

Maine Medical

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Women's Health

A department of Maine Medical Center

Corticosteroid Administration for Fetal Lung Maturity

Patients Between 23 0/7 and 33 6/7 Weeks

Antenatal corticosteroid administration has been shown to improve outcomes for infants born at less than 34 weeks, resulting in decreased rates of neonatal death, respiratory distress syndrome, intraventricular hemorrhage, and necrotizing enterocolitis.

Recommended for patients who are considered at risk of delivery **within 7 days**, including those with ruptured membranes or multiple gestations:

Betamethasone 12 mg IM every 24 hours, for a total of 2 doses

or

Dexamethasone 6 mg IM every 12 hours, for a total of 4 doses

**Note: Timing of administration at perivable gestational ages (23 to 24 weeks) should be guided by the family's decision regarding neonatal resuscitation, after NICU consult.*

Rescue Corticosteroid Course for Patients Less than 34 0/7 Weeks

If a patient has received a previous corticosteroid course greater than 14 days previously (though can be provided as early as 7 days from prior dose), **AND** at risk of delivery within the next 7 days **AND** prior to 34 0/7 weeks:

Give a **single** rescue course of:

Betamethasone 12 mg IM every 24 hours, for a total of 2 doses

or

Dexamethasone 6 mg IM every 12 hours, for a total of 4 doses

**Note: Regularly scheduled repeat courses or serial courses (more than two) are not recommended.*

Whether to administer a repeat course of corticosteroids with preterm, premature rupture of membranes is controversial, and there is insufficient evidence to make a recommendation for or against.

Patients Between 34 0/7 and 36 6/7 Weeks

The Antenatal Late Preterm Steroids (ALPS) trial demonstrated that antenatal corticosteroids may be of benefit to infants born in the late preterm period, with decreased need for respiratory support and rate of severe respiratory complications.

A single steroid course is recommended for patients between 34 0/7 and 36 6/7 weeks who are considered at high risk of delivery **within 7 days** and who have **not received a previous course of antenatal steroids**:

- Preterm labor, with at least 3 cm of dilation or effacement of 75%
- Preterm premature rupture of membranes (PPROM)
- Expected late preterm delivery for another indication:
 - Preeclampsia or gestational hypertension, with concern for development of severe features within the next 7 days (e.g., severe BPs)
 - Fetal growth restriction, with concern for worsening status necessitating delivery within the next 7 days (e.g., abnormal Dopplers)
 - Oligohydramnios
 - Prior classical cesarean, myomectomy necessitating cesarean delivery
 - Suspected placenta accreta

Should **NOT** be used if:

- Previous corticosteroid course for fetal lung maturity in current pregnancy
- Maternal diabetes (i.e., gestational diabetes, preexisting diabetes)
- Expected to deliver in < 12 hours (e.g., cervical dilation \geq 8 cm)
- Chorioamnionitis
- Multiple gestation
- Maternal chronic steroid use during pregnancy

NOTE:

*Tocolysis should **NOT** be used to delay delivery for corticosteroid course in late preterm period, nor should an indicated preterm delivery (e.g., preeclampsia with severe features, induction of labor for PPRM) be postponed.

*Because corticosteroid treatment for < 24 hours is still associated with reduction in neonatal morbidity and mortality, the first dose of corticosteroids should be administered **even if** the ability to give the second dose is thought to be unlikely (e.g., PPRM with suspected early labor).

*Neonatal blood glucose monitoring is recommended by the American Academy of Pediatrics (AAP) for **all** infants born in the late preterm period, regardless of exposure to antenatal corticosteroids.

References:

1. American College of Obstetricians and Gynecologists (ACOG) Committee Opinion No. 713: Antenatal Corticosteroid Therapy for Fetal Maturation, August 2017 (reaffirmed 2018).
2. Society for Maternal-Fetal Medicine (SMFM) Statement: Implementation of the Use of Antenatal Corticosteroids in the Late Preterm Birth Period in Women at Risk for Preterm Delivery, April 2016.
3. Gyamfi-Bannerman C et al. NICHD Maternal–Fetal Medicine Units Network. Antenatal Betamethasone for Women at Risk for Late Preterm Delivery (ALPS trial). *N Engl J Med.* 2016; 374:1311-20.
4. American College of Obstetricians and Gynecologists (ACOG) Practice Bulletin No. 171: Management of preterm labor, October 2016.