RECOGNITION & REFERRAL · PAEDIATRICS

# Neurological Conditions in Children

A fast, practical guide to spotting the child who needs a specialist — and knowing **how quickly**. Sixteen presentations, one simple system, every red flag in one place.

Based on **NICE NG127** — Suspected neurological conditions: recognition and referral (recommendations for children under 16). Cross-referenced guidance updated to current codes · June 2026.

### ◆ THE ONE IDEA THAT UNLOCKS THIS WHOLE GUIDE

NICE does not just say "refer" or "don't refer". It gives you a **ladder of five actions**, graded by how fast the child must be seen. Learn the ladder once, and every one of the sixteen presentations below simply tells you **which rung to stand on**. Think of it as a triage traffic-light with two extra shades — from a calm green "keep them with you" to a red "pick up the phone now".

THE NICE REFERRAL URGENCY LADDER — THE COLOUR CODE USED ON EVERY CARD IN THIS GUIDE

SAFEST → MOST URGENT

| Reassure | Consider | Refer | Urgent | Immediate |
|---|---|---|---|---|
| NOT ROUTINELY | WEIGH IT UP | ROUTINE | WITHIN 2 WEEKS | WITHIN HOURS |
| Safe to keep in | Refer if impact | Non-urgent route | Seen by specialist | Emergency / same-day |

- **IMMEDIATE** — **Refer immediately.** Emergency or same-day. The child is seen by the specialist service **within a few hours — or faster if needed.** This usually means an acute admission or a phone call now.
- **URGENT** — **Refer urgently.** The child is seen **within 2 weeks.** Serious but not an emergency — do not let it drift into a routine queue.
- **REFER** — **Refer.** A normal, non-urgent referral to the right service.
- **CONSIDER** — **Consider referring.** Use judgement — refer if there is real impact or a worrying feature; otherwise watch and review.
- **REASSURE** — **Do not routinely refer / reassure.** A recognised benign pattern. Explain, safety-net, and keep the child in primary care.

### 16 presentations

Every childhood neurological symptom NG127 covers — grouped into four clinical clusters.

### 5 graded actions

One colour-coded ladder, from reassure to emergency, used on every card.

### 3 danger patterns

Raised pressure · faint-vs-fit · the boy with weak muscles. Learn these first.

# A What has changed — and how to use this guide

READ FIRST

◆ **WHAT'S CHANGED FROM OLDER TEACHING**

The clinical thresholds in NG127 for children are **unchanged and current** (NG127 was last reviewed in October 2023; that review altered only some adult cancer-pathway wording). The important updates are the **guidelines it points you to** — several codes have been replaced since 2019. Always follow the **current** version:

- Epilepsy assessment — **CG137 is retired → use NG217** (Epilepsies in children, young people and adults, 2022).
- Head injury — **CG176 is retired → use NG232** (Head injury: assessment and early management, 2023).
- Meningitis / meningococcal disease — **CG102 is retired → use NG240** (2024). NG240 flags a "red-flag combination": fever, headache, neck stiffness and altered consciousness.
- Sepsis — the old single NG51 has been **split**. For a child, use **NG254** (Suspected sepsis in under 16s, 2024).
- Unchanged and still current: CG150 (headaches over 12s), CG128 (autism under 19s), CG109 (blackouts over 16s), NG62 (cerebral palsy), NG1 (reflux), CG99 (constipation), NG41 (spinal injury).
- Terminology corrected: the test to exclude Duchenne muscular dystrophy is **creatine kinase** (the source's "creatinine kinase" was a typo).

### 1 · Recognise

Start from the symptom the child presents with. Each card opens with the key point that changes your thinking.

### 2 · Act

Read the coloured pills top-to-bottom. The highest (reddest) matching row wins — act on that first.

### 3 · Refer

Send to the named service, within the timeframe the colour demands. Safety-net every child kept in primary care.

# B The three patterns worth memorising

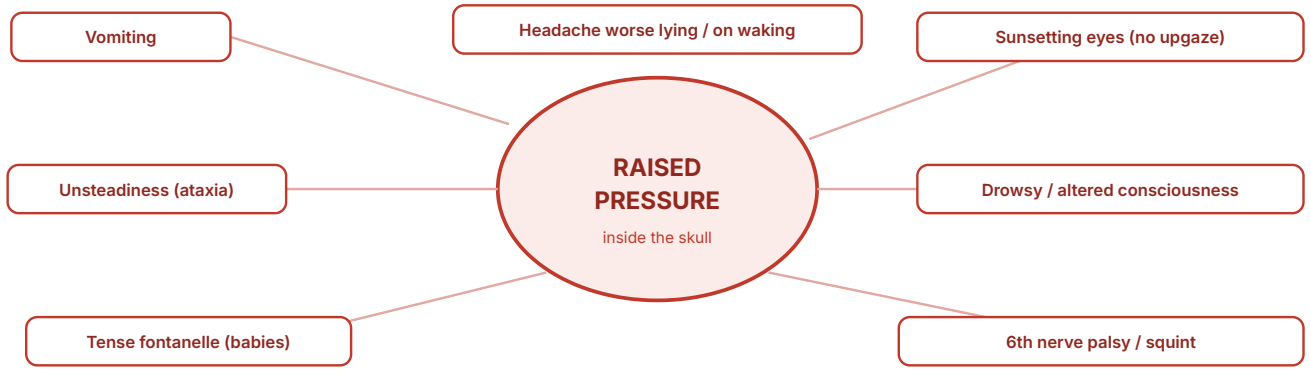
HIGH-YIELD

Most of the sixteen presentations funnel into three recurring danger patterns. Fix these in your memory and the rest becomes recognition, not recall.

▲ **PATTERN 1 — RAISED PRESSURE INSIDE THE SKULL**

This cluster recurs under **headache, head size and squint**. Any combination below is the brain-tumour / hydrocephalus gestalt and forces same-day action. Memorise it as one picture:

THE RAISED-INTRACRANIAL-PRESSURE CLUSTER — SAME SIGNS, MANY CHAPTERS



# C Never miss — the same-day / emergency list



Every "refer immediately" trigger scattered through NG127 for children, gathered onto one page. If a presenting child matches any line here, act within hours — do not wait for a routine slot.

### ▲ ACT WITHIN HOURS — EMERGENCY OR SAME-DAY

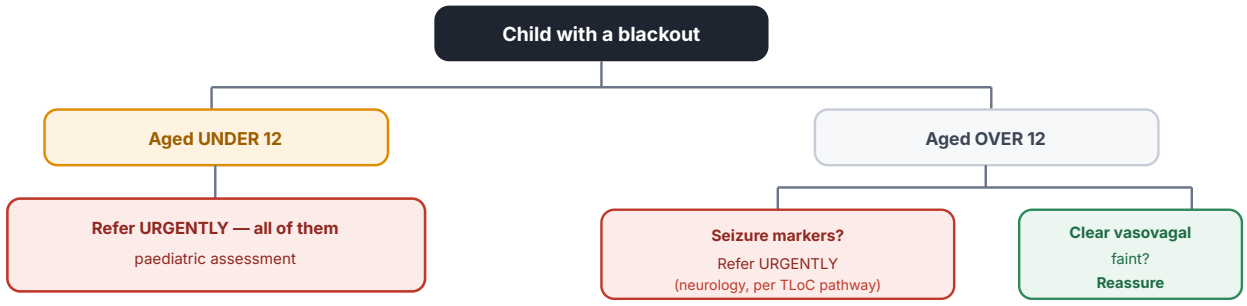
- IMMEDIATE **Unexplained acute confusion** — Emergency transfer to hospital **and** check blood glucose. Think meningitis, encephalitis, poisoning.
- IMMEDIATE **Headache in a child under 12 with any red flag** — Wakes at night · present on waking · progressively worse · worse on cough/sneeze/bending · vomiting · ataxia · drowsiness · meningism · squint or sunsetting · within 5 days of head injury.
- IMMEDIATE **Head circumference crossing ≥2 centile lines + raised-ICP signs** — Tense fontanelle, 6th nerve palsy, sunsetting, vomiting, ataxia or headache.
- IMMEDIATE **Acute-onset floppiness in a baby under 1 year** — Examine for cardiac failure, organomegaly, fever, altered consciousness — refer immediately.
- IMMEDIATE **Sudden-onset or rapidly progressive limb / facial weakness** — Hours to days → neurological assessment.
- IMMEDIATE **New-onset gait abnormality** — Acute paediatric assessment.
- IMMEDIATE **Abnormal neck posture after recent head or neck trauma** — Immobilise the cervical spine, send to ED (NG232 head injury · NG41 spinal injury).
- IMMEDIATE **New-onset squint with loss of red reflex** — Same-day ophthalmology — think retinoblastoma.
- IMMEDIATE **New-onset squint with ataxia, vomiting or headache** — Acute paediatrics — raised ICP.
- IMMEDIATE **Sudden-onset chorea, ataxia or dystonia** — Neurological assessment.
- IMMEDIATE **Non-blanching rash or meningococcal signs** — Meningococcal-disease pathway (NG240) without delay.

### ◆ PATTERN 2 & 3 — THE OTHER TWO YOU WILL USE DAILY

**Pattern 2 — Faints vs fits.** Under-12s who black out all get an urgent paediatric look. Over-12s split: a clear vasovagal faint is reassured; anything with seizure markers is referred urgently.

**Pattern 3 — Boys with weak or regressing muscles.** In any boy with limb weakness, motor delay or motor regression, **check creatine kinase to screen for Duchenne muscular dystrophy before the specialist review** — it can save months.

PATTERN 2 — THE BLACKOUT SPLIT



# 1 The acutely unwell brain

EMERGENCIES LIVE HERE

Confusion, dangerous headache and abnormal head growth. These three share the raised-pressure pattern from page 2 — treat any red flag as an emergency.

## Acute confusion

NG127 §1.19

Unexplained acute confusion is an **emergency** until proven otherwise — meningitis, encephalitis or poisoning.

- IMMEDIATE — **Emergency transfer to hospital and measure blood glucose.**
- IMMEDIATE — Suspected infection → follow the sepsis pathway for under-16s (**NG254**).
- IMMEDIATE — Non-blanching rash / meningococcal signs → meningococcal pathway (**NG240**).

## Dizziness & vertigo

NG127 §1.20

Isolated dizziness with no other sign is **unlikely** to be a brain tumour. It is often **migraine**; in older children (>8y) posture-related dizziness is usually **postural hypotension**.

- CONSIDER — Cardiac pointers (blackouts, family history of cardiomyopathy or sudden death, palpitations) → cardiology.
- REFER — Fixed-pattern episodes → think epilepsy (**NG217**).

▸ Always examine the ears for infection, effusion or perforation.

## Headaches

NG127 §1.21

Most childhood headache is benign — but a short red-flag list must trigger same-day action. Over-12s follow **CG150**.

- IMMEDIATE — Child **under 12** with **any** red flag (see the raised-ICP picture) → **same-day** assessment.
- URGENT — **All children under 4** with headache → neurological assessment.
- URGENT — Recurrent headache: do **fundoscopy** — refer urgently if abnormal. Refer if worse upright, relieved lying flat.
- REASSURE — **Do not routinely refer** migraine unless it disrupts school, social or family life, or carries a red flag.

▲ Also check blood pressure (hypertension can cause it) and ask about analgesic overuse and stress/bullying.

## Head shape & size

NG127 §1.22

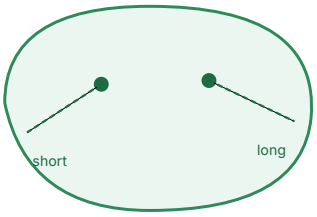
Measure properly, plot correctly, and act on **change**. Crossing centile lines matters more than a single value.

- IMMEDIATE — Crossing **≥2 centile lines and** raised-ICP signs → paediatrics immediately.
- URGENT — Dysmorphic features **and** developmental delay → paediatrics.
- REFER — Under-4 head circumference **below the 2nd centile** (best of 3 measurements, corrected for gestation) → paediatrics.
- REFER — Crossing **≥2 centile lines** without ICP signs → paediatrics for assessment + cranial imaging.
- REASSURE — Stable head **above 98th centile**, developing normally, familial macrocephaly likely → do not routinely refer.

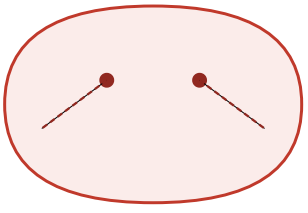
▲ Plagiocephaly in babies <1 yr: measure canthus→tragus each side (see diagram below).

FLAT HEAD IN A BABY UNDER 1 YEAR — ONE MEASUREMENT DECIDES THE PATH (§1.22)

**Measurements DIFFER = positional**




**Measurements SAME = suture fusion**



# 2 Spells, faints & funny turns



The “funny turn” is one of the commonest — and most anxiety-provoking — paediatric presentations. Your job is to sort the benign faint from the event that needs a neurologist.

## Blackouts & paroxysmal events

NG127 §1.18

Separate a true **faint** from a possible **fit**. Age 12 is the key dividing line (full flow on page 3).

- URGENT — New-onset blackout with **seizure markers** → neurology (per the blackouts pathway, **CG109**).
- URGENT — Mid-activity vacant spells, or outbursts with altered consciousness / amnesia → paediatrics.
- URGENT — **Every child under 12** with a blackout → paediatric assessment.
- REASSURE — Over-12 with **clear vasovagal features** (even brief limb jerks) → do not routinely refer.

▲ Blackout, seizure or amnesia after a head injury → follow the head-injury guideline (NG232).

## Attention, concentration & memory

NG127 §1.17

Discrete **vacant spells** can be epilepsy — not just daydreaming. Not every inattentive child is hyperactive.

- URGENT — Discrete episodes of lost awareness / vacant spells → refer urgently for epilepsy (**NG217**).
- REFER — Concentration or memory problems affecting learning, school or behaviour → community paediatrics / neurodevelopmental.

▲ Remember: epilepsy medicines themselves can blunt concentration and memory.

## Sensory symptoms — tingling & numbness

NG127 §1.27

Isolated brief tingling is usually benign; tingling **with weakness or bladder/bowel change** is not.

- URGENT — Tingling **plus** weakness or bladder/bowel dysfunction → neurology. Think **Guillain–Barré** if motor signs.
- REFER — Isolated **episodic** paraesthesia not from nerve compression → neurology (epilepsy work-up, **NG217**).
- REASSURE — Clear compression trigger (heavy backpack, crossed legs) or hyperventilation → do not routinely refer.

### ▶ PRACTICAL TIP — HISTORY IS THE TEST

For every spell, a clear eyewitness account of **before, during and after** outperforms any investigation. Posture and prodrome point to a faint; sudden onset mid-activity, automatisms or post-event confusion point to a seizure. Ask a parent to film a repeat event on their phone — it is often diagnostic.

### ✓ WHEN A FAINT IS JUST A FAINT (OVER-12S)

You can confidently reassure an over-12 without referral when the picture is a **clear vasovagal faint**: an upright trigger (standing, heat, pain, emotion), a warning prodrome (light-headed, hot, nauseated, greying vision), a brief event, and rapid full recovery once lying down — even if there were a few limb jerks. Explain the mechanism, advise on avoiding triggers and lying down early, and safety-net.

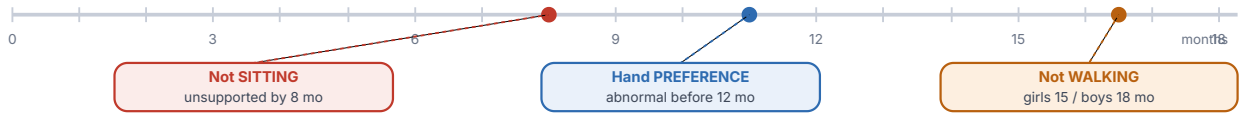
# 3 Movement, tone & posture



Six presentations that share a theme: **onset speed** drives urgency. Sudden change is an emergency; developmental patterns need the right specialist, in the right order.

PATTERN 3 SUPPORT — THE MILESTONE RED FLAGS FOR §1.25

**Red-flag motor milestones (corrected for gestation) — refer the child who has MISSED them**




## Hypotonia (floppiness)

NG127 §1.23

In a baby, **how fast** the floppiness came on decides the urgency.

- **IMMEDIATE** — **Acute-onset** floppiness <1 yr → examine for cardiac failure, organomegaly, fever, altered consciousness → refer immediately.
- **URGENT** — Long-standing (weeks–months) floppiness **with** weakness (feeding / breathing) → paediatrics.
- **CONSIDER** — Long-standing, **not** weak, no acute illness → consider referral for cerebral-palsy signs (**NG62**).

## Limb or facial weakness

NG127 §1.24

Sudden or fast-progressing weakness is an emergency; slower or developmental weakness still needs specialist eyes.

- **IMMEDIATE** — **Sudden-onset or rapidly progressive** (hours–days) → neurological assessment.
- **URGENT** — **Progressive** limb weakness → neurological assessment.
- **REFER** — Weakness as part of a developmental disorder → paediatrics (**NG62**).

▲ Any boy with weakness → check creatine kinase for Duchenne MD before specialist review.

## Motor delay, regression & unsteadiness

NG127 §1.25

Know the red-flag milestones by heart. New unsteadiness that appears suddenly is an emergency.

- **IMMEDIATE** — **New-onset gait abnormality** → acute paediatrics.
- **REFER** — Missed milestone (see timeline) → child development service; consider physio / OT (**NG62**).
- **REFER** — Motor **regression** → paediatric neurodevelopmental / neurology.

▲ Boys: check creatine kinase for Duchenne MD before the specialist review.

## Posture distortion

NG127 §1.26

The first question is always **trauma**. Abnormal head tilt can hide a posterior fossa tumour.

- **IMMEDIATE** — Abnormal neck posture **after recent head/neck trauma** → immobilise, send to ED (**NG232 · NG41**).
- **REFER** — Abnormal limb posture with no musculoskeletal cause → neurological assessment.

▲ No trauma? First check for painful cervical lymphadenopathy as the cause.

## Tics & involuntary movements

NG127 §1.31

Simple tics are common and benign. Sudden chorea, ataxia or dystonia is not.

- **IMMEDIATE** — **Sudden-onset chorea, ataxia or dystonia** → neurological assessment.
- **CONSIDER** — Significant impact on quality of life → mental health (OCD), neurodevelopmental team (autism/ADHD) or neurology if severe.
- **REASSURE** — Simple, non-troublesome motor tics → do not routinely refer.

▲ Do NOT start medicine for motor tics without specialist advice.

## Tremor

NG127 §1.32

New neurological signs or sudden onset raise the stakes; isolated postural tremor rarely does.

- **URGENT** — Tremor **with** other neurological signs (e.g. unsteadiness) **or** sudden onset → neurology.
- **CONSIDER** — Postural tremor + signs of thyroid overactivity → check thyroid function.
- **REFER** — Postural tremor → OT **only if** it affects writing, eating or dressing.

▲ Isolated postural tremor may be a side effect of sodium valproate or a beta-agonist.

# 4 Senses, speech & sleep

QUIETER PRESENTATIONS

Less dramatic than a seizure, but each hides a serious pattern you must not overlook — a retinoblastoma behind a squint, an autism behind a speech delay, respiratory failure behind a morning headache.

## Squint

NG127 §1.30

Two squint pictures are emergencies; the rest go to ophthalmology.

- **IMMEDIATE** New squint **+ loss of red reflex** → same-day ophthalmology (retinoblastoma).
- **IMMEDIATE** New squint **+ ataxia / vomiting / headache** → acute paediatrics.
- **URGENT** **Paralytic** squint → neurology, even with no other ICP signs.
- **REFER** **Non-paralytic** squint → ophthalmology.

## Speech problems

NG127 §1.29

**New** slurred speech is neurological until proven otherwise; slow speech development is developmental.

- **URGENT** **New-onset** slurred/disrupted speech (not from medicines, drugs or alcohol) → neurology.
- **CONSIDER** Over-2 with abnormal speech development → speech & language therapy.

▲ Speech delay or regression can be autism — follow CG128.

## Sleep disorders

NG127 §1.28

Most childhood parasomnias are benign — but a few sleep patterns signal serious disease.

- **URGENT** Neuromuscular disorder + early-morning headache / new sleep disturbance → respiratory assessment (respiratory failure).
- **URGENT** Features of new-onset seizures in sleep → neurology.
- **REFER** Narcolepsy ± cataplexy → neurology or sleep clinic. Sleep apnoea → ENT / respiratory (advise weight loss if obese).
- **REFER** New night terrors over 5y, or night terrors persisting after 12y.
- **REASSURE** Under-5s with night terrors, sleep talking/walking, repetitive movements → reassure; give sleep-hygiene advice.

▲ Also consider reflux (NG1) or constipation (CG99) as hidden causes of disturbed sleep.

### ✓ SAFE DEFAULTS YOU CAN TRUST

Reassurance is a clinical action, not a cop-out — when the pattern is benign, confident reassurance plus clear safety-netting is the **correct** management. Recognised safe patterns in this guide: the vasovagal faint in an over-12; the under-5 with night terrors or sleep-walking; simple non-troublesome tics; stable familial macrocephaly; and tingling with an obvious compression trigger. In each, explain what to watch for and when to return — then keep the child in primary care.

# D One-glance referral matrix

RETRIEVAL AID

The whole guide on a single grid — use it to test yourself, or to check fast in clinic. The middle column is the fastest action that presentation can demand; the last column is the recognised safe pattern, where present.

| Presentation | Top urgency | Act fast if... | Safe to reassure |
|---|---|---|---|
| **Acute confusion** | ▲ Immediate | Any unexplained confusion — emergency + glucose | — |
| **Headache** | ▲ Immediate | <12 with any red flag; <4 any headache (urgent) | Migraine with no red flag |
| **Head shape / size** | ▲ Immediate | Crossing ≥2 lines + ICP signs | Stable familial macrocephaly |
| **Blackouts** | ● Urgent | Seizure markers; all under-12s | Clear vasovagal faint >12 |
| **Attention / memory** | ● Urgent | Vacant spells (epilepsy) | — |
| **Dizziness / vertigo** | ◐ Consider | Cardiac pointers → cardiology | Isolated, no other signs |
| **Hypotonia** | ▲ Immediate | Acute onset in baby <1 yr | — |
| **Limb / facial weakness** | ▲ Immediate | Sudden or rapidly progressive | — |
| **Motor delay / regression** | ▲ Immediate | New gait abnormality; missed milestones | — |
| **Posture distortion** | ▲ Immediate | Neck posture + trauma → immobilise | — |
| **Sensory / tingling** | ● Urgent | With weakness or bladder/bowel change | Compression or hyperventilation |
| **Sleep disorders** | ● Urgent | Seizures in sleep; neuromuscular + AM headache | Under-5 parasomnias |
| **Speech problems** | ● Urgent | New slurred/disrupted speech | — |
| **Squint** | ▲ Immediate | + lost red reflex, or + ataxia/vomiting/headache | — |
| **Tics / involuntary** | ▲ Immediate | Sudden chorea, ataxia or dystonia | Simple non-troublesome tics |
| **Tremor** | ● Urgent | With neuro signs or sudden onset | — |

◆ **GUIDELINE MAP — ALWAYS FOLLOW THE CURRENT CODE**

The struck-through codes are retired. Where a card cross-refers, use the live guideline:

**NG127**
Suspected neurological conditions — the parent guideline

**NG217** ~~CG137~~
Epilepsies in children, young people & adults (2022)

**NG232** ~~CG176~~
Head injury: assessment & early management (2023)

**NG240** ~~CG102~~
Meningitis (bacterial) & meningococcal disease (2024)

**NG254** ~~NG51~~
Suspected sepsis in under-16s (2024)

**CG150**
Headaches in over-12s — current

**CG128**
Autism spectrum disorder in under-19s — current

**CG109**
Blackouts (transient loss of consciousness) in over-16s

**NG62**
Cerebral palsy in under-25s — current

**NG1 / CG99 / NG41**
Reflux · constipation · spinal injury — current

# E Sources, credits & disclaimer



### ◆ PRIMARY SOURCE

All clinical content is drawn from **NICE guideline NG127**, *Suspected neurological conditions: recognition and referral* — recommendations for children aged under 16 (§1.17–1.32). Published May 2019; last reviewed October 2023. Cross-referenced guidance has been updated to the current codes in force at the date of this document. 

### ▶ EDITORIAL NOTES

- The original source reproduced the guideline text with the "NICE Accredited" mark. That mark is a NICE trademark and would imply this teaching aid is itself NICE-accredited, so it has been **removed**. NICE remains fully credited in text as the source. *(Flagged for review — say the word and it can be reinstated.)*
- Retired guideline codes have been replaced with their current equivalents (see the guideline map on the previous page).
- "Creatinine kinase" corrected to **creatine kinase**.
- Language has been simplified and the material restructured around the referral-urgency ladder to aid first-read understanding and recall. Clinical thresholds are unchanged from NG127.

### ▲ DISCLAIMER

This document is provided **exclusively for educational and training purposes as a teaching aid**. It does not constitute formal clinical guidance. Clinicians must independently verify all medical information, prescribing guidance, procedural protocols, and legal requirements against current national guidance, local policies, and the relevant regulatory bodies before applying in practice. The information must be verified by the individual user against authoritative sources and local policies for their area.

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