VOL. 01 · PEDIATRIC NURSING / HIGH-YIELD REVIEW NGN NCLEX · 2026 TEST PLAN

Pediatric *Medication* Administration.

Every pediatric medication question on the NGN tests **safety, math, and developmental fit** at the same time. This sheet consolidates the rules that separate a correct dose from a sentinel event — from needle length to apical pulse holds.

REMEMBER · ALWAYS

Weight in kilograms. Every time.

- → Convert lb ÷ 2.2 = kg
- → Verify Safe Dose Range
- → Two-nurse check: high-alert meds
- → Never round dangerous doses up

01 Safe Dose Calculation

MATH · SAFETY

Weight-Based Dosing

Pediatric doses are almost always **mg/kg**. Always weigh in kg — a misplaced pound-to-kilogram conversion is the #1 peds med error.

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mg/kg/dose × kg = single dose
```

Verify the SDR

Confirm the ordered dose falls **inside the Safe Dose Range** from a peds reference before administration. If outside → hold and clarify.

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Low SDR ≤ ordered dose ≤ High SDR
```

BSA for High-Risk Drugs

Use **Body Surface Area (m²)** for chemotherapy and other narrow-window drugs. BSA is more accurate than weight alone in those cases.

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BSA = √(ht·cm × wt·kg / 3600)
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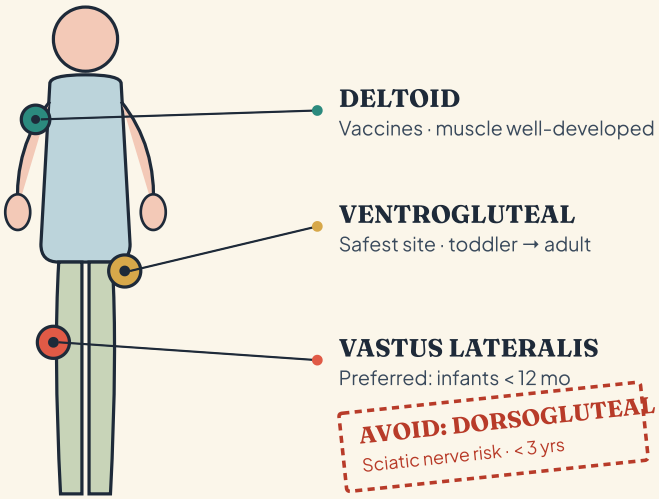
02 IM Injection Sites by Age

DEV · ANATOMY



Infant < 12 MO		**Vastus lateralis** — only developed IM site. Hold leg firmly; max 0.5 mL.
Toddler 1 – 3 YR		**Vastus lateralis** or **ventrogluteal**. Distraction + 2-person restraint as needed.
Preschool 3 – 6 YR		**Ventrogluteal** preferred — furthest from major nerves & vessels.
School-Age 6 – 12 YR		**Ventrogluteal** or **deltoid** (vaccines, ≤ 1 mL).
Adolescent 12 + YR		**Deltoid** or **ventrogluteal**. Adult-equivalent volumes acceptable.

FIG. 01 — PEDS IM TARGET SITES

03 Needle, Gauge & Maximum Volume

DO NOT EXCEED

AGE GROUP	NEEDLE LENGTH	GAUGE	MAX IM VOLUME	SUBQ VOLUME
Infant	⅝ – 1 in	22 – 25 G	**0.5 mL**	≤ 0.5 mL
Toddler	⅝ – 1 in	22 – 25 G	**1 mL**	≤ 0.5 mL
Preschool	⅝ – 1 in	22 – 25 G	**1 – 1.5 mL**	≤ 0.5 mL
School-Age	⅝ – 1½ in	22 – 25 G	**1.5 – 2 mL**	≤ 0.5 mL
Adolescent	1 – 1½ in	20 – 25 G	**2 – 2.5 mL** (up to 3)	≤ 1 mL

04 Developmentally Appropriate Administration

PSYCH · COMMUNICATION

Infant
0 – 12 MO

- Comfort hold / swaddle
- Pacifier + sucrose
- Encourage parent presence
- Give last: assessment first

Toddler
1 – 3 YR

- Brief, concrete words
- Offer limited choices
- Therapeutic hold
- Allow tantrum · stay calm

Preschool
3 – 6 YR

- Magical thinking — use play
- "Bandaid fixes the poke"
- Reassure: not punishment
- Praise & sticker reward

School-Age
6 – 12 YR

- Explain the "why"
- Let child help (alcohol swab)
- Offer control over site
- Honor modesty

Adolescent
12 + YR

- Privacy · one-on-one
- Adult-level honesty
- Ask about adherence
- Peers > parents for support

05 The Rights of Pediatric Medication

ALWAYS VERIFY

"9"

There are Nine Rights in peds — the extras exist because children can't self-advocate.

1 Right Patient
Two identifiers + parent/caregiver confirm

2 Right Medication
Check label 3× against MAR

3 Right Dose
Weight × mg/kg · inside SDR

4 Right Route
Age-appropriate & tolerated

5 Right Time
±30 min of scheduled dose

6 Right Documentation
After admin — never before

7 Right Reason
Is this appropriate for this child?

8 Right Response
Reassess for therapeutic effect

9 Right to Refuse
Assent from child · consent from guardian

06 Red-Flag Safety & High-Alert Medications

NGN HOT-BUTTONS

⚠ NEVER · Pediatric Don't-Do-It List

AUTOMATIC NCLEX WRONG-ANSWER TRAPS

- ✕ **Never** mix meds in honey for infants < 12 mo (botulism)
- ✕ **Never** give aspirin to child with viral illness (**Reye's syndrome**)
- ✕ **Never** use adult-concentration medication for pediatrics
- ✕ **Never** mix med in a full bottle of formula or juice — child may not finish
- ✕ **Never** inject > max volume per site · split the dose
- ✕ **Never** use dorsogluteal site in child < 3 years
- ✕ **Never** call medication "candy"

⚠ HIGH-ALERT · Double-Check Required

TWO-NURSE INDEPENDENT VERIFICATION

- ⚠ **Insulin** — verify units, pen, pump settings
- ⚠ **Heparin & anticoagulants** — weight-based drip
- ⚠ **Opioids** — watch RR; narcan at bedside
- ⚠ **Chemotherapy** — BSA-based; PPE + closed system
- ⚠ **Digoxin** — apical pulse 1 full min first
- ⚠ **Electrolytes (K^+, Ca^{2+}, Mg^{2+})** — never IV push
- ⚠ **Vasoactive infusions** — central line preferred

07 Must-Know Pediatric Medications

HIGH-FREQUENCY NCLEX

Digoxin

CARDIAC · GLYCOSIDE

- Take **apical pulse × 1 full minute** before every dose
- Therapeutic level: 0.8 – 2 ng/mL
- Signs of toxicity: bradycardia, vomiting, vision halos
- Give 1 hr before / 2 hr after feeds

HOLD if HR < 90 (infant), < 70 (child), < 60 (adolescent). Notify HCP.

Acetaminophen

ANALGESIC · ANTIPYRETIC

- **10–15 mg/kg** PO/PR q 4–6 hr PRN
- Max: **75 mg/kg/day** (not to exceed 4 g)
- Liver toxicity = leading peds overdose
- Antidote: **N-acetylcysteine**

Use dropper/syringe — never kitchen spoon. Teach parents to verify concentration.

Iron (Ferrous Sulfate)

HEMATINIC · SUPPLEMENT

- Give **between meals** with vitamin C (OJ)
- Use **straw or dropper** — stains teeth
- Rinse mouth / brush after dose
- Stools turn **dark green/black** — normal

Overdose = #1 cause of peds fatal poisoning. Keep locked & away from siblings.

Insulin

HIGH-ALERT · ENDOCRINE

- **Two-nurse** independent dose check
- Clear (short) drawn before cloudy (NPH)
- Rotate sites — abdomen fastest absorption
- Never shake NPH — gently roll

Hypoglycemia signs: shaky, sweaty, irritable. Rx: 15 g fast carb → recheck in 15 min.

Vaccines

IMMUNIZATION · IM / SUBQ

- MMR, Varicella = **live** — NOT in immunocompromised / pregnant
- Rotavirus = oral only (live)
- Give > 1 vaccine in **different sites**
- Document lot #, site, route, VIS date

Egg allergy: flu & MMR generally OK per CDC — verify per facility protocol.

Antibiotics (Suspensions)

ANTI-INFECTIVE

- **Shake well** — uneven suspensions = under/over-dose
- Use oral syringe, not measuring cup
- Finish full course even if better
- Assess for rash, diarrhea, candidiasis

Tetracyclines: avoid in children < 8 yr (stains permanent teeth). Fluoroquinolones: tendon risk.

NGN
TEST-TAKING PLAYBOOK

Recognize Cues
Watch for weight changes, bradycardia, RR drop, rash, level out of range.

Analyze Cues
Is the order within SDR? Is the route developmentally right?

Prioritize Hypotheses
Airway → Breathing → Circulation → Disability → Exposure.

Generate Solutions
Hold dose & notify HCP beats "give and monitor."

Take Action
Safest, least invasive, most developmentally appropriate first.

Evaluate Outcomes
Therapeutic effect *and* adverse effects — within the expected time frame.

Rx·Peds Quick-Review

HIGH-YIELD · NGN-ALIGNED · 2026 TEST PLAN

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