

**Review Article****Headaches: An Overview and Review**Yusuf Yahaya Miya¹, Jamil Hassan Abdulkareem², Sabiu Muhammad³

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The aim of this paper is to conduct a review of concepts of headache and relations through reviewing related literatures available online. Headache is a symptom of pain affecting the neck or head. It is a common pain in many people, about 12 percent of adults are affected worldwide, children are also affected. The discomfort due to headache affects learning, education, productivity, and economics. Most common headache types are migraine, tension headache, cluster headache and medication overuse. Another classification viewed headaches as primary and secondary. Primary headaches are occurring without underlying medical condition, while secondary headaches are occurring due to medical conditions such as infection or drug abuse. Usually, after diagnosis, specific headache type determined is eased through treatment with painkillers or handled by removing the precipitating factor. People suffering from primary headaches should eat properly, abstain from excess light, noise, drug, alcohol, junk foods, stress, etc. Use of enough sleep, avoiding drug abuse, proper hydration, behavioral change, awareness, are some instances of prevention against headaches.

INTRODUCTION

Headache is a condition characterized by a symptom of pain in the head or neck (Lee et al., 2018). Headache can be triggered by stress, sitting behaviors, hunger, movement behavior, thirst, hormonal changes, tiredness, drugs, brain tumor (in rare cases), alcohol, coffee, brain injury (in rare cases), infection, allergy, etc (Pharmaceutical Management Agency, 2019). Migraine affects approximately 12 percent of the adults inhabiting the world, among women it is about 18 percent, and 6 percent among men. Migraine is a second leading instigator of disability among both women and men, globally (Tzankova et al., 2023). Commonly, headaches are frequent medical complaints reported by many on one occasion or the other. But, headaches that stay regularly affect studies, family, social life, and work. Other effects include anxiety and disturbance. Some headaches require serious medical attention if they occur (Junior et al., 2012; National Neuroscience Institute, 2020). Some headaches may be common health problem, they are as well primary headaches, therefore, they do not have underlying cause (National Institute for Health and Care Excellence, 2023),

such as tension -headache, cluster headache, migraine (with aura, menstrual -related, etc). Other headaches are secondary, because they are due to another health problem or as a result of medication, for instance, medication overuse headache. Secondary Types are precipitated as a result of another disorder condition, be it systemic or local. Indicators of secondary headache commonly include, sudden onset, associated facial neurological deficit, old patients (over 50 years), and associated systemic features (BASH, 2019). Despite the costs of headache, such as reduced quality of life, treatment cost, poor productivity, etc there is poor attention to the problem nowadays (Lee et al., 2018). Therefore, this paper is performing a review of headache concepts with a view to inform the public for taking right measures.

HEADACHES

Headaches are presently becoming common problems affecting most of the people at one point or the other along the life course (Junior et al., 2017). Headache is a pain "referred to the forehead, temples, scalp, orbits. It is not a pain that is only in the face or neck"

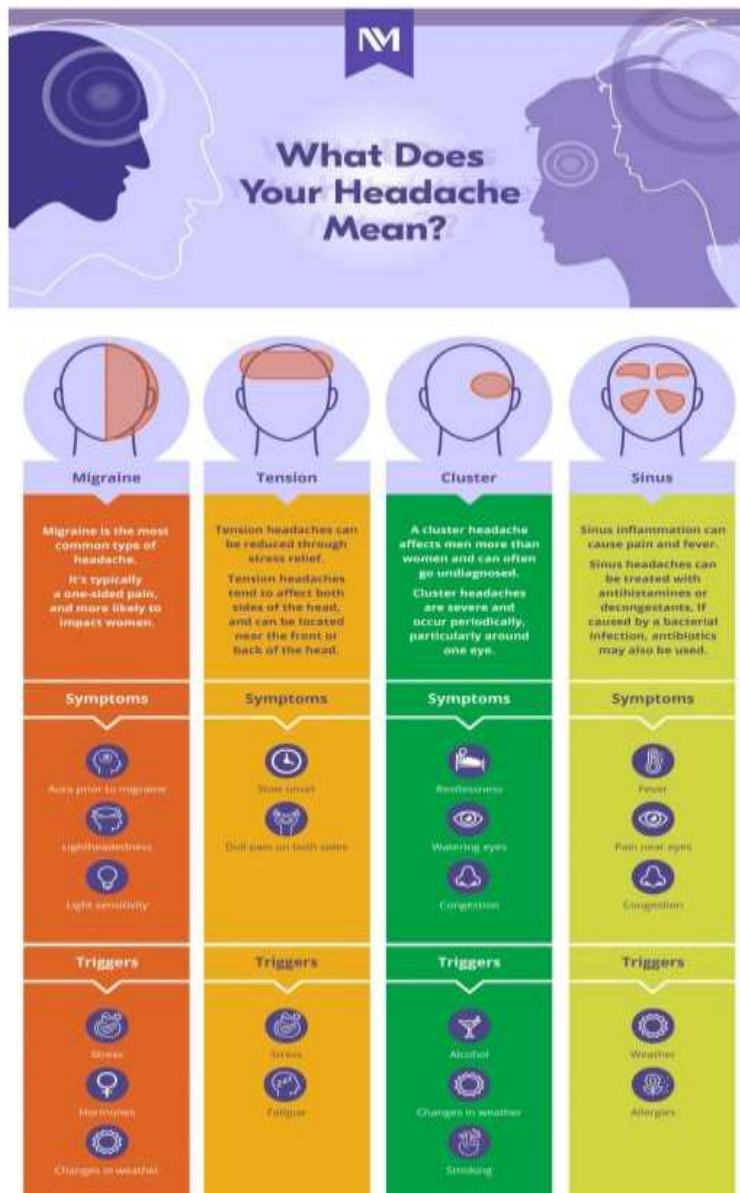


Figure 1: Some types of headaches and their peculiarities, Source: Northwestern Medicine (2013)

Types

There are many types of headaches that affect humans, some of which are as follows:

Migraine

Migraine is a one-sided throbbing headache

Painful in the sense that it can prevent the affected person from engaging in normal activities

Can cause dislike of bright colors or noisy things

Usually may go away after 4 to 72 hours

Sleeping may ease the problem (Jagtap et al., 1998; Junior et al., 2012).

Cluster headache

Is reoccurring in nature

One-sided headache

Common types of headaches

There are many types of headaches. Understanding what type of headache you have can help you find the best way to prevent and treat it.

<p>Tension headache Feels like a tight band around your head.</p> 	<ul style="list-style-type: none"> • The most common type of headache. • May begin with shoulder or neck tension. • Often caused by lifestyle issues such as poor posture, not getting enough sleep and stress or anxiety. • Treatment of lifestyle factors can help improve or prevent headaches.
<p>Migraine Intense, throbbing pain, usually one-sided.</p> 	<ul style="list-style-type: none"> • Can make you feel weak and exhausted. • May also cause nausea, vomiting and sensitivity to light and noise. • Tends to run in families. Is common in children, teenagers and young adults but may begin at any age. • Treatment includes lifestyle changes and using medications for relief or, in some cases, to stop a migraine from happening.
<p>Cluster headache Sudden, stabbing pain, often around your eye.</p> 	<ul style="list-style-type: none"> • Is severe but uncommon. • Lasts from 15 minutes to three hours, goes away and then comes back. • May be associated with symptoms of the eye, nose or face on the same side (e.g., tearing of the eye). • Can happen several times a day for a period, then disappear for months or years. • Sometimes triggered by drinking alcohol.
<p>Medication-overuse headache May feel like a tension-type headache or migraine-like attack.</p> 	<ul style="list-style-type: none"> • Often improve within two months of stopping the overused medicine. • Can feel worse before they feel better. • To avoid, use pain relief for the shortest possible time; only when you have pain. <ul style="list-style-type: none"> ◦ Paracetamol and ibuprofen should not be taken for headache on more than 15 days per month. ◦ Triptans for migraine should not be used for more than 10 days per month.

Tension headaches

"Tight band-like sensation" in the forehead

Become worse during the progress of the day, but could not prevent sleeping
Ease after using paracetamol, ibuprofen, or aspirin

Ease within 30 minutes to seven days
Medication overdose headache

Cause by use of drugs such as cocaine, tramadol, morphine, dihydrocodeine (or other painkillers)

Happened with red watery eye, running nose, or blocked nose

Ease within about few hours, but may keep going

(Kim, 2022)

It ease after halting the drug use (da Silva, 2021).

Figure 2: Common headaches types, Source: Pharmaceutical Management Agency (2019)

Strategies to Ease Headaches

Consumption of more water

Reduce or stop caffeine use

Stop alcohol use

Sleep sufficiently

Reduce the use of electronic appliances, such as laptops, phones, etc

Reduce stressful engagements

Engaging in physical activity

Shun carbon dioxide pollution (Imperial College Healthcare, 2022)

Headaches as Primary or Secondary Types

Sometimes the use classification of headaches types is the primary or secondary. Primary are the ones occurring nit as a result of other medical condition, they may include cluster headache, migraine, tension - headache. Secondary are those linked to underlying medical aetiology. Sometimes, headaches are occurring as chronic or episodic.

Table 1: Distinguishing Common Features of Primary Headache, Source: British Association for the Study of Headaches (2019)

MIGRAINE	TENSION-TYPE HEADACHE	CLUSTER HEADACHE
	<i>Episodic</i>	
Unilateral (although often bilateral) Pulsating	Bilateral Pressing, tightening, non-pulsating	Unilateral (never bilateral)
Moderate or severe	Mild or moderate <i>but not disabling</i>	Very severe
Aggravated by, or causing avoidance of, routine physical activity	No aggravation by, or avoidance of, routine physical activity	Restlessness No aggravation by physical activity
Nausea and/or vomiting Photophobia Phonophobia	No nausea, vomiting, photophobia, or phonophobia	<i>Ipsilateral to pain, there may be:</i> Conjunctival injection Lacrimation Nasal congestion Rhinorrhoea Eyelid swelling/drooping
Attacks last hours to days (usually 4-72 hours)	Attacks last hours to days	Attacks last from 15 mins to 3 hours
Frequency 1-2 attacks per month		Frequency 1-3 attacks per day (up to 8) and usually occur daily for 2-3 months at a time
<i>Chronic</i>		
Chronic migraine or chronic tension-type headache: At least 15 headache days per month for >3 months with the above clinical description, in the absence of medication overuse		Chronic cluster headache: Attacks occurring for more than 1 year without remission, or remission periods lasting <3 months
<i>Medication-overuse headache</i>		
Ergotamine, triptans, or opioids taken on 10 or more days per month, or 15 days for simple analgesics, for >3 months. Chronic migraine is fulfilled 2 months after medication has been withdrawn without improvement		No medication overuse headache Medication-overuse headache only reported in patients with a predisposition to migraine and/or tension-type headache; clinical syndrome of the headache exacerbated by the acute-relief medication overuse is of the migraine and/or tension-type headache ⁵⁰

Diagnosis

Some of the things that may be asked about for the purpose of headache diagnosis are:

- An injury to the head within the last three months
- Are headache increasing and followed by a fever
- Sudden start of headache
- Personality changes
- Feeling disoriented or confused
- Headaches begin after coughing or sneezing
- Headaches start after exercise
- A painful eye or red one
- Substantial change in symptoms

- Low immunity
- Presence of cancer

(National Neuroscience Institute, 2020; Imperial College Healthcare, 2022).

Treatments

Various types of headaches have specific treatments, therefore, some treatments are enumerated as follows:

Migraine

It might be difficult to remedy migraine completely, but some suggested treatments significantly help. Administration of triptan and paracetamol (or other NSAID) helps greatly.

Cluster headache

To relieve pain triptan, paracetamol or an opioid of another type could be used greatly.

Medication overuse headache

This is treated by stopping the use of the drug that incited the headache discomfort for at least a month. It is also required to go on with withdrawal treatment for drug abusers.

Specific for women

Women suffering from menstrual - related migraine can be given frovatriptan or ad well zolmitriptan for prevention. Pregnant women can take paracetamol or relations. Women using contraceptives should change their drugs or halt them completely.

Tension -type headache

This can be relieved by a kind of painkiller like paracetamol, aspirin or relations (NICE, 2023).

Prevention Tips Against Common

Headache Types

There is need to imbibe certain tips to prevent most of the common headaches threatening us, the tips are as follows:

- Sleeping adequately
- Avoiding skipping meals
- Engaging in regular exercise
- Consuming enough water to stay hydrated
- Maintaining good posture all the times
- Properly managing stress
- Cognitive behavioral therapy (educating the patients on pros and cons of headache, stress management, drug abuse, drug use, etc) (Rathier, 2015; Smitherman et al., 2015).



Figure 3: Tips for Headache Prevention, Source: Pharmac (2019)

The need for healthcare

People experiencing certain symptoms of headache should see a doctor. The conditions are as follows:

- A headache that is not improving after taking painkillers for over two weeks
- A headache that get worse or don't go away
- A headache occurring by just standing up, having sex, coughing, straining
- When the patient is 50 years old and headaches are regular (Roth, 2015; Pharmac, 2019)

10. Some Common Headache Triggers

Some triggers of headache are as follows:

- Alcohol (more especially red wine)
- Flickering lights (from computer, phone, television)

- Heat
- Light (glaring)
- Chemicals (such as perfume, petrol)
- Hunger
- Exercise or persistent use of musculoskeletal system such as trauma, joint dysfunction
- Emotions such as fatigue, stress, excitement
- Relaxation after stressful working week
- Cheese, chocolate, coffee, food additives, preservatives
- Negative life events such as divorce, death
- Menopause
- Personality disorders
- Drug abuse (National Agency for Accreditation and Evaluation in Healthcare, 2004; Tzankova et al., 2023).

Table 2: Food Items Acting as Triggers of Headache

Food Item	Not known to trigger migraines	Possible triggers
Beverages	Fruit juice, club soda, noncola soda (7-Up, gingerale), decaffeinated coffee, herbal tea, soy milk, rice milk. Limit caffeine sources to 2 cups/day (coffee, tea, cola).	Chocolate and cocoa. Alcoholic beverages (especially red wine, beer, and sherry). Caffeine (even in small amounts) may be a trigger for some people.
Fruits	Any except those to avoid. Limit citrus fruits to ½ cup/day. Limit banana to ½ per day.	Figs, raisins, papayas, avocados (especially if overripe), red plums, overripe bananas.
Vegetables	Any except those to avoid.	Beans such as broad, fava, garbanzo, Italian, lima, navy, pinto, pole. Sauerkraut, string beans, raw garlic, snow peas, olives, pickles, onions (except for flavoring).
Bread & Grains	Most commercial breads, English muffins, melba toast, crackers, RyKrisp, bagei. All hot and dry cereals. Grains such as rice, barley, millet, quinoa, bulgur. Corn meal and	Freshly baked yeast bread. Fresh yeast coffee cake, doughnuts, sourdough bread. Breads and crackers containing cheese, including pizza. Any product containing chocolate or nuts.
Dairy Products	Milk (2% or skim). Cheese: American, cottage, farmer, ricotta, cream, Velveeta. Yogurt: (limit to ½ cup per day).	Cultured dairy products (buttermilk, sour cream). Chocolate milk. Cheese: blue, brick (natural), Gouda, Gruyere, mozzarella, Parmesan, provolone, Romano, Roquefort, cheddar, Swiss (emmentaler), Stilton, Brie types and Camembert types.
Meat, fish, poultry	Fresh or frozen turkey, chicken, fish, beef, lamb, veal, pork. Egg (limit to 3 eggs/week). Tuna or tuna salad.	Aged, canned, cured or processed meat, including ham or game, pickled herring, salted dried fish, sardines, anchovies, chicken livers, sausage, bologna, pepperoni, salami, summer sausage, hot dogs, pâté, caviar. Any food prepared with meat tenderizer, soy sauce or brewer's yeast. Any food containing nitrates, nitrites, or tyramine.
Soups	Soups made from foods allowed in diet, homemade broths.	Canned soup, soup or bouillon cubes, soup base with autolytic yeast or MSG. <u>Read labels.</u>
Desserts	Fruit allowed in diet. Any cake, pudding, cookies, or ice cream without chocolate or nuts. JELL-O.	Chocolate ice cream, pudding, cookies, cakes, or pies. Mincedmeat pie. Nuts. Any yeast-containing doughs and pastries.
Sweets	Sugar, jelly, jam, honey, hard candy	
Miscellaneous	Salt in moderation, lemon juice, butter or margarine, cooking oil, whipped cream, and white vinegar. Commercial salad dressings in small amounts as long as they don't have additives to avoid.	Nutrasweet, monosodium glutamate (MSG), yeast/yeast extract, meat tenderizer (Accent), seasoned salt, mixed dishes, pizza, cheese sauce, macaroni and cheese, beef stroganoff, cheese blintzes, lasagna, frozen TV dinners, chocolate. Nuts and nut butters, Pumpkin, sesame and sunflower seeds. Anything fermented, pickled or marinated. Some aspirin medications that contain caffeine. Excessive amounts of Niacin (Niacinamide is fine).

Source: University Of California (2014)

Homecare Tips

Some measures at home help to ease headaches as follows:

- Sleeping in a quiet, dark, cold room
- Placing a cold clothe on the head
- Avoiding television or reading
- Taking painkillers prescribed
- Avoiding coffee, tea, junk foods
- Taking bath frequently with cold water until remedied
- Avoiding moving around
- Seeing a doctor if there is no improvement (British Associatioj for the Sturdy of Headache, 2007; Birru et al., 2016; Roger, 2022).

Negative Impacts of Headaches

Headaches are badly affecting humans influencing them in various ways such as the following:

- Headaches impair quality of life, such as through psychological effects, iatrogenic effects (in women)
- Economically, headaches pose burden for seeking healthcare or medications and spur lost of works, wages, poor productivity, work absentia, etc
- Educationally, there are diverse impacts such as school absenteeism by students and staff for healthcare visits or homecare treatments, poor teaching and learning performance, poor academic performance, and related effects (Teni, 2016).

Summary

Headache is a specific pain in the head or neck which is either due to certain instigators or medical condition such as infection. There are multidimensional instigators of headache ranging from biological, personal, and environmental parameters that work sometimes in synergy to elicit headache. Therefore, specifically, Every headache may have specific methods for prevention; while, generally health promotion tips such as personal hygiene, diet, avoidance of pollution (noise, light, air), awareness, avoidance of drug abuse, stress management, infection, drug therapy, etc help to prevent headache.

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