Phases & Stages of *Labor*

→ THE FOUR STAGES AT A GLANCE

STAGE 1	STAGE 2	STAGE 3	STAGE 4
Dilation & Effacement Onset → 10 cm · 6–18 hrs (primip)	Expulsion / Birth 10 cm → baby out · ≤ 3 hrs	Placental Baby → placenta · 5–30 min	Recovery First 1–4 hrs postpartum

★ STAGE 4 = highest risk for postpartum hemorrhage — most critical monitoring window

01 Overview · What is "Labor"?

- **Labor** = regular, progressive uterine contractions causing **cervical dilation & effacement**, ending in birth of fetus & placenta.
- Divided into **4 stages**; Stage 1 has 3 **phases** (latent, active, transition). The terms "phase" and "stage" are *not interchangeable* on NCLEX.
- **True vs. False labor:** True = regular, progressive, intensifies w/ activity, cervical change. False (Braxton Hicks) = irregular, no cervical change, stops w/ rest/hydration.

02 Pathophysiology · The 5 P's of Labor Progress

- **Passenger** → fetus: size, lie, presentation, position, attitude.
- **Passageway** → bony pelvis + soft tissues (cervix, vagina).
- **Powers** → contractions (involuntary) + maternal pushing (voluntary, Stage 2).
- **Position** → maternal position; upright/lateral aids descent & placental flow.
- **Psyche** → maternal coping, anxiety, support, prior experience.
- *Hormonal trigger:* ↓ progesterone + ↑ estrogen & oxytocin → **Ferguson reflex** → contractions.

STAGE 1 — Dilation & Effacement · *onset of true labor → 10 cm*

LONGEST stage · 3 phases · primip 6–18 hrs · multip 2–10 hrs

	LATENT (EARLY)	ACTIVE	TRANSITION
DILATION	**0–6 cm**	**6–8 cm**	**8–10 cm**
CONTRACTIONS	Mild · 30–45 sec q 5–30 min	Moderate–Strong · 40–70 sec q 3–5 min	Strong · 60–90 sec q 2–3 min
MOM	Talkative, excited, sociable. Tolerates contractions well.	Focused, serious, requests pain relief. ↓ ability to cope.	Irritable, N/V, shaking, "I can't do this," urge to push, rectal pressure.
PRIORITY CARE	Admit, baseline FHR + VS, hydration, ambulation, education, encourage void q 1–2 hr.	FHR **q 30 min** (low-risk) / q 15 min (high-risk). Pain mgmt (epidural 6+ cm), position changes, IV fluids.	FHR **q 15 min**. Coach breathing, do **NOT push until 10 cm**, prep for delivery, support partner.

⚠ Stage 1 Complications

Prolapsed Umbilical Cord

Cord precedes fetus → cord compression. **Action:** knee-chest / Trendelenburg, lift presenting part off cord, O_2, call provider, prep C-section. Do NOT replace cord.

Placental Abruption

Painful dark red bleeding, **rigid/board-like** uterus, fetal distress, maternal shock. Emergency C-section.

Uterine Tachysystole

> 5 contractions / 10 min averaged over 30 min. **Stop oxytocin**, lateral position, IV bolus, O_2 8–10 L NRB, notify HCP.

Failure to Progress / Dystocia

No cervical change ≥ 2 hrs in active phase. Causes: malposition, CPD, weak contractions. May need oxytocin augmentation or C-section.

Non-Reassuring FHR

Late decels, prolonged decels, bradycardia, minimal/absent variability. Intrauterine resuscitation: *LION* — Left side, IV fluids, O_2, Notify provider, stop pitocin.

PROM / Chorioamnionitis

ROM > 18 hrs ↑ infection. Maternal fever, fetal tachycardia, foul lochia. Antibiotics, monitor temp q 2 hr.

Phases & Stages of *Labor*

STAGE 2 — Expulsion · *10 cm dilation → birth of baby*

Primip ≤ 3 hrs (≤ 4 w/ epidural) · Multip ≤ 2 hrs · Has passive (descent) + active (pushing) phases

RX Stage 2 Management

- Confirm **full dilation (10 cm)** before pushing — pushing earlier = cervical edema/laceration.
- Open-glottis pushing (3–4 pushes per contraction, 6–8 sec each) preferred over Valsalva.
- **FHR after EVERY contraction** (q 5 min low-risk, q 15 min active push).
- Position: upright, squat, side-lying, or hands & knees aid descent.
- Assist with perineal support; warm compresses ↓ tearing risk.
- Prep delivery field, infant warmer, neonatal resuscitation equipment.
- Cardinal movements: *Engagement → Descent → Flexion → Internal rotation → Extension → External rotation → Expulsion.*

⚠ Stage 2 Complications

Shoulder Dystocia
Head delivers but shoulders stuck. **Turtle sign.** Action: **McRoberts maneuver** (hyperflex hips to abdomen) + **suprapubic pressure** (NEVER fundal pressure — worsens it).

Perineal Lacerations
1st (skin), 2nd (muscle), 3rd (anal sphincter), 4th (rectal mucosa). 4th = ↑ infection risk; **no enemas/suppositories**.

Prolonged 2nd Stage / Fetal Distress
May require vacuum, forceps, or emergency C-section. Watch for late or prolonged decels.

STAGE 3 — Placental · *birth of baby → delivery of placenta*

5–30 min · Retained placenta > 30 min = complication

RX Stage 3 Management

- **4 signs of placental separation** (mnemonic **"GLOB"**): **G**ush of blood · cord **L**engthens · uterus rises & becomes globular (**O**val→globe) · firm **B**oggy-free fundus.
- **Schultze ("shiny")** = fetal side first (most common, less bleeding). **Duncan ("dirty")** = maternal side first (↑ retained fragments).
- Administer **oxytocin** (10 units IM or 10–40 units in 1 L IV) per protocol — active management of 3rd stage prevents PPH.
- Inspect placenta for completeness — retained fragments → hemorrhage / infection.
- **NEVER pull on the cord** → risk of uterine inversion (life-threatening).

⚠ Stage 3 Complications

Retained Placenta
Not delivered in 30 min. Manual removal, possible D&C. ↑ hemorrhage & infection.

Uterine Inversion
Fundus turns inside-out (often from cord traction). Massive hemorrhage + shock. **Do not remove placenta if attached.** Tocolytic (terbutaline), IV fluids, manual replacement.

Immediate PPH
> 500 mL vag / > 1000 mL C-section. Cause: **"4 T's"** — Tone (atony), Trauma, Tissue (retained), Thrombin (coag).

STAGE 4 — Recovery · *first 1–4 hours postpartum*

Highest hemorrhage risk · VS & fundus q 15 min × 1 hr → q 30 min × 1 hr → q 1 hr × 2 hrs

RX Stage 4 Management · BUBBLE-HE

- **B**reasts — soft, colostrum, nipples intact.
- **U**terus — firm, midline, at umbilicus (drops 1 cm/day). **Boggy = MASSAGE FIRST**, then check bladder.
- **B**ladder — full bladder displaces uterus & → atony. Void within 6–8 hrs; cath if unable.
- **B**owel / **L**ochia — bowel sounds + flatus; lochia rubra (1–3 d). Saturating > 1 pad/hr = abnormal.
- **E**pisiotomy — *REEDA* (Redness, Edema, Ecchymosis, Discharge, Approximation). Ice × 24 hr.
- **H**omans / **E**motions — DVT signs; bonding, baby blues vs PPD screen.

⚠ Stage 4 Complications

Uterine Atony (#1 cause PPH)
Boggy fundus + ↑ bleeding. **1st: massage fundus.** 2nd: empty bladder. 3rd: uterotonics (oxytocin → methergine → hemabate → misoprostol). IV fluids, type & cross.

Hypovolemic Shock
↑ HR, ↓ BP (LATE), pale, cool, ↓ UO < 30 mL/hr, restless. Trendelenburg, 2 large-bore IVs, O_2, blood products.

Hematoma · Bladder Distention
Severe perineal pain w/ *firm* fundus = hematoma. Distended bladder displaces fundus to right of midline.

Pharm • Traps • *Education* • Mnemonics

05 Pharmacology · Drugs Used Across Labor Stages

Oxytocin (Pitocin) — Uterotonic

USE	Induction/augmentation; prevent & treat PPH (active mgmt of 3rd stage).
SE	Tachysystole, fetal distress, water intoxication, ↓ BP.
CARE	**Stop** if > 5 contractions/10 min, late decels, or non-reassuring FHR. Always on IV pump, piggyback.

Methylergonovine (Methergine) — Ergot · Uterotonic

USE	PPH from atony (2nd-line). 0.2 mg IM.
SE	HTN, HA, N/V, chest pain.
CARE	**CONTRAINDICATED in HTN / preeclampsia.** Check BP first.

Carboprost (Hemabate) — Prostaglandin F2α

USE	PPH (3rd-line uterotonic). 0.25 mg IM q 15–90 min.
SE	Severe diarrhea, N/V, fever, bronchospasm.
CARE	**CONTRAINDICATED in asthma.**

Misoprostol (Cytotec) — Prostaglandin E1

USE	Cervical ripening; PPH. PO/PR/buccal/vaginal.
SE	Tachysystole, N/V, fever, chills.
CARE	**NEVER in pregnancy unless inducing** (causes contractions/abortion). C/I prior C-section (rupture).

Magnesium Sulfate — Tocolytic · Anticonvulsant

USE	Preterm labor tocolysis; preeclampsia/eclampsia seizure prevention; fetal neuroprotection < 32 wks.
TOXICITY	↓ DTRs, RR < 12, ↓ UO < 30 mL/hr, ↓ LOC.
ANTIDOTE	**Calcium gluconate** at bedside.

Terbutaline (Brethine) — β2 Agonist · Tocolytic

USE	Stop preterm contractions; uterine inversion / tachysystole rescue.
SE	Maternal tachycardia, tremor, hyperglycemia, pulm edema.
CARE	Hold if maternal HR > 120. C/I in cardiac dz.

Epidural (Bupivacaine + Fentanyl) — Regional Anesthesia

USE	Pain relief active phase (≥ 4–6 cm dilation typical).
SE	**Maternal hypotension** → fetal bradycardia. HA, urinary retention.
CARE	IV bolus 500–1000 mL LR **before** placement; if ↓ BP → left lateral, IV bolus, ephedrine, O_2.

IV Opioids (Fentanyl, Nalbuphine) — Analgesic

USE	Pain relief Stage 1 — early/active phase.
SE	Maternal sedation, neonatal respiratory depression if given < 1 hr before birth.
ANTIDOTE	**Naloxone (Narcan)** for newborn — neonatal resus equipment ready.

06 NCLEX Test Traps · Watch Your Step

SROM just occurred — what FIRST?
Assess FHR (cord prolapse risk) — NOT vital signs, not the color of fluid, not calling provider.

Boggy fundus + heavy bleeding — what FIRST?
Massage fundus. Then check bladder. THEN administer uterotonics. THEN call HCP.

Fundus deviated to the right — what does it mean?
Full bladder. Have pt void or catheterize — bladder distention causes atony & bleeding.

Postpartum BP ↑ + atony — give Methergine?
NO! Methergine is contraindicated in HTN. Use oxytocin or hemabate (unless asthmatic).

Asthma + atony — give Hemabate?
NO! Carboprost causes bronchospasm. Use oxytocin or methergine (if normotensive).

Pt urge to push at 8 cm — push?
NO! Pushing before 10 cm = cervical edema/laceration. Coach blow/pant breathing.

Shoulder dystocia — apply fundal pressure?
NEVER. Worsens impaction. Use **McRoberts + suprapubic** pressure.

Severe perineal pain + firm fundus + no excess lochia?
Hematoma (concealed bleed). Assess vitals, notify HCP. Not normal "afterpains."

Late decelerations — first action?
Reposition L lateral + stop oxytocin + IV bolus + O_2 + notify HCP. (LION)

Variable decels — what does it suggest?
Cord compression. Reposition, amnioinfusion if ordered. (VEAL CHOP: Variable = Cord)

Epidural placed → BP drops → fetal bradycardia.
Left lateral, IV bolus, O_2 — NOT decrease epidural. Treat the hypotension.

Placenta delivered — pull on cord to speed it up?
NEVER. Risk of uterine inversion (life-threatening hemorrhage).

Patient Education & *Memory* Boosters

07 Patient Education · What to Teach the Family

WHEN TO COME TO THE HOSPITAL

- **5-1-1 rule** (primip): contractions **5** min apart, **1** min long, for **1** hr. Multips: come earlier.
- Rupture of membranes (note time, color, odor) — go in even without contractions.
- Bright red bleeding (not bloody show), severe HA, vision changes, ↓ fetal movement.
- Suspected cord prolapse: assume knee-chest, call 911.

DURING LABOR

- Pain options: non-pharm (breathing, position, hydrotherapy, doula), IV opioids, epidural — risks & benefits.
- Pushing: open-glottis, with contractions, listen to your body.
- Empty bladder q 1–2 hrs to support labor progress.
- Bring birth plan, but stay flexible — safety overrides preferences.

POSTPARTUM / STAGE 4

- **Lochia progression:** rubra (1–3 d) → serosa (4–10 d) → alba (10 d–6 wk). No tampons, no intercourse until cleared.
- Saturating ≥ 1 pad/hr or passing clots larger than a golf ball — call HCP.
- Perineal care: peri-bottle front-to-back, ice × 24 hr, sitz baths after.
- Breastfeeding: latch q 2–3 hr, on demand, both breasts.
- Watch for PPH signs: dizziness, soaked pads, ↑ HR, light-headedness.
- Baby blues (≤ 2 wks, mild) vs PPD (> 2 wks, impaired function) — screen + refer.
- No driving on opioids, no lifting > baby's weight, no sex × 6 wks (vag) / longer for C-section.
- Kegels begin postpartum day 1 to restore pelvic floor.

08 Memory Boosters · Mnemonics & Patterns

5 P's

FACTORS AFFECTING LABOR

Passenger · fetus
Passageway · pelvis
Powers · contractions
Position · maternal
Psyche · coping

5-1-1

GO TO HOSPITAL (PRIMIP)

5 min apart
1 min long
For **1** hour
Multips: come sooner!

VEAL CHOP

FHR PATTERN → CAUSE

Variable → **C**ord compression
Early → **H**ead compression (OK)
Accel → **O**K (oxygenated)
Late → **P**lacental insufficiency

LION

INTRAUTERINE RESUSCITATION

Left side
IV fluids bolus
Oxygen 8–10 L NRB
Notify provider · stop pit

4 T's

CAUSES OF PPH

Tone — atony (#1)
Trauma — laceration
Tissue — retained placenta
Thrombin — coagulopathy

BUBBLE-HE

POSTPARTUM / STAGE 4 ASSESSMENT

Breasts · **U**terus · **B**ladder
Bowel · **L**ochia
Episiotomy/perineum
Homans · **E**motions

Cardinal Movements

"EVERY DARN FOOL IN EGYPT EATS EGGS"

Engagement
Descent · **F**lexion
Internal rotation · **E**xtension
External rotation · **E**xpulsion

Schultze vs Duncan

PLACENTAL DELIVERY

Schultze = "**Shiny**" fetal side
Duncan = "**Dirty**" maternal side
Duncan = ↑ retained tissue
"Shiny Schultze, Dirty Duncan"