

NCLEX 2026 · HIGH-YIELD REVIEW

PHARMACOLOGY

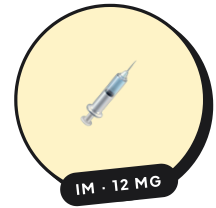
OB / MATERNITY

ENDOCRINE

DRUG CARD · CORTICOSTEROID

Betamethasone

(Celestone) — the antenatal steroid that saves preterm lungs

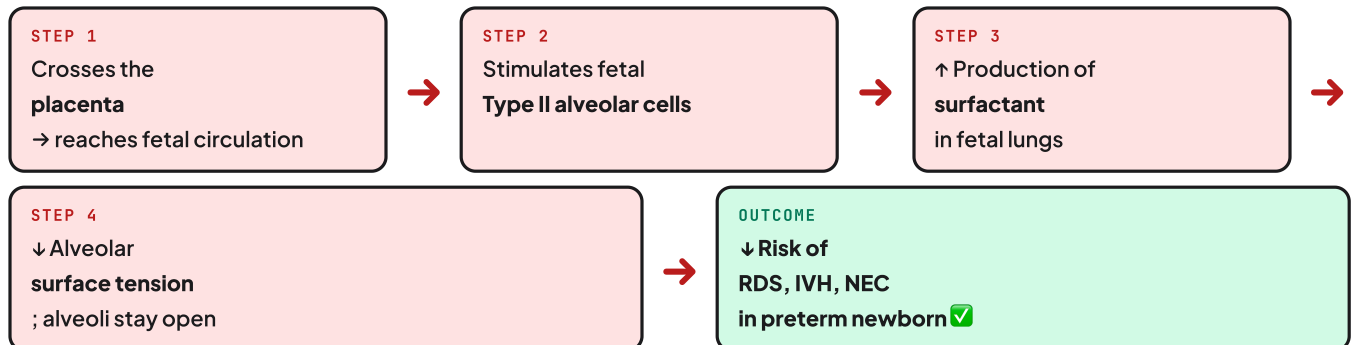


01 Definition / Overview



- 1 **Long-acting synthetic glucocorticoid** (corticosteroid) with potent anti-inflammatory and immunosuppressive effects.
- 2 **#1 NCLEX use:** given antenatally to mothers in preterm labor (24–34 wks) to **accelerate fetal lung maturity** and prevent **respiratory distress syndrome (RDS)** in the newborn.
- 3 Also **decreases risk** of intraventricular hemorrhage (IVH) and necrotizing enterocolitis (NEC) in preterm neonates.

02 Mechanism of Action



STANDARD DOSE

12 mg IM × 2 doses · 24 hrs apart

WINDOW

24–34 wks gestation

PEAK BENEFIT

24 hrs – 7 days after 1st dose

03 Side Effects & Adverse Reactions



👤 Maternal Effects

- ▶ **Hyperglycemia** — esp. in gestational/pre-existing diabetes **RED FLAG**
- ▶ **Pulmonary edema** — esp. if given with tocolytics or IVF overload **RED FLAG**
- ▶ Fluid retention, peripheral **edema**, weight gain
- ▶ ↑ WBC (can **mask infection**) & ↑ risk of infection
- ▶ Insomnia, mood swings, anxiety
- ▶ GI upset, possible ↑ BP

👶 Fetal Effects

- ▶ **Transient ↓ in fetal movement** (usually returns in 24–48 hr)
- ▶ **Transient ↓ in FHR variability** — usually self-resolves
- ▶ No teratogenic effects at antenatal doses
- ▶ Long-term exposure ↑ risk of neonatal adrenal suppression (rare with 2-dose course)

04 Priority Nursing Interventions



ABC → SAFETY → MASLOW → ACUTE BEFORE CHRONIC

ASSESS **Lung sounds** before & after dosing — pulmonary edema is a known complication, especially with concurrent tocolytic therapy.

MONITOR **Blood glucose q4–6h** (more often in diabetics) — hyperglycemia is the most common maternal side effect; insulin adjustment is often needed.

MONITOR **Fetal heart rate & fetal movement** — expect a temporary decrease in variability/movement; differentiate from true fetal distress.

ADMINISTER **Deep IM** into ventrogluteal or vastus lateralis. Give **exactly 24 hrs apart**, complete the full 2-dose series if possible.

ASSESS For **signs of infection** (fever, uterine tenderness, foul lochia) — steroids mask classic inflammatory signs.

MONITOR **Maternal BP, daily weight, I&O, edema** — watch for fluid overload.

DOCUMENT **Exact time of each dose** and communicate to the neonatal team — timing drives the neonate's resuscitation plan.

05 Pharmacology Snapshot



Betamethasone *Celestone®*, *Celestone Soluspan®* **GLUCOCORTICOID**

MECHANISM (SIMPLE)

Synthetic corticosteroid that crosses the placenta and stimulates fetal lung surfactant production; systemically it suppresses inflammation and immune response.

KEY INDICATIONS

Preterm labor 24–34 wks (fetal lung maturation); also inflammation, autoimmune disease, asthma exacerbation, adrenal insufficiency.

KEY SIDE EFFECTS

Hyperglycemia, fluid retention, **pulmonary edema**, mood changes, insomnia, ↑ infection risk, masked infection signs.

NURSING CONSIDERATIONS

Deep IM; monitor **BG**, lung sounds, FHR; give **12 mg × 2 doses, 24 h apart**; do not abruptly stop if used long-term (taper).

CONTRAINDICATIONS / CAUTIONS

Active **systemic infection**, known hypersensitivity, **chorioamnionitis** (use carefully — OB provider may still give). Caution with diabetes, HTN, PUD.

ROUTE / ONSET

Route: **IM** (deep). Onset for lung maturity: **~24 hrs**. Optimal neonatal benefit: **24 hrs – 7 days** post 1st dose.

06 NCLEX Test Traps



⚠️ **It is given to the MOTHER, but the benefit is for the BABY.** Students often confuse who the "patient" is on the NCLEX — the intervention targets the fetus's lungs.

⚠️ **Betamethasone is NOT a tocolytic.** It does not stop contractions. Tocolytics (magnesium sulfate, nifedipine, terbutaline) do that — betamethasone just buys time for the lungs.

⚠️ **Still give it even if delivery may occur before 48 hrs.** Even a partial course has benefit — don't hold the dose waiting for "enough time."

⚠️ **Priority assessment = LUNG SOUNDS** (pulmonary edema risk) & **BLOOD GLUCOSE** — not "fetal movement" on most priority questions (ABCs first).

⚠️ **Don't skip the second dose** just because mom "feels fine." The full 2-dose course gives maximum lung benefit.

Betamethasone

12 mg IM × 2 doses, 24 h apart

vs.

Dexamethasone

6 mg IM × 4 doses, 12 h apart

Both do the same job (fetal lung maturation). Know the dosing difference — it's a classic distractor.

07

Patient Education



"This medicine helps **your baby's lungs develop** faster in case of early delivery."



Expect **2 injections, 24 hours apart**. Both doses are important — don't skip the second.



If you're diabetic, expect **higher blood sugars** for a few days; insulin may need adjusting.



Baby's **movement may slow briefly** (24–48 hrs) — this is expected, but **report any major decrease**.



Report **fever, chills, uterine pain, foul-smelling discharge** — signs of infection.



Report **chest pain, shortness of breath, rapid weight gain, swelling** — possible fluid overload.



You may feel **anxious or have trouble sleeping**; this is temporary and resolves once the drug clears.



Contact your provider for **contractions, leaking fluid, bleeding, or no fetal movement**.

08

Memory Boosters



MNEMONIC • ACTION

BETA

Baby's lungs • Enhances surfactant • Two doses • **Accelerates** maturity

MNEMONIC • DOSING

12 • 2 • 24

12 mg, 2 doses, 24 hours apart — the magic numbers for Betamethasone.

PATTERN RECOGNITION

"Beta = Better Breathing"

Betamethasone = Better Breathing for Baby. If the question mentions **preterm labor + steroid**, think **surfactant**.

QUICK ASSOC. • PRIORITY

LGS

Top 3 things to monitor: **Lungs** (pulmonary edema) • **Glucose** (hyperglycemia) • **Signs of infection** (masked).

DISTRACTOR DEFENSE

Not a Tocolytic!

Betamethasone does **NOT** stop labor. It just prepares baby's lungs. Tocolytics = Mag, Nifedipine, Terbutaline.

"DO NOT CONFUSE"

B vs D

Betamethasone = 12 mg × 2 (q24h)

Dexamethasone = 6 mg × 4 (q12h)

Same job • different dosing.