Pediatrics: Growth, Vital Signs and Immunizations

Milestones, Erikson and play, vital signs, vaccines, safety, pain scales and dehydration for NCLEX

RN Basics
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GROWTH AND MILESTONES

- Birth weight doubles by 5 to 6 mo, triples by 12 mo
- Fontanels: posterior closes by 2 mo, anterior at 7 to 19 mo (exams: 12 to 18). Sunken: dehydration; bulging: raised ICP

CDC: what most children (75%) do by each age

AGE	MOTOR	LANGUAGE	SOCIAL
2 mo	Lifts head on tummy	Sounds besides crying	Social smile
6 mo	Rolls tummy to back	Squeals, raspberries	Laughs; knows familiar people
9 mo	Sits alone; toy hand to hand	Babbles (mamama)	Stranger anxiety
12 mo	Cruises; pincer grasp	Mama or dada; waves	Pat-a-cake
18 mo	Walks alone; scribbles	3 or more words	Moves away, checks back
2 yr	Runs; kicks a ball	2-word phrases	Notices others upset
5 yr	Hops on one foot	Tells a short story	Follows game rules

EXAM TIP Missed milestone or lost skill: report it for developmental screening; don't wait and see. Textbooks use earlier averages, such as first steps at about 12 mo.

ERIKSON, PLAY AND COMMUNICATION

AGE	ERIKSON	COMMUNICATING
Infant (0 to 1)	Trust vs mistrust	Parent close; comfort items
Toddler (1 to 3)	Autonomy vs shame/doubt	Simple words; medical play kit
Preschool (3 to 5)	Initiative vs guilt	Use play; not their fault
School-age (6 to 12)	Industry vs inferiority	Honest; explain why
Teen (12 to 18)	Identity vs role confusion	Privacy; share decisions

Play: solitary (infant), parallel (toddler), associative (preschool), cooperative, with rules (school-age).

NORMAL VITAL SIGNS

Approximate awake ranges for study; published ranges differ

AGE	HR	RR	SBP
Newborn	100–160	30–60	65–85
Infant (1–12 mo)	100–160	30–53	70–100
Toddler (1–3 yr)	80–130	20–30	72–110
Preschool (3–5 yr)	80–120	20–26	78–112
School-age (6–12 yr)	70–110	16–24	82–126
Teen (13+ yr)	60–100	12–20	100–120

Fever: 38.0 °C (100.4 °F) or higher; rectal is most accurate in infants. At 3 mo or younger, notify the provider at once.

SAFETY Falling blood pressure is a late sign of shock in children. Report rising heart rate, slow capillary refill or reduced alertness early.

ROUTINE IMMUNIZATIONS

Routine in the CDC schedule now posted (2025 version) and the AAP 2026 schedule

AGE	VACCINES
Birth	HepB within 24 hr; mother HBsAg-positive: HepB and HBIG within 12 hr
2, 4, 6 mo	DTaP, Hib, PCV, IPV, oral rotavirus (start before 15 wk, last dose by 8 mo); more HepB
RSV season	RSV antibody under 8 mo unless mother vaccinated 14+ days before birth
6 mo and up	Flu yearly; 2 doses 4+ wk apart if under 9 yr with fewer than 2 prior doses
12 to 18 mo	MMR, varicella, HepA, Hib and PCV boosters, DTaP
4 to 6 yr	DTaP, IPV, MMR, varicella
11 to 12 yr	Tdap, HPV, MenACWY (booster at 16)

Exams test this CDC/AAP routine schedule. As of October 18, 2026, a March 2026 court order still blocks a January 2026 CDC revision that moved several of these off routine use; a related appeal, argued October 6, awaits a ruling. Check the current schedule: cdc.gov/vaccines/hcp/imz-schedules

EXAM TIP Withhold live vaccines (MMR, varicella, rotavirus, nasal flu) in severe immunosuppression. Delay for moderate or severe illness, not for mild illness even with fever. Egg allergy does not rule out any flu vaccine.

SAFETY: CAR SEATS, POISONING, LEAD

- Rear-facing to the seat's limit, then a forward-facing harness to its limit
- Booster until the belt fits (about 4 ft 9 in, age 8 to 12); back seat until 13
- Never a rear-facing seat in front of an active airbag
- Poison Help 1-800-222-1222 (911 if unresponsive, not breathing or seizing); do not induce vomiting
- Lock up medicines and chemicals in their original containers
- Lead: Medicaid requires blood tests at 12 and 24 mo; 3.5 µg/dL or higher (CDC reference value) needs follow-up

SAFETY Swallowed button battery: emergency department now; serious tissue damage can occur within 2 hours.

PAIN SCALES AND DEHYDRATION

- FLACC: nurse scores face, legs, activity, cry and consolability, 0 to 2 each (total 0 to 10), when a child cannot self-report
- Wong-Baker FACES: self-report, age 3 and up

EXAM TIP With FACES the child picks the face; never score it from the child's expression.

Weight loss from pre-illness weight: mild to moderate 3 to 9%, severe over 9% (CDC)

FINDING	MILD TO MODERATE	SEVERE
Behavior	Normal to irritable	Lethargic or unresponsive
Eyes, tears, mouth	Slightly sunken, fewer tears, dry	Deeply sunken, no tears, parched
Skin fold, refill	Recoils under 2 s; refill prolonged	Recoils over 2 s; refill prolonged or minimal
Limbs, urine	Cool; less urine	Cold, mottled; minimal urine

- Mild to moderate: oral rehydration solution 50 to 100 mL/kg over 2 to 4 hr; keep breastfeeding; no soda or juice
- If vomiting: 5 mL every 5 min by spoon or syringe, increasing slowly
- Severe: IV isotonic fluid, 20 mL/kg boluses
- Typical doses for exam study; follow your institution's protocols

Sources (31) are listed with links at rnbasics.com/sheets/pediatrics-growth.html. For education and exam preparation only. Not medical advice; follow current guidelines and your institution's protocols. RN Basics is an independent study aid not affiliated with any certifying body.