Fetal Heart Rate Decelerations

OB / Maternity • NCLEX 2026 Test Plan • Clinical Judgment + Prioritization

NGN High-Yield

🧠 MASTER MNEMONIC: VEAL CHOP

- **V** — **Variable decel** — abrupt drop in FHR
- **E** — **Early decel** — mirrors contraction
- **A** — **Accelerations** — ↑ FHR >15 bpm
- **L** — **Late decel** — after contraction peak
- **C** — **Cord compression** — umbilical cord pinched
- **H** — **Head compression** — fetal head pressure
- **O** — **Okay / Oxygenated** — reassuring sign
- **P** — **Placental insufficiency** — ↓ O_2 to fetus

📘 1. DEFINITION / OVERVIEW

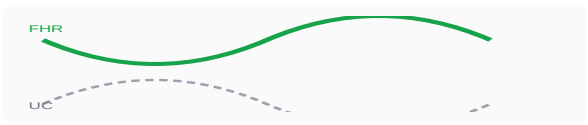
► **FHR decelerations** = transient decreases in fetal heart rate during labor that correlate with specific physiologic causes.

► Three distinct patterns — **Early, Variable, Late** — each tied to a different mechanism: **Head compression, Cord compression, or Placental insufficiency.**

► **Why it matters:** Correct identification guides intervention, prevents fetal hypoxia/acidosis, and is a top-tested NCLEX clinical judgment skill.

🩸 2. PATHOPHYSIOLOGY + 3. SIGNS & SYMPTOMS

E EARLY Decel
HEAD COMPRESSION



MECHANISM

Contraction → head compressed → vagal nerve stimulation → ↓ FHR (mirrors UC)

KEY FEATURES

- ► **Mirrors** the contraction
- ► Gradual onset (>30 sec to nadir)
- ► Nadir = **peak** of contraction
- ► Returns to baseline as UC ends
- ► Uniform, symmetric U-shape

✓ BENIGN / REASSURING

V VARIABLE Decel
CORD COMPRESSION

MECHANISM

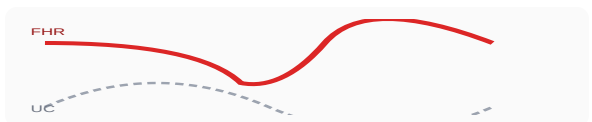
Cord compressed → ↓ blood flow to fetus → baroreceptor response → abrupt FHR drop

KEY FEATURES

- ► **Abrupt** drop (<30 sec to nadir)
- ► V, U, or W shape
- ► **Variable** timing (no pattern with UC)
- ► Drop ≥15 bpm for ≥15 sec
- ► Rapid return to baseline

⚠ CAUTION • R/O CORD PROLAPSE

L LATE Decel
RED FLAG
PLACENTAL INSUFFICIENCY



MECHANISM

↓ placental perfusion → fetal hypoxia → ↓ O_2 → FHR drops AFTER contraction peak

KEY FEATURES

- ► Begins **after** contraction starts
- ► Nadir **after** UC peak
- ► Returns to baseline **after** UC ends
- ► Uniform, smooth shape
- ► Sign of **uteroplacental insufficiency**

🚨 ALWAYS CONCERNING

⚕ 4. PRIORITY NURSING INTERVENTIONS (ABCs → SAFETY → PRIORITIZATION)

EARLY (HEAD COMPRESSION)

- ► **No action** required
- ► Document pattern
- ► Continue routine EFM
- ► Reassure mother

VARIABLE (CORD COMPRESSION)

- ► **REPOSITION** (L or R lateral, knee-chest)
- ► **Stop oxytocin**
- ► **O_2** 10 L non-rebreather
- ► **IV fluid bolus** (LR)
- ► **Vaginal exam** → r/o prolapse
- ► Notify provider
- ► Prepare for amnioinfusion

LATE (PLACENTAL INSUFF.) 🚨

- ► **STOP oxytocin** IMMEDIATELY
- ► Turn to **LEFT SIDE**
- ► **O_2** 10 L non-rebreather mask
- ► **IV fluid bolus**
- ► Notify provider **STAT**
- ► Prepare for possible **C-section**
- ► Consider tocolytic (terbutaline)

🦁 LION — Intrauterine Resuscitation

- **L** — **Lateral** position (left side)
- **I** — **IV fluid** bolus
- **O** — **Oxygen** 10 L NRB mask
- **N** — **Notify** + **No** more Pitocin

Use for: Late decels or severe variable decels

💊 5. PHARMACOLOGY

Oxytocin (Pitocin)

UTEROTONIC • INDUCTION / AUGMENTATION

Mechanism: Stimulates uterine smooth muscle → contractions.

Key S/E: Tachysystole, uterine rupture, water intoxication, fetal distress.

Nursing: Continuous EFM, titrate to contraction pattern, monitor I&O.

HOLD / STOP if: Late decels • severe variables • contractions >5 in 10 min • Cat III tracing • uterine rupture s/sx

Terbutaline

B2-AGONIST • TOCOLYTIC (RESCUE)

Mechanism: Relaxes uterine smooth muscle → stops contractions.

Key S/E: Maternal tachycardia, tremors, hyperglycemia, pulmonary edema.

Nursing: Hold if HR >120; monitor glucose, K^+, lung sounds.

USE FOR: Uterine tachysystole with fetal distress when stopping oxytocin isn't enough

🪤 6. NCLEX TEST TRAPS

⚠️ **Late decel = ALWAYS concerning.** Never "continue to monitor" — intervene immediately.

⚠️ **Variable decel → check for cord prolapse FIRST** with a vaginal exam. Missed prolapse = fetal death.

⚠️ **Timing is everything:** Mirror UC = Early • After UC peak = Late. Students confuse these constantly.

⚠️ **Left lateral position** is preferred (NOT right) — relieves IVC compression & boosts placental flow.

⚠️ **STOP Pitocin BEFORE calling provider** for late decels. The action is priority over the call.

⚠️ **O_2 to MOM helps BABY.** Oxygen crosses the placenta — don't put it on the baby directly.

⚠️ **Early decels are NORMAL.** Don't "treat" them; no repositioning, no O_2, no notification needed.

⚠️ **Abrupt drop <30 sec = Variable.** Gradual drop >30 sec = Early or Late (check timing vs UC).

🗣️ 7. PATIENT EDUCATION

1. Explain the **purpose of continuous fetal monitoring** and what the tracings show.
2. **Avoid the supine position** — lie on your left side to maximize blood flow to the baby.
3. Report **immediately**: decreased fetal movement, sudden gush of fluid, or feeling "something" in the vagina (cord!).
4. **Stay hydrated** — good hydration supports placental perfusion and oxygen delivery.
5. **Position changes** during labor may be requested by the nurse to help the baby — it's normal and protective.
6. If you receive **oxygen**, it's helping your baby too — oxygen crosses the placenta.

🧠 8. MEMORY BOOSTERS

📏 Shape Recognition

★ **Mirror** the contraction → Early (head)

★ **Abrupt V/W/U** drop → Variable (cord)

★ **Shifted right / lagging** → Late (placenta) 🚨

⚡ Trigger → Action

★ **Early:** do NOTHING (benign)

★ **Variable:** REPOSITION first

★ **Late:** STOP Pit + L I O N

🩺 3 Rights for Baby

★ Right **Side** → LEFT lateral

★ Right **Flow** → IV bolus LR

★ Right **Air** → 10 L O_2 via NRB

★ **ONE-LINE TAKEAWAY** ★ | Early = **Benign** (head) • Variable = **Reposition + r/o prolapse** (cord) • Late = **STOP Pit + LION** (placenta) 🚨