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Hotline: 1300 36 2500

Coldline: 1300 36 2730

Fax: 1300 36 2498

Email: [help@nets.health.nsw.gov.au](mailto:help@nets.health.nsw.gov.au)

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## NETS DRUG DOSE CALCULATOR

### Disclaimer

This drug calculator is made available as an on-line aid to clinicians providing critical care of newborns, infants and children prior to the arrival of a NETS retrieval team. It is provided "as-is" and without support or warranty of any kind. Although NETS uses this tool and has sought to verify the contents and calculations in good faith, no responsibility is accepted for its use by others. The drug calculator should always be used directly from the website for each individual patient and not stored locally since NETS reviews and updates the calculator regularly to maintain currency. Stored copies should not be used.

**This document is not a substitute for a legible, carefully checked prescription. It is intended to give guidance in the preparation and administration of intravenous drugs. It has been designed to meet the particular needs of NETS retrievals and may not be appropriate for every situation.**

For some of the drugs there is a dose range given. The dose that has been used for the calculation is given in the "based on" column. Doses and volumes which are calculated from the weight are indicated by a box with rounded corners. Fixed doses are written in square boxes. Doses and volumes have been rounded with varying precision depending on the magnitude of the dose or volume.

The infusion calculations give a dose to be added to the syringe, but not a volume of the drug. This is deliberate as it creates a step that requires someone to perform a calculation manually as an error checking mechanism. Final infusion volumes are almost all 50mL. To make up the same concentration in a smaller syringe, reduce the dose of drug added into the syringe accordingly. In a fluid restricted child it may be necessary to make certain infusions as double-strength solutions and adjust the infusion rate accordingly.

Neonatal ETT sizes and oral lengths are based on the guideline produced by the Australian Resuscitation Council (2010), nasal lengths are based on unpublished, extrapolated data. Paediatric ETT sizes and lengths are calculated using the age-based APLS (2011) formula. For paediatric patients under one year old, the weight-based ETT length formula presented in Lau et al (2006) are used. The ETT lengths presented are for general guidance, and will not be appropriate for all patients. The aim should be careful positioning guided by direct visualisation at the cords.

Acute care of the newborn infant around the time of birth potentially requires a range of procedures for which selection of appropriate equipment and correct placement of lines and tubes can be vital. The Resuscitation at Birth guide does not replace clinical expertise and procedural experience. The referring hospital's most senior and experienced practitioner should be available for any very sick patient; prior to the arrival of a NETS team and until the baby's departure for another hospital.

**Please check all prescriptions and medications very carefully as NETS takes no responsibility for the accuracy of doses or calculations. This dose calculator is designed to be used in conjunction with an appropriate formulary which contains information on drug interactions, compatibilities, precautions, side effects, rates of delivery, maximum/minimum doses and drug monitoring.**

This version authored by Ian Braithwaite, NETS Retrieval Nurse, and Jeanette Marchant, NETS Retrieval Consultant, with valued contributions from Adrian Bonsall, NETS Registrar. Original concept by Dr Andrew Berry, NETS State Director, with further development by Dr Janil Puthuchery. Many thanks to all the staff at NETS. Designed for Adobe Reader version 8.0 or higher: <http://get.adobe.com/reader>. Any queries or suggestions, contact: [info@nets.health.nsw.gov.au](mailto:info@nets.health.nsw.gov.au). (Updated July 2012.)

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