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 and multiple gestations:

- Betamethasone 12 mg IM every 24 hours, for a total of 2 doses
- Dexamethasone 6 mg IM every 12 hours, for a total of 4 doses

*Note: Timing of administration at periviable gestational ages (22 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 is at risk of delivery within the next 7 days AND is 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
- Dexamethasone 6 mg IM every 12 hours, for a total of 4 doses

*Serial corticosteroid courses (more than two) are not recommended.

Patients Between 34 0/7 and 36 6/7 Weeks
The Antenatal Late Preterm Steroids (ALPS) trial demonstrated that antenatal corticosteroids appear to 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 antenatal corticosteroid course:
• Preterm labor
• 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
  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, with anticipated preterm delivery

Should **NOT** be used if:
• Previous corticosteroid course for fetal lung maturity in current pregnancy
• Maternal diabetes (i.e., gestational diabetes, pregestational/preexisting diabetes)
• Expected to deliver in < 12 hours (e.g., cervical dilation ≥ 8 cm)
• Intrauterine infection

**NOTE:**
*The ALPS trial did **NOT** include multiple gestations, pregestational diabetes, or those who previously received an antenatal course of corticosteroids, thus it remains unknown whether late preterm steroids provide a benefit in these populations.

*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 PPROM) 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., PPROM 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:**