Zidovudine

200 mg/20 mL injection (SAS)
10 mg/mL oral mixture

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Note:
This guideline provides advice of a general nature. This statewide guideline has been prepared to promote and facilitate standardisation and consistency of practice, using a multidisciplinary approach. The guideline is based on a review of published evidence and expert opinion.

Information in this statewide guideline is current at the time of publication.

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Health practitioners in the South Australian public health sector are expected to review specific details of each patient and professionally assess the applicability of the relevant guideline to that clinical situation.

If for good clinical reasons, a decision is made to depart from the guideline, the responsible clinician must document in the patient's medical record, the decision made, by whom, and detailed reasons for the departure from the guideline.

This statewide guideline does not address all the elements of clinical practice and assumes that the individual clinicians are responsible for discussing care with consumers in an environment that is culturally appropriate, and which enables respectful confidential discussion. This includes:

- The use of interpreter services where necessary,
- Advising consumers of their choice and ensuring informed consent is obtained,
- Providing care within scope of practice, meeting all legislative requirements, and maintaining standards of professional conduct, and
- Documenting all care in accordance with mandatory and local requirements

Synonyms

Azidothymidine, AZT, ZDV

Dose and Indications

****To be used only on Infectious Diseases (ID) team recommendation****

Prevention of Vertical Transmission of HIV for High-Risk Mother-to-Child Transmission (MTCT)

Commence therapy within 4 hours of birth.

Oral

Round dose to the nearest 0.5 mg. Seek ID advice for duration of therapy.

Gestational age	Dose	Frequency
< 30 weeks	2 mg/kg/dose	12 hourly
30 to 33^{+6} weeks	2 mg/kg/dose	12 hourly for 2 weeks, and then 8 hourly
≥ 34 weeks	4 mg/kg/dose	12 hourly

Additional antiretroviral prophylaxis in the form of nevirapine and lamivudine may be necessary for some HIV exposed infants. See practice points for further details.

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Intravenous

To be used only if neonate unable to tolerate oral feeds. Round dose to the nearest 0.5 mg.

Gestational age	Dose	Frequency
< 33^{+6} weeks	1.5 mg/kg/dose	12 hourly
≥ 34 weeks	1.5 mg/kg/dose	6 hourly

This product is not registered in Australia and is accessed under the Special Access Scheme.

Preparation and Administration

Oral

The oral mixture contains 10 mg/mL zidovudine

Dose	1 mg	2 mg	3 mg	4 mg	5 mg	6 mg	8 mg
Volume	0.1 mL	0.2 mL	0.3 mL	0.4 mL	0.5 mL	0.6 mL	0.8 mL

Can be given without regard to food

Intravenous

Dilute 1 mL of the 10 mg/mL zidovudine injection with 4 mL of 5% glucose (total volume 5 mL).

The resulting solution contains 2 mg/mL zidovudine.

Dose	1 mg	2 mg	3 mg	4 mg	5 mg	6 mg
Volume	0.5 mL	1 mL	1.5 mL	2 mL	2.5 mL	3 mL

Administer over 30 to 60 minutes. Rapid infusion or bolus should be avoided.

Compatible Fluids

Glucose 5%, sodium chloride 0.9%

Adverse Effects

Common

Anaemia, neutropenia, leucopenia

Rare

Nail and skin pigmentation, cardiomyopathy, pancytopenia, red cell aplasia, aplastic anaemia, myopathy, hepatic disorders, lactic acidosis (extremely rare for a 4-week prophylaxis course)

Monitoring

Full blood counts at baseline, 2 and 4 weeks, more frequently if clinically indicated.

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Practice Points

- Infectious Diseases consultation is essential for maternal HIV infection. Refer to the ASID guideline for duration of post exposure prophylaxis by Mother-to-Child Transmission (MTCT) risk stratification.
- **If MTCT risk is very low,** 2 weeks zidovudine monotherapy is recommended.
- **If MTCT risk is low** (<2%), 4 weeks zidovudine monotherapy is recommended.
- **If MTCT risk is high** (>2%), triple antiretroviral therapy is recommended with zidovudine (4 weeks), lamivudine (4 weeks) and nevirapine (2 weeks) Follow the drug monographs for each drug.
- If infant vomits within 15 minutes of a dose, give another dose if possible. If neonate vomits more than 15 minutes after dose, give next dose at next scheduled time.
- Avoid in infants exhibiting abnormally low neutrophil counts (less than 0.75 x 10^9/L) or abnormally low haemoglobin levels (less than 75g/L)
- Zidovudine is associated with drug interactions. Consult with pharmacist for advice.
- Lactic acidosis associated with hepatomegaly and hepatic steatosis has been reported with zidovudine. Infectious Diseases consultation is recommended regarding continuation of zidovudine when infants have evidence of hyperlactataemia, lactic acidosis or liver disease (cholestasis, abnormal coagulation studies, or transaminase levels above 5 times the upper limit of normal).
- Consider dose adjustment in patients with severe renal dysfunction. Consult with Infectious Diseases

References

Palasanthiran P, et al, Management of Perinatal Infections, 2022, Third Edition, Australian Society for Infectious Diseases (ASID) Inc., Sydney, NSW.

Guidelines for the Use of Antiretroviral Agents in Paediatric HIV Infection, Panel on Antiretroviral Therapy and Medical Management of Children Living with HIV, AIDsInfo 2021

South Australian Perinatal Practice Guideline, Clinical Guideline, HIV in Pregnancy, 2018

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Document Ownership & History

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If so, which version? **V3.1**
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If so, which Neonatal Medication Guideline (title)?

Approval Date	Version	Who approved New/Revised Version	Reason for Change
04/07/2024	V3.1	Clinical Guideline Domain Custodian	Changes based on updated ASID Management of Perinatal Infections Guideline
29/06/2022	V3	Domain Custodian, Clinical Governance, Safety and Quality	Reviewed in line with 5-year review
24/05/2018	V2.1	SA Health Safety and Quality Strategic Governance Committee	New template
05/2015	V2	SA Health Safety and Quality Strategic Governance Committee	Update on dosing regimen based on new guidelines
05/2013	V1	SA Health Safety and Quality Strategic Governance Committee	Original SA Health Safety and Quality Strategic Governance Committee approved version