MATERNAL-NEWBORN / PHARMACOLOGY · NGN NCLEX-RN

Hormonal vs Non-Hormonal Contraceptives

The NGN doesn't ask you to define a pill — it drops you into a scenario and makes you decide **who can't have estrogen**, **which warning sign means call now**, and **which method fits this history**. This module is built around those forks.

2	ACHES	PAINS	LARC
core decisions: estrogen vs not	combined-pill danger signs	IUD danger signs	most effective tier

01 The split that drives every question

START HERE

Before mechanism, before side effects — sort the method into one of two buckets. Estrogen is what carries the clot, stroke, and MI risk, so the first thing you decide in any stem is whether the patient can safely have it.

Contains Estrogen

`combined hormonal — clot/stroke risk`

- **Combined oral pills** (estrogen + progestin)
- **Transdermal patch** — changed weekly
- **Vaginal ring** — 3 weeks in, 1 week out

If the stem names a clot history, smoking at ≥35, or migraine with aura → these are the **wrong** answer.

No Estrogen

`progestin-only + non-hormonal — safer profile`

- **Progestin-only:** minipill, Depo injection, implant, hormonal IUD
- **Non-hormonal:** copper IUD, condoms, diaphragm, FAM, sterilization

These are the methods you reach for when estrogen is contraindicated or the patient is breastfeeding.

02 How each hormone works

Two hormones, three actions. Knowing which hormone does what lets you reason through "why is this method failing / why backup needed" items.

Estrogen

- Suppresses **FSH** → no dominant follicle develops
- Stabilizes the endometrium → cycle control, less breakthrough bleeding

Progestin

- Suppresses **LH** → blocks the ovulation surge
- **Thickens cervical mucus** → sperm can't pass
- **Thins endometrium** → unfavorable for implantation

Combined effect

- Combined methods **primarily stop ovulation**
- Progestin-only relies more on **mucus + thin lining**; ovulation suppression is variable (esp. minipill)

03 Every method at a glance

The dosing/timing column is heavily tested in cloze drop-down items. Memorize the intervals.

Method	Class	Timing / dosing	Signature NGN point
Combined oral pill	Estrogen	Daily, same time	Missed-pill rules tested constantly (see §06)
Transdermal patch	Estrogen	New patch **weekly** ×3, then patch-free week	Higher VTE risk than pills; less effective if >90 kg
Vaginal ring	Estrogen	**3 wk in, 1 wk out**	If out >3 h, backup needed
Progestin-only pill (minipill)	Progestin	Daily, **same time — <3 h window**	>3 h late = backup ×48 h; safe while breastfeeding
DMPA (Depo-Provera)	Progestin	**Every 11–13 wk** IM/SQ	↓ bone density (black box); delayed return to fertility
Implant (Nexplanon)	Progestin	**3 years**, subdermal	LARC — Tier 1 efficacy; irregular bleeding common
Hormonal IUD (Mirena, Kyleena…)	Progestin	**3–8 years**	Makes periods **lighter** — contrast with copper
Copper IUD (ParaGard)	Non-hormonal	**Up to 10–12 years**	Periods **heavier/crampier**; best emergency option
Male / female condom	Non-hormonal	Each act	**Only method that prevents STIs**
Diaphragm	Non-hormonal	Insert before; leave **6 h after**, remove by 24 h	Refit after pregnancy or ±10 lb; TSS risk if left too long
Fertility awareness	Non-hormonal	Cycle tracking	BBT rises 0.4–0.8°F after ovulation; egg-white mucus = fertile
Sterilization (tubal / vasectomy)	Non-hormonal	Permanent	Vasectomy: **backup until azoospermia confirmed** (~3 mo)

04 Estrogen contraindications

HIGH-YIELD

This is where points are won and lost. If a stem lists any of these *and* an answer option contains a combined pill, patch, or ring — that option is wrong. Use the mnemonic **SCARED of estrogen** (see §05).

Absolute / high-risk — no estrogen

- **Smoker + age ≥ 35** — the classic distractor
- History of **DVT / PE** or clotting disorder (Factor V Leiden)
- **Migraine with aura** (without aura is often okay — that's the trap)
- History of **stroke, MI, or CAD**
- **Uncontrolled hypertension**
- Current or past **breast cancer**; active liver disease/tumor

Situational cautions

- **<21 days postpartum** — elevated VTE risk
- **Breastfeeding** — estrogen lowers milk supply (use progestin-only)
- Diabetes with vascular complications
- Prolonged immobilization / major surgery
- **Pregnancy** (known/suspected)

NGN CLINICAL JUDGMENT

Read the stem for these facts *first*, eliminate estrogen methods they rule out, then match the remaining options to the efficacy/teaching detail the item is probing.

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05 Mnemonic wall

MEMORIZE

Five anchors that cover the warning signs, the counseling standard, and the estrogen rule-outs. ACHES, PAINS, and BRAIDED are classic NCLEX mnemonics; SCARED and the IUD-period hook are memory aids built for this module.

ACHES

COMBINED PILL · CALL PROVIDER

A	**Abdominal pain** (severe) — liver, gallbladder, or clot
C	**Chest pain / dyspnea** — PE or MI
H	**Headache** (severe, sudden) — stroke / hypertension
E	**Eye problems** — vision loss/blurring, clot or stroke
S	**Severe leg pain** — DVT (calf/thigh)

PAINS

IUD · CALL PROVIDER

P	**Period** late, or abnormal bleeding/spotting
A	**Abdominal pain** / pain with intercourse
I	**Infection** — abnormal or foul discharge
N	**Not feeling well** — fever, chills
S	**String** missing, longer, or shorter than usual

SCARED

…OF ESTROGEN · RULE-OUTS

S	**Smoking** at age ≥ 35
C	**Clots / cardiovascular** — DVT, PE, stroke, MI
A	**Aura** — migraine with aura
R	**Reproductive cancer** — breast cancer hx
E	**Elevated BP** — uncontrolled hypertension
D	**Disease of liver** (also: delivery <21 days ago)

BRAIDED

INFORMED-CONSENT COUNSELING

B	**Benefits** of the method
R	**Risks**, including failure rate
A	**Alternatives** available
I	**Inquiries** — client's questions answered
D	**Decision** — client may decline at any time
E	**Explanation** of the method in full
D	**Documentation** of teaching and consent

Copper = Crimson & Cramps · Hormonal = Hushed

IUD PERIOD CONTRAST

⊕ **Copper IUD** → heavier, crampier periods (no hormones; copper is spermicidal + inflammatory). The matrix-item trap loves to flip this.

○ **Hormonal IUD** → lighter periods, sometimes amenorrhea (progestin thins the lining).

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06 Method-specific teaching traps

The details below show up as take-action and cloze items. They reward precise numbers, not vibes.

Missed combined pills

- **Miss ONE** active pill → take it ASAP (even 2 in one day), **no backup** needed.
- **Miss TWO+** → take the most recent, discard others, **backup ×7 days.**
- Vomiting/diarrhea within ~3 h of a dose = treat like a missed pill.

Progestin-only pill (minipill)

- Take at the **same time daily** — window is only **3 hours.**
- More than 3 h late → **backup ×48 h.**
- Preferred while breastfeeding (no estrogen, no milk-supply effect).

DMPA (Depo-Provera)

- **Black-box: ↓ bone mineral density** → push calcium, vitamin D, weight-bearing exercise.
- **Delayed return to fertility** — up to ~9–18 months.
- Weight gain; given **every 11–13 weeks.**

Drugs that lower efficacy

- **Rifampin / rifabutin** — the proven offender.
- Enzyme-inducing anticonvulsants: phenytoin, carbamazepine, phenobarbital, topiramate.
- **St. John's wort.** → counsel a **backup method.**

NOTE

The blanket "all antibiotics" rule is outdated — only rifampin truly reduces efficacy. Answer to the enzyme-inducer logic if the option set forces a choice.

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07 Non-hormonal — the discriminators

These are the methods you choose when estrogen is off the table. The contrasts below are favorite single-best-answer fodder.

Copper IUD

Copper is spermicidal and creates an inflammatory environment hostile to sperm/ova. Lasts 10–12 yr. **Most effective emergency contraception** (within 5 days). Expect **heavier, crampier** menses.

Barrier methods

Only condoms prevent STIs — if a stem mentions STI protection, every non-condom option is wrong. Diaphragm: leave in **6 h after**, refit after pregnancy or ±10 lb, remove by 24 h (**TSS risk**).

Fertility awareness

BBT **rises 0.4–0.8°F after** ovulation. Cervical mucus turns clear, stretchy, egg-white (spinnbarkeit) at peak fertility. Abstain or use backup during the fertile window.

Sterilization

Tubal ligation: effective immediately. **Vasectomy: NOT immediate** — use backup until semen analysis confirms azoospermia (~3 months / ~20 ejaculations).

LAM (lactational amenorrhea)

Reliable **only if all three**: <6 months postpartum, **exclusively** breastfeeding, and amenorrheic. Lose any one → add another method.

Spermicide / withdrawal

Low efficacy alone. Nonoxynol-9 can irritate mucosa and **increase HIV risk** with frequent use. Withdrawal is among the least reliable methods.

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08 Efficacy tiers

"MOST EFFECTIVE" ITEMS

When an item asks for the *most effective* option, think LARC. The fewer chances for user error, the lower the failure rate.

TIER 1 **<1% failure**

- Implant (Nexplanon)
- Hormonal & copper IUDs
- Sterilization

"Set and forget" — no daily user action.

TIER 2 **~6–9%**

- Pills, patch, ring
- DMPA injection

User-dependent — adherence drives the typical failure rate.

TIER 3 **~12–28%**

- Condoms, diaphragm
- Fertility awareness, withdrawal, spermicide

Highest typical-use failure — but condoms add **STI protection.**

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09 Emergency contraception

Often bundled into a maternal-newborn item set. Teach that these **prevent or delay ovulation — they are not abortifacients** and do not end an established pregnancy.

Option	Window	Access	Key point
Copper IUD	Up to **5 days**	Provider-inserted	**Most effective** EC; also ongoing contraception
Ulipristal (ella)	Up to **120 h**	Prescription	More effective than levonorgestrel later in window
Levonorgestrel (Plan B)	Up to **72 h**	OTC, any age	Sooner = better; reduced efficacy at higher BMI

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10 Interactive flashcards

FLIP TO REVEAL

Scenario-framed, the way the NGN cues clinical judgment. Click a card to flip; mark cards mastered to track progress (saved on this device).

KEY

MECHANISM

Which hormone is mainly responsible for suppressing the LH surge and thickening cervical mucus?

tap to flip ↻

ANSWER

RED FLAG

CONTRAINDICATION

A 38-year-old smoker asks for the pill. What's the safest counseling direction?

tap to flip ↻

ANSWER

Progestin. It blocks the ovulation surge (LH), thickens cervical mucus so sperm can't pass, and thins the endometrium. Estrogen's job is suppressing FSH and stabilizing the lining.

Avoid **estrogen-containing** methods — smoking at age ≥35 raises clot risk. Offer a **progestin-only or non-hormonal** option (minipill, implant, IUD, copper IUD).

RED FLAG

CONTRAINDICATION

Which type of migraine rules out combined hormonal contraceptives?

tap to flip ↻

ANSWER

Migraine **WITH aura** (stroke risk). Migraine *without* aura is often acceptable — the 'with aura' qualifier is the NGN trap.

RED FLAG

WARNING SIGNS

A client on combined pills reports sudden chest pain and shortness of breath. Which ACHES letter, and what does it signal?

tap to flip ↻

ANSWER

C — Chest pain/dyspnea, signaling possible **PE or MI**. This is an emergency; she needs immediate evaluation, not reassurance.

RED FLAG

WARNING SIGNS

An IUD user reports a missing string, fever, and foul discharge. Which mnemonic and what's the concern?

tap to flip ↻

ANSWER

PAINS — String missing (S), Infection/discharge (I), Not well/fever (N). Possible expulsion plus infection; needs prompt evaluation.

KEY

TEACHING

A client misses TWO active combined pills. What's the instruction?

tap to flip ↻

ANSWER

Take the most recent missed pill, discard the others, continue the pack, and **use a backup method for 7 days.** (Missing just ONE = take ASAP, no backup needed.)

NGN CUE

TEACHING

How late can a progestin-only minipill be taken before backup is required?

tap to flip ↻

ANSWER

More than **3 hours** late → use **backup for 48 hours.** The minipill has a much narrower window than combined pills.

RED FLAG

TEACHING

What is the black-box warning for DMPA (Depo-Provera), and the nursing response?

tap to flip ↻

ANSWER

Decreased bone mineral density. Counsel weight-bearing exercise, calcium, and vitamin D; limit prolonged use. Also teach delayed return to fertility (up to ~9–18 months).

KEY

TEACHING

Which medications meaningfully reduce hormonal contraceptive efficacy?

tap to flip ↻

ANSWER

Rifampin/rifabutin, enzyme-inducing anticonvulsants (phenytoin, carbamazepine, phenobarbital, topiramate), and **St. John's wort.** Advise a backup method. The blanket 'all antibiotics' rule is outdated.

NGN CUE

NON-HORMONAL

How do the copper IUD and the hormonal IUD differ in their effect on menstruation?

tap to flip ↻

ANSWER

Copper IUD → heavier, crampier periods (Crimson & Cramps). **Hormonal IUD → lighter periods**, sometimes amenorrhea. A favorite matrix-item flip.

KEY

NON-HORMONAL

RED FLAG

NON-HORMONAL

Which contraceptive method is the only one that also prevents STIs?
tap to flip ↻

ANSWER

Condoms (male or female). If a stem mentions STI protection, every non-condom option is wrong.

KEY

NON-HORMONAL

What diaphragm teaching points are high-yield?
tap to flip ↻

ANSWER

Leave in place **6 hours after** intercourse, remove within 24 h (**TSS risk**), and **refit** after pregnancy or a weight change of ±10 lb.

NGN CUE

EFFICACY

When an item asks for the MOST effective method, what category do you choose?
tap to flip ↻

ANSWER

LARC — long-acting reversible contraception (implant, IUDs) plus sterilization. Tier 1, <1% failure, because there's no daily user action.

NGN CUE

COUNSELING

What does the BRAIDED mnemonic cover?
tap to flip ↻

ANSWER

Elements of informed-consent contraceptive counseling: **B**enefits, **R**isks, **A**lternatives, **I**nquiries, **D**ecision (may decline), **E**xplanation, **D**ocumentation.

Why is a vasectomy not immediately effective, and what's the teaching?
tap to flip ↻

ANSWER

Sperm remain in the distal tract. Use a **backup method until a semen analysis confirms azoospermia** (~3 months / ~20 ejaculations).

NGN CUE

NON-HORMONAL

What are the body's fertility signs in fertility-awareness methods?
tap to flip ↻

ANSWER

BBT rises 0.4–0.8°F just after ovulation; cervical mucus becomes clear, stretchy, and egg-white-like (spinnbarkeit) at peak fertility.

KEY

EMERGENCY

Which emergency contraception option is the most effective, and what's its window?
tap to flip ↻

ANSWER

The **copper IUD**, effective up to **5 days** after intercourse — and it provides ongoing contraception. EC prevents/delays ovulation; it is **not** an abortifacient.

KEY

POSTPARTUM

Which contraceptive class is preferred for a breastfeeding mother and why?
tap to flip ↻

ANSWER

Progestin-only (minipill, implant, DMPA, hormonal IUD) or non-hormonal. Estrogen reduces milk supply and adds VTE risk in the early postpartum period (<21 days).

11 NGN-format practice

CLINICAL JUDGMENT

Three NGN item types. Answer, then reveal the rationale.

SATA SELECT ALL THAT APPLY

A 36-year-old who smokes one pack/day requests a combined oral contraceptive. Which findings make a **combined (estrogen)** method inappropriate? Select all that apply.

- Age 36 with daily tobacco use
- Desire for a discreet method
- History of a DVT after a long flight
- Migraines preceded by visual aura
- Regular 28-day menstrual cycles

Reveal rationale

MATRIX BEST METHOD PER PATIENT

Match the priority counseling point to the method.

Which statement correctly pairs a method with its signature teaching?

- "Your copper IUD will make your periods lighter."
- "After your vasectomy, keep using backup until the semen analysis is clear."
- "The minipill has a 12-hour window if you're late."
- "Depo-Provera has no effect on your bones."

Reveal rationale

TAKE ACTION SINGLE BEST RESPONSE

A client on combined oral contraceptives calls reporting sudden severe calf pain and swelling in one leg. What is the nurse's **priority** response?

- Reassure her this is a common side effect of the pill
- Tell her to skip today's pill and resume tomorrow
- Direct her to seek immediate evaluation for a possible clot
- Schedule a routine appointment for next week

Reveal rationale

12 Night-before cram sheet

HIGHEST YIELD

The numbers & rules that win points

// if you only review one thing

TIMING INTERVALS

Patch changed	**weekly**
Ring	**3 wk in / 1 out**
Minipill window	**3 h**
Depo every	**11–13 wk**
Implant **3 yr** · copper IUD	**10–12 yr**
Diaphragm: leave **6 h after** , out by	**24 h**

ESTROGEN = NO IF…

Smoker	**≥35**
Clot hx /	**VTE**
Migraine	**with aura**
Breast cancer	
Uncontrolled	**HTN**
Breastfeeding / **<21 d**	PP

WARNING SIGNS

Combined pill →	**ACHES**
IUD →	**PAINS**
Calf pain = **DVT**	(emergency)
Chest pain/SOB =	**PE/MI**

DON'T-MISS CONTRASTS

Copper IUD **heavier** · hormonal	**lighter**
Only **condoms**	stop STIs
Vasectomy	**not immediate**
Depo →	**↓ bone density**
Most effective EC =	**copper IUD**
Most effective overall =	**LARC**

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