

Common causes of headaches kids



Understanding pediatric headaches

A headache is a symptom, not a diagnosis. In children, clinicians often classify headaches as primary or secondary. Primary headaches arise from headache biology itself, such as migraine, tension-type headache, or less commonly cluster headache. Secondary headaches occur because another condition is irritating pain-sensitive structures, altering intracranial pressure, causing systemic inflammation, or affecting the head and neck.

This distinction matters because the same complaint, "my head hurts," can have very different meanings. A child with a typical recurrent migraine pattern, normal neurologic examination, and a family history of migraine is different from a child with a first sudden severe headache, fever, neck stiffness, confusion, or headache after a fall. Pediatric headache assessment usually focuses on the time course, severity, location, associated symptoms, neurologic findings, medication exposure, sleep, hydration, stressors, and recent illness.

Age also changes the picture. Younger children may point to the whole head, become quiet, vomit, avoid bright rooms, or fall asleep rather than describe pulsating pain. Adolescents may give more adult-like descriptions and may also have triggers such as irregular meals, high academic pressure, screen overuse,

caffeine, or menstrual hormonal fluctuations. A headache diary for children can help reveal these patterns without forcing families to rely on memory during a brief appointment.

Migraine and other primary headache disorders

Migraine is one of the most common headache disorders in children and adolescents. Pediatric migraine can be bilateral rather than one-sided, may last a shorter time than adult migraine, and often comes with nausea, vomiting, abdominal pain, pallor, dizziness, sensitivity to light, or sensitivity to sound. Some children have aura, meaning transient neurologic symptoms such as visual zigzags, shimmering spots, numbness, or speech difficulty before or during the headache. Any new neurologic symptom should be discussed with a clinician, particularly if it is prolonged, atypical, or not clearly part of a known migraine pattern.

Family history is relevant because migraine tends to cluster in families. A child with a parent or sibling who has migraine may be more susceptible, although family history alone does not prove the cause of a child's headache. Common migraine triggers include missed meals, insufficient sleep, dehydration, stress, illness, bright light, strong odors, and certain foods or beverages in susceptible children.

Tension-type headache is another frequent primary headache. It is often described as a band-like pressure or tightness, usually mild to moderate, without prominent vomiting or severe light sensitivity. It may be associated with stress, prolonged concentration, poor sleep, neck and shoulder muscle tension, or long periods of screen use. Cluster headache is much less common in children but can cause severe unilateral pain with eye redness, tearing, nasal congestion, or restlessness. Because severe or unusual headache patterns can overlap with secondary causes, professional evaluation is important before assuming a primary headache diagnosis.

Infections and inflammation

Common infections are among the most frequent causes of headaches in kids. Viral upper respiratory infections, influenza-like illnesses, sinus inflammation, strep throat, and febrile illnesses can produce headache through

fever, dehydration, systemic cytokine release, nasal congestion, poor sleep, and reduced food intake. A child with a cold may complain of forehead pressure, facial discomfort, or generalized head pain, especially when coughing or bending forward.

Ear infection in children can also be associated with head discomfort, irritability, fever, poor sleep, or pain that a younger child may describe vaguely as a headache. Dental infections, temporomandibular joint strain, and throat infections can refer pain to the head or face. In many of these situations, the headache improves as the underlying illness resolves, but persistent fever, worsening pain, unusual drowsiness, dehydration, or localized neurologic signs need medical assessment.

Less common but serious infections must remain on the radar. Meningitis and encephalitis can cause headache with fever, neck stiffness, photophobia, vomiting, confusion, rash, seizure, or a child who appears very ill. These symptoms are not situations for watchful waiting. Likewise, a headache with a non-blanching rash, altered mental status, or severe lethargy should be treated as urgent. Most infection-related headaches are not dangerous, but the overall clinical picture is more important than the headache alone.

Hydration, meals, sleep, and caffeine

Everyday physiologic stressors can trigger headaches, particularly in children who are already migraine-prone. Dehydration is a common contributor, especially during hot weather, sports, fever, vomiting, diarrhea, or busy school days when a child avoids drinking to reduce bathroom trips. Hydration and childhood headaches are often linked because even mild fluid deficit can worsen fatigue, dizziness, and pain sensitivity.

Skipped meals are another common trigger. Children have high metabolic demands, and long gaps between meals can contribute to headache, nausea, shakiness, irritability, or reduced concentration. Some children develop headaches after a very sugary intake followed by a rapid energy drop, although triggers vary widely. Rather than applying overly restrictive food rules, families can look for consistent patterns and discuss them with a healthcare professional.

Sleep disruption is particularly important. Too little sleep, irregular weekend

sleep schedules, late-night screen exposure, sleep apnea symptoms, and poor sleep quality can all lower the threshold for headache. Children with snoring, witnessed pauses in breathing, morning headaches, daytime sleepiness, or behavioral changes may need evaluation for sleep-disordered breathing.

Caffeine can complicate pediatric headaches in two directions. Regular use of caffeinated soda, energy drinks, coffee drinks, or some teas can contribute to headaches, anxiety, palpitations, and sleep disruption. Abrupt caffeine withdrawal can also trigger headache in a child or adolescent who consumes it frequently. Energy drinks are especially concerning because they may contain high caffeine amounts and other stimulants.

Stress, emotions, school pressures, and mental health

Stress does not mean a headache is imaginary. Emotional stress can activate neurobiological pathways involving muscle tension, autonomic arousal, sleep disruption, appetite changes, and altered pain processing. Children may develop headaches during school transitions, examinations, bullying, family conflict, grief, performance pressure, or social anxiety. Some children cannot easily name stress, so the first sign may be recurrent stomachaches, headaches, fatigue, avoidance, or irritability.

Anxiety and depression can coexist with headache disorders and may increase headache frequency, disability, and medication use. Conversely, recurrent headaches can worsen mood by limiting school, sports, friendships, and sleep. This bidirectional relationship deserves compassion rather than blame. A supportive approach asks what the headache is preventing the child from doing, what times of day it appears, and what situations make it better or worse.

Screen use is sometimes framed too simplistically. Screens may contribute through visual strain, posture, prolonged sitting, reduced blinking, late-night light exposure, missed meals, or emotional overstimulation. However, screens are not always the sole cause. A practical approach is to consider ergonomics, lighting, breaks, sleep timing, and whether headaches occur only with certain visual tasks. Children with squinting, reading difficulty, or headaches after schoolwork may benefit from vision assessment, but many pediatric headaches are not caused by eye problems alone.

Head injury, exertion, and environmental exposures

Headache after a fall, collision, sports injury, or blow to the head requires careful monitoring. Concussion can cause headache along with dizziness, nausea, light sensitivity, fogginess, sleep disturbance, balance problems, emotional changes, or difficulty concentrating. A child does not need to lose consciousness to have a concussion. Worsening headache, repeated vomiting, seizure, confusion, unequal pupils, weakness, or abnormal behavior after head trauma should prompt urgent medical care.

Exertional headaches can occur during intense exercise, dehydration, overheating, coughing, or straining. Some are benign, but a first severe exertional headache, a thunderclap onset, fainting, chest pain, neurologic symptoms, or headache that repeatedly occurs with exertion should be evaluated. Clinicians may consider cardiovascular, neurologic, and hydration-related factors depending on the presentation.

Environmental exposures can also cause headaches. Carbon monoxide exposure is an important example because it may cause headache, dizziness, nausea, weakness, confusion, or flu-like symptoms in multiple people in the same home. Poor ventilation, malfunctioning heaters, smoke exposure, strong chemical odors, and high heat can contribute as well. If several household members develop headaches together, or symptoms improve when leaving a building, families should consider environmental safety and seek appropriate help.

Medication, substances, and less common medical causes

Medication patterns can both relieve and perpetuate headaches. Frequent use of pain-relieving medicines can contribute to medication-overuse headache in children, a cycle in which headaches become more frequent and medication seems to help briefly but then the pattern continues. Families should not abruptly change prescribed medications without guidance, but they should tell the clinician how often any over-the-counter or prescription pain medicine is being used.

Substance-related causes include caffeine excess or withdrawal, stimulant exposure, alcohol or other substance use in adolescents, and certain prescribed medications. Headache can also occur with hypertension, anemia, autoimmune or

inflammatory disease, endocrine problems, dental disease, temporomandibular disorders, and vision-related strain. In some children, recurrent abdominal pain, motion sickness, cyclic vomiting, or vertigo may be part of a migraine spectrum.

Rare but serious intracranial causes include brain tumors, bleeding, abscess, hydrocephalus, venous sinus thrombosis, and vascular malformations. These are uncommon compared with migraine, tension-type headache, and infection-related headaches, but they are the reason clinicians pay close attention to red flags. Concerning patterns include progressively worsening headaches, headaches that wake a child from sleep repeatedly, morning vomiting, new seizures, abnormal neurologic examination, personality change, or headache in a very young child who cannot communicate well. A pediatric neurologist for headaches may be involved when headaches are recurrent, disabling, atypical, or difficult to manage.

What caregivers can observe before seeking care

Families do not need to solve the diagnosis at home, but careful observation can make medical visits more productive. Useful details include when headaches started, how often they occur, how long they last, where the pain is located, what it feels like, what the child was doing beforehand, and whether nausea, vomiting, fever, dizziness, vision changes, weakness, numbness, rash, or neck stiffness occurred. Note school absences, sports impact, sleep patterns, menstrual timing in adolescents, recent infections, head injuries, and all medications or supplements.

A calm response helps. Children often take emotional cues from adults, and fear can intensify distress. Offering rest, fluids if tolerated, a regular meal or snack when appropriate, and a dark quiet room for headache may help while caregivers decide whether medical advice is needed. However, comfort measures should not delay urgent evaluation when red flags are present.

For recurrent headaches in children, clinicians may recommend tracking patterns over several weeks. The goal is not to police every activity but to identify modifiable triggers and recognize whether the headache pattern is stable, improving, or worsening. Medical assessment is especially important if headaches are frequent, severe, new in pattern, associated with neurologic

symptoms, or interfering with normal childhood activities.