom	Clinical Director Neonatal Intensive Care Unit
<b>Document Facilitator:</b>	Kerrie Knox	Pharmacist

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