

CLINICAL POLICIES AND PROCEDURES

**NEWBORN USE ONLY
GIVEN ON DOCTORS ORDER ONLY****BUDESONIDE**

DESCRIPTION	Inhaled steroid with strong glucocorticoid and negligible mineralocorticoid activity. Budesonide has local anti-inflammatory effects with low systemic corticosteroid side effects over a wide dose range. Cochrane Reviews of inhaled vs systemic steroid use in ventilator-dependent preterm infants have not shown significant evidence of short or long-term benefit or advantage over systemic steroids.
USE	Severe chronic lung disease
PRESENTATION	0.5mg/2ml Respules for nebulisation
PHARMACOKINETICS	First-pass metabolism in the liver after systemic absorption. A proportion of the drug may be swallowed. The percentage of the inhaled dose reaching the lung will depend upon the method and delivery of the nebulised budesonide. After a single dose, improvement of the lung function is achieved within a few hours. The duration of effect is more than 12 hours. Full effect is not achieved until after a couple of days.
DOSE	500mcg Respules twice daily via nebuliser
ADMINISTRATION	Inhaled via spacer device (aerochamber) or nebulizer. COVER INFANTS' EYES AND FACE DURING ADMINISTRATION!
ADVERSE EFFECTS	<ol style="list-style-type: none">1. mild irritation in the throat2. candida infection in the oropharynx3. facial skin irritation4. bronchoconstriction (rare)5. gastrointestinal (nausea and vomiting)6. suppression of the pituitary-adrenal axis7. posterior subcapsular cataracts
PRECAUTION	<ol style="list-style-type: none">1. Known sensitivity to budesonide2. Caution neonates with fungal and viral infections in the airways3. Caution neonates who are being transferred from oral corticosteroids to budesonide4. Caution, may need to wean dose, do not stop suddenly
DRUG INTERACTION	After oral administration of ketoconazole, a potent inhibitor of CYP3A4, the mean plasma concentration of orally administered budesonide increased. Concomitant administration of other known inhibitors of CYP3A4 (eg, itraconazole, clarithromycin, erythromycin , etc.) may inhibit the metabolism of, and increase the systemic exposure to budesonide. Care should be exercised when budesonide is coadministered with long-term ketoconazole and other known CYP3A4 inhibitors. Omeprazole did not have effects on the pharmacokinetics of oral budesonide, while cimetidine, primarily an inhibitor of CYP1A2, caused a slight decrease in budesonide clearance and a corresponding increase in its oral bioavailability.

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BUDESONIDE cont

REFERENCES

Neonatal Formulary 5, Drug use in Pregnancy and First Year of Life, 2007, Blackwell Publishing

S Shah, A Ohlsson, H Halliday, VS Shah. Inhaled versus systemic corticosteroids for preventing chronic lung disease in ventilated very low birth weight preterm neonates Cochrane Review 2004

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