

Headaches arise from the pain-sensitive structures of the head. Numerous stimuli are capable of eliciting painful signals and are broadly grouped as mechanical, thermal or chemical.

Most headaches occur as a result of mechanical traction, compression or the chemical irritation of the following pain sensitive structures:

Extra Cranial

Scalp - skin, subcutaneous tissue and periosteum of the skull

Joints - cervical (neck) and jaw joints

Muscles - scalp and paraspinal muscles

Sinuses

Teeth

Ocular contents

Intra Cranial

Blood Vessels - arteries, veins and venous sinuses

Meninges - linings within the brain

Cranial Nerves

The International Headache Classification considers:

Primary Headaches

These are not associated with any underlying disease.

While there are others, the main primary headaches are:

1. Migraine
2. Tension Type Headaches
3. Trigeminal Autonomic Cephalalgia. Including :
Cluster Headaches, SUNCT, SUNA, Paroxymal Hemicrania

Secondary Headaches

Where there is underlying disease causing the pain

Causes can be:

- i. Infectious
- ii. Neoplastic
- iii. Vascular
- iv. Drug induced (including Medication Overuse Headaches)

Further: Chronic headache is defined as occurring 15 days or more per month and have occurred for at least 3 months.

Primary Headaches

A good history is the key to diagnosis. Examination is usually normal in patients with primary headache, such as migraine, tension-type headache, and cluster headache.

Migraine

Recurrent severe disabling headaches
Associated with nausea and sensitivity to light
Normal neurological examination
Characteristically unilateral, pulsating
Builds up over minutes to hours
Aggravated by routine physical activity
It is the most common type of severe primary headache
More than half of women with migraine report an increased frequency and severity of migraine attacks around menstruation

Tension Type Headache

Recurrent, non-disabling headache
Bilateral
Normal neurological examination
Tension-type headache is less burdensome than migraine to the individual patient but is of higher prevalence

Trigeminal Autonomic Cephalalgia

The most common form is 'Cluster Headache'. SUNCT, SUNA and Paroxysmal Hemicrania are similar but the duration of attacks vary. Frequent, brief, unilateral headaches with facial sensations (such as tearing, eye redness, facial sweating) on the same side to the headache. These headaches are rare but excruciatingly severe.

Chronic Daily Headache

This is NOT a diagnosis but implies the headache occurs frequently.

Diagnosis of Migraine

Recurrent intermittent attacks lasting 4 -72 hours
At least two symptoms of:
1) Throbbing / pulsing
2) Unilateral
3) Moderate to severe
4) worsened by activity (Avoids)
AND either
5) Nausea / Vomiting
6) Photophobia / Phonophobia

Diagnosis of Cluster Headaches

Severe unilateral HA lasting 15 - 18 minutes. Attack frequency up to 8/day. With at least one of:
1) Conjunctival redness
2) Nasal congestion
3) Eyelid swelling
4) Facial sweating
5) Eyelid droop
6) Restlessness/agitation

Primary Headaches

Duration >4hrs	Duration <4Hrs
Chronic Migraine	Chronic Cluster Headaches
Chronic Tension Headaches	Chronic Paroxysmal Hemicrania
Hemicrania Continua (Unilateral)	SUNCT
New Daily persistent headaches	Hypnic Headache

Secondary HA

Duration >4Hrs
Chronic Cluster Headaches
Chronic Paroxysmal Hemicrania
SUNCT
Hypnic Headache

Exclude Medication Overuse Headache in all patients with chronic daily headache, as this is the commonest cause. In patients with new daily persistent headache that is daily from onset, exclude secondary causes (See : Differential Diagnosis Table above).

Medication Overuse Headache

This is a secondary headache but is included here because of it's easy misdiagnosed as Primary. For patients in whom this headache is caused by simple analgesics or triptans, advise withdrawal of the overused medication - with appropriate advice and support!

Hypnic Headache - Attacks of dull headache developing during sleep and awaken the patient. First occurs in people over 50 years of age.

Primary Stabbing Headache - Transient and localised stabs of pain in the head that occur spontaneously in the absence of disease. Head pain occurring in a single stab or a series of stabs. Stabs last for up to a few seconds with no associated symptoms.

Secondary Headaches

Secondary headaches should be considered in patients with NEW onset headaches or headaches which differ from their usual headaches. 'RED FLAG' features should be considered. The mnemonic **SNOOP T** helps.

S Systemic Symptoms or Secondary Risk Factors

FEVER, WEIGHT LOSS, KNOWN CANCER, HIV, IMMUNOSUPPRESSION, PATIENTS WITH RISK FACTORS FOR CEREBRAL THROMBOSIS, JAW CLAUDICATION, VISUAL DISTURBANCE

N Neurological Symptoms or Abnormal Neurological Signs:

CONFUSION, IMPAIRED ALERTNESS, DROWSINESS, LIMB WEAKNESS, COGNITIVE DISTURBANCES

Optometry Based Signs : Neurological Screen, Fundoscopy, Pupils, Colour Perception, Ocular motility.

O Onset

'FIRST AND WORST HEADACHE', THUNDERCLAP HEADACHE, SUDDEN OR ABRUPT AWAKENING FROM SLEEP (but remember that migraine is the most frequent cause of morning Headaches)

PROGRESSIVELY WORSENING. NEW ONSET HEADACHES IN PATIENTS OVER 50, PATIENTS WITH KNOWN CANCER, PATIENTS WITH HIV.

O Older

NEW ONSET OR PROGRESSIVE IN OVER 50s. (Temporal Arteritis could also be associated with jaw claudication and temporal tenderness)

P Previous Headache History

FIRST HEADACHE OR FUNDAMENTALLY DIFFERENT FROM EXISTING HEADACHES (Significant change in features, frequency, severity, associated symptoms)

T Triggered Headaches

HEADACHE PRECIPITATED BY PHYSICAL EXERTION OR VALSALVA ACTIVITIES (coughing, straining, sneezing) HEADACHE CHANGING WITH POSTURE

The following are warning signs or 'red flags' for potential secondary headache:

- 1) New headache in a patient aged over 50 consider Temporal Arteritis
- 2) First presentation of thunderclap onset. Refer immediately to hospital for exclusion of subarachnoid haemorrhage, intracranial haemorrhage, meningitis, cerebral thrombosis.
- 3) For patients with headache and features suggestive of infection of the central nervous system (such as fever, rash), refer immediately to hospital.
- 4) Headache with features suggestive of raised intracranial pressure: changing with posture; valsalva headache (triggered by coughing, sneezing, bending, heavy lifting, straining); Fever; History of HIV or cancer; Focal or non-focal symptoms or signs; papilloedema. Refer urgently.
- 5) Consider MRI for patients presenting with a trigeminal autonomic cephalalgia.
- 6) Consider intracranial hypotension in all patients with headache developing or worsening after assuming an upright posture. Refer such patients to a neurologist or headache clinic.

Headache Diaries

Consider using headache diaries and appropriate assessment questionnaires to aid the diagnosis and management of headaches.

Week		Please score the pain of your headache out of 10 (0 - no pain, 10 - unbearable) and indicate if you & indicate if you have any other symptoms as listed						
		Sun	Mon	Tue	Wed	Thur	Fri	Sat
Headache Score 0-10								
Number of attacks per day								
Feeling sick? Yes/No								
Vomiting? Yes/No								
Other symptoms Yes/No Specify in notes								
Duration of attacks (Hrs)								
Had to lie down? Yes/No								
Had to move? Yes/No								
Time away from normal activities (Hrs)								
Number of tablets of medicine taken								
Prescribed	1)							
	2)							
	3)							
Over counter	1)							
	2)							
	3)							
Menstruation? Yes/No								
Additional Observations								