NGN NCLEX • 2026 TEST PLAN • HIGH-YIELD PEDIATRICS

Neurodevelopmental *& Genetic* Conditions in Pediatric Nursing

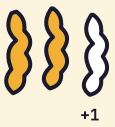
A side-by-side quick-review of three high-yield NCLEX topics — **Autism Spectrum Disorder, Down Syndrome (Trisomy 21), and ADHD** — with clinical manifestations, priority nursing care, pharmacology, and test-taking cues.

POPULATION: Pediatric (Infancy → Adolescence) **CATEGORY:** Psychosocial / Physiological Integrity

NCLEX CLIENT NEEDS: Safe & Effective Care

Autism Spectrum

01 / SOCIAL & SENSORY



Down Syndrome

02 / TRISOMY 21

ADHD

03 / ATTENTION & IMPULSE

01 Autism Spectrum Disorder

NEURODEVELOPMENTAL • ONSET BEFORE AGE 3 • LIFELONG

◆ PATHOPHYSIOLOGY & CAUSE

A **complex neurodevelopmental disorder** with impaired social interaction, communication deficits, and restricted/repetitive behaviors. Exact cause unknown — strong **genetic component** + risk factors (advanced parental age, prematurity). **NOT caused by vaccines.** Screen with **M-CHAT at 18 & 24 months**.

CLINICAL CUES

What You'll Assess

- **Poor eye contact**, limited social smiling
- **Delayed / absent speech** or **echolalia** (repeats words)
- **Repetitive behaviors**: rocking, hand-flapping, spinning ("stimming")
- **Insists on sameness** — rigid routines, lines up toys
- **Sensory extremes** — over/under-reactive to sound, light, touch, texture
- Prefers solitary play; limited imaginative play
- Narrow/intense interests; may be savant in specific areas

PRIORITY CARE

Nursing Interventions

- **Maintain consistent routine** — changes trigger distress
- **Minimize sensory stimulation** — quiet, low-light room
- Use **short, concrete, literal** instructions (avoid idioms)
- Allow **familiar comfort objects** during care/hospitalization
- Approach slowly; limit number of caregivers
- Use **visual schedules** and picture communication boards
- Involve parents — they know the child's cues best
- Prepare child in advance for any procedure

TOP NCLEX PRIORITY

SAFETY first — children with ASD have reduced awareness of danger, may elope (wander), and self-injure during sensory overload.

NCLEX TEST-TAKING PEARL

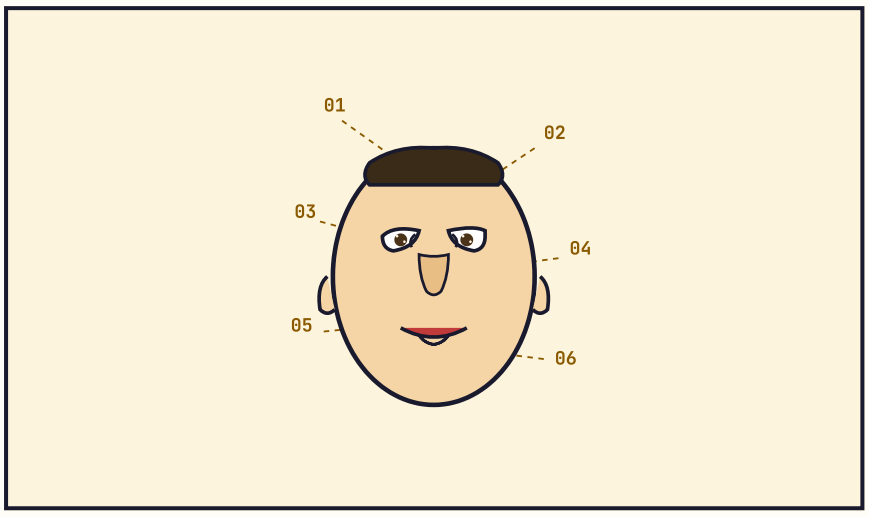
When a child with ASD is hospitalized, the FIRST nursing action is to ask the parents about the child's routines, communication style, and sensory triggers. Individualized care beats standardized care every time.

02 Down Syndrome

TRISOMY 21 • MOST COMMON CHROMOSOMAL DISORDER

◆ PATHOPHYSIOLOGY & CAUSE

Extra copy of chromosome 21 (3 copies instead of 2) — usually from **nondisjunction** during meiosis. **Advanced maternal age** is the primary risk factor. Results in characteristic features, intellectual disability (mild to moderate), and multiple associated conditions requiring lifelong surveillance.



HEAD-TO-TOE FEATURES

01 **Upward-slanting palpebral fissures** with epicanthal folds

02 **Brushfield spots** (white flecks on iris)

03 **Flat facial profile** — low nasal bridge

04 **Small, low-set ears**; small mouth

05 **Protruding tongue**, small oral cavity

06 **Short neck** + excess skin at nape

07 **Simian crease** — single palmar crease

08 **Hypotonia** + short stature + short fingers

RED-FLAG COMORBIDITIES

Assess & Monitor

- #1 **Congenital heart defects (40–50%)** — especially AV canal defect
- GI **Duodenal atresia**, Hirschsprung disease, GERD, constipation
- ENDO **Hypothyroidism** — screen regularly
- ONCO **15× ↑ leukemia risk** (ALL)
- ORTHO **Atlantoaxial instability** — no contact sports, screen with C-spine x-ray
- SENSORY Hearing loss, refractive errors, cataracts

PRIORITY CARE

Nursing Interventions

- **Cardiac monitoring** — auscultate, watch for feeding fatigue
- **Feeding strategy**: small, frequent feedings; upright position; thickened feeds if hypotonic swallow
- Suction nares PRN — narrow passages + large tongue
- **Prevent infection** — immune function diminished; up-to-date immunizations
- Skin care — dry skin cracks easily
- Early intervention: PT, OT, speech therapy referrals
- **Avoid neck hyperflexion/extension** — spinal cord risk
- Long-term family support — connect to genetic counseling & support groups

TOP NCLEX PRIORITY

CARDIAC assessment is the priority at birth — nearly half of all newborns with Down syndrome have a congenital heart defect.

NCLEX TEST-TAKING PEARL

A newborn with suspected Down syndrome — the priority assessment is not the physical features; it's cardiorespiratory status (heart sounds, O_2 sat, feeding tolerance). Features confirm the diagnosis; perfusion saves the life.

03 ADHD

ATTENTION-DEFICIT / HYPERACTIVITY DISORDER • ONSET < AGE 12

◆ PATHOPHYSIOLOGY & CAUSE

A neurodevelopmental disorder of **attention regulation, impulse control, and hyperactivity**, linked to dysregulation of **dopamine & norepinephrine** in the prefrontal cortex. **Diagnostic criteria:** symptoms must appear **before age 12**, occur in **2+ settings** (e.g., home & school), and persist for **≥ 6 months**.

THREE PRESENTATIONS

TYPE 01

Inattentive

Forgetful, loses things, daydreams, poor follow-through, careless mistakes, distracted easily.

TYPE 02

Hyperactive-Impulsive

Fidgety, can't stay seated, runs/climbs inappropriately, interrupts, blurts out, can't wait turn.

TYPE 03

Combined

Meets criteria for BOTH inattention and hyperactivity-impulsivity. Most commonly diagnosed type.

PHARMACOLOGY (HIGH-YIELD)

Medications You Must Know

STIMULANT (1ST LINE)

Methylphenidate

Ritalin, Concerta, Daytrana patch. **Give in morning** to avoid insomnia. Take with food.

STIMULANT

Amphetamine salts

Adderall, Vyvanse, Dexedrine. **CNS stimulant** — watch HR, BP, mood.

NON-STIMULANT

Atomoxetine (Strattera)

SNRI. Used if stimulants not tolerated. **Black box: suicidal ideation** in teens.

ALPHA-2 AGONIST

Guanfacine / Clonidine

Non-stimulant. **Monitor BP** — can cause hypotension & sedation.

STIMULANT SIDE EFFECTS

Monitor & Teach

- **↓ Appetite** → give meds AFTER breakfast
- **Insomnia** → give early in day, not evening
- **Weight loss & growth suppression → monitor height/weight q visit**
- ↑ HR and ↑ BP → baseline & periodic vitals
- Nervousness, headache, irritability
- Potential for abuse — Schedule II controlled substance

BEHAVIORAL STRATEGIES

Parent & Child Teaching

- **Consistent daily routine** + written schedules
- Clear, simple, **one-step instructions**
- **Positive reinforcement** (praise, reward charts)
- Break tasks into small, achievable steps
- Limit environmental distractions (quiet study space)
- Plan **physical activity outlets** daily
- Balanced diet; limit caffeine & refined sugar
- Collaborate with school — IEP/504 plan

Mnemonic

REMEMBER STIMULANT TEACHING

S•T•I•M•S

S — Sleep disturbance (give AM)
I — Increase appetite post-dose (give w/ food)
S — Schedule II — secure medication
T — Track height & weight
M — Monitor HR & BP

TOP NCLEX PRIORITY

Baseline & ongoing growth monitoring — stimulants suppress appetite and can slow growth velocity in school-age children.

NCLEX TEST-TAKING PEARL

Parent teaching on methylphenidate: give in the morning with or after breakfast. If a second dose is prescribed, the last dose should be given ≥ 6 hours before bedtime to prevent insomnia.

NGN Case-Study *Strategy*

ONE-LINE TAKEAWAYS FOR THE EXAM

✦ AUTISM

Priority = **safety + consistent routine**. Ask the parent first. Cluster care, minimize stimuli, use visuals & literal language.

✦ DOWN SYNDROME

Priority = **cardiac & airway** at birth. Remember *AV canal defect*, hypotonia, feeding risk, atlantoaxial instability.

✦ ADHD

Priority = **growth monitoring** & med timing. Stimulants in AM, with food. Behavioral therapy always supports medication.