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MIGRAINE

What is a Migraine

A migraine headache is a severe pain that is typically on one side of the head but sometimes on both sides. The pain is mostly in the front around the temples or behind one eye. Migraines can occur at any time of the day and can last a few hours or up to one or two days. Migraine attacks can be very intense, forcing the sufferer to abandon normal daily activities. Migraine is commonly experienced between the ages of 15 and 55, most of these sufferers have a family history of migraine and women are affected more than men.

What are the Symptoms of Migraine

Migraine headaches can be characterised by a combination of two or more of the following symptoms experienced during a headache:

- Intense pulsating or throbbing headache
- Moderate to intense pain affecting daily activities
- Nausea, vomiting or diarrhoea
- Increased sensitivity to smells
- Increased sensitivity to sounds
- Increased sensitivity to light (photophobia)
- Visual disturbances or ‘aura’ (flashing lights, wavy lines, distorted vision, blind spots)

- Other neurological symptoms (also known as aura) include:

- Difficulty concentrating
- Difficulty speaking
- Tingling sensation in the limbs
- Tension in the neck and shoulders
- Problems with coordination

What Triggers Migraine

Many factors can trigger migraine attacks, and these can vary from person to person:

- **Light**
  - Bright Light – sunlight, fluorescent lights, car headlights
  - Flickering or flashing lights – TV and computer screens

- **Noise**
  - Excessive or loud noise – especially with a high pitch

- **Weather changes**– cold wind and humidity

- **Food**
  - Lack of food and dehydration (fasting or dieting)
  - Alcohol (red wine), nicotine
  - Foods containing additives such as MSG and tyramine.

  (Note - Tyramine is a natural substance formed from the breakdown of protein as food ages. Tyramine is also thought to trigger headaches. Examples of foods and beverages which contain tyramine include: beer, cheese, sour cream, bananas, red plums, figs, raisins, avocados, eggplant, salami, yoghurt, chocolate, soy sauce.)

- **Physical Factors**
  - Change in sleep patterns
  - Neck or shoulder tension
  - Over-exertion/tiredness

- **Emotional Factors**
  - Stress, anxiety, depression, shock or anger.

- **Hormone changes**
  - Menopause, menstruation, pregnancy, contraceptive pill, or HRT

- **Other triggers**
  - High blood pressure, dental problems, eyestrain or sinus problems

A migraine is commonly triggered by a combination of factors. Normally, a single trigger can be tolerated, however when several occur simultaneously a migraine attack may occur.

It can sometimes be helpful to identify and avoid any of the trigger factors that are specific to an individual. It may be useful to keep a headache diary by recording the date of each migraine, factors or events that may have caused it and the methods used for relief of the symptoms. This may help to determine the right treatment for you. Following is an example of how to diaries these details.

Headache Diary

Details to include are listed below:

Date & Duration

Enter the date of each migraine in the column listed as “Date” and indicate the duration in the “Duration” column.

Severity

Indicate the severity as a numeral using a scale. An example is below:
1 = Mild headache which does not affect normal activities
2 = Moderate headache which is disturbing but does not prevent daily activities.
3 = Severe headache which is very intense and normal activities are impossible.

Triggers

Indicate the factors that may have triggered the migraine.
Some examples are listed below.

- Stress/anxiety
- Neck/shoulder tension
- Fatigue/Poor sleep
- Skipped meals/on diet
- Bright light
- Loud noise
- Intense smell
- Alcohol
- Caffeine
- Chocolate
- Artificial sweetener
- Salty foods
- Other – specify

Relief

List the method/s of action that were used for relief

- Avoiding light, resting in a dark room
- Sleeping/Bed rest
- Relaxation techniques – indicate technique e.g. yoga, massage.
- Cooling applications e.g. ice packs
- Medication – indicate name and dosage
- Other – indicate details

Headache Diary

Date	Duration	Severity (1- 3)	Triggers	Relief

What Causes Migraine

Migraine is a genetically based disease, which may be explained by two different theories that describe the process of abnormal activity in the brain leading to migraine.

Blood Flow Theory:
The blood flow theory focuses on the activity of the blood vessels in the brain to explain the cause of migraine. Blood vessels either expand or contract. When blood vessels expand, there is increased blood flow and this can put pressure on the surrounding nerves, which usually causes a throbbing pain. Narrowing of the blood vessels can reduce blood flow, and may cause dizziness or problems with vision.

Chemical Changes Theory:
Another theory focuses on chemical changes in the brain. Migraine may be caused by the release of a chemical (known as serotonin) from the storage areas in the body, into the blood stream. This results in changes in the chemicals that transmit messages (neurotransmitters) and in the blood vessels of the brain. The blood vessels on the surface of the brain can expand and send pain messages to part of the brain that processes information about pain (the brainstem).

Types of Migraine

Common Migraine (migraine without aura)
This type of migraine consists of an intense, throbbing headache, usually involving one side of the head. In some cases the pain occurs behind the eye. Other features may include nausea/vomiting, and increased sensitivity to light, sound or smell.

Classic Migraine (migraine with aura)
Classic migraine is associated with neurological disturbances, which can last between 15 minutes and 1 hour before experiencing a migraine. Visual aura may consist of blind spots, tunnel vision, flashing lights or shimmering zigzag lines in the vision. Other examples of aura include a tingling sensation or numbness in the limbs or face, difficulty with speech and problems with coordination.

Ophthalmoplegic Migraine
This is a rare form of migraine with pain often around the eye, nausea, vomiting, and temporary double vision due to paralysis of eye muscles.

Ocular/Retinal Migraine
Ocular or Retinal migraine consists of partial or complete temporary loss of vision in one eye, lasting less than an hour. Central vision blurs however it may not be accompanied by headache.

Hemiplegic Migraine
This is very rare and is characterised by temporary paralysis of one side of the body. Other features include double vision, hearing impairment, difficulty walking, numbness around the mouth and difficulty with speech.

Cluster Headache
This is an alternative type of migraine, which is also rare. It is most common in middle-aged men. The headache is characterized by a severe, sharp pain that occurs behind or around one eye and can radiate to the temple, jaw, and chin. Each headache attack lasts between 10 minutes and 2 hours but it may occur in 'clusters', several times a day (up to 8 attacks). These episodes of clusters usually last for 6-8 weeks, with periods of no attacks for months or several years. Attacks are commonly triggered by disrupted sleep, alcohol intake, cold wind, or heat blown into the face. Some of the features that occur with the headache include nasal congestion, excessive tearing and redness of the affected eye.

Treatment

Migraine treatment

Migraine headaches can significantly affect a person's quality of life, normal day to day functioning and work. There is no cure for migraine however it is possible to bring it under control.

1. Lifestyle Changes

Many factors can contribute to migraine attacks. In order to understand migraine, it may be helpful to keep a diary to identify the trigger factors. Avoiding or limiting these trigger factors can reduce the frequency and severity of migraine headaches that are experienced. Also, making a few changes to lead a healthy lifestyle including regular exercise, regular sleep patterns and a good diet (e.g. reducing alcohol intake and quitting smoking) may also enhance the management of migraine.

Summary Note:
- Exercise regularly
- Maintain a regular sleep pattern
- Avoid Trigger factors e.g. bright lights
- Drink plenty of water, eat regularly and include a healthy diet
- Learn relaxation techniques or positive methods to cope with stress

2. Medication For Immediate Relief

This involves the use of medication to treat a migraine attack at the moment when it occurs, to provide quick relief of the headache and other symptoms.

a) Non-prescription medications

i) Non-steroidal anti-inflammatory drugs (**NSAID**) are used to relieve pain and reduce inflammation e.g. aspirin (Solprin), ibuprofen (Motrin).

ii) Paracetamol relieves pain and reduces fever.

iii) Codeine (Mersyndol Daystrength) is used to treat mild to moderate pain but causes drowsiness and constipation.

b) Prescription Painkillers

Strong painkillers can be prescribed such as:

i) NSAID E.g. naproxen (Naprosyn), indomethacin (Indocin)

ii) Combination painkillers and anti-nausea medications e.g. Migramax

c) Anti-nausea Treatment

i) Domperidone (also available over the counter as Motilium)

Metaclopramide (prescription only)

iii) Non-prescription medications are also available for problems with the digestive system e.g. Gaviscon. It may be helpful to take these along with painkillers. It is a good idea to see your doctor.

d) Migraine Medications

There are a number of medications that have been developed specifically to treat migraine attacks.

i) Triptans – These medications are effective and well tolerated for acute attacks of migraine. They relieve pain by balancing chemicals in the brain and constricting the blood vessels. While it is very effective in relieving migraine, it does not prevent or reduce the number of attacks of migraine.

Sumatriptan (Imigran, Imitrex) - Sumatriptan has been shown to be an effective drug for the treatment of an acute attack of migraine. Minor adverse events are not uncommon, though it is usually well tolerated. It is available in self-injection, rapidly dissolving tablet and nasal spray forms.

Rizatriptan (Maxalt) is effective in treating acute migraine, with a dose-related increase in effectiveness. Significant pain relief may be achieved within half-an-hour of taking one 10 mg dose of rizatriptan, (one hour for the 5 mg dose). It is also available as an orally disintegrating tablet that can be taken with water.

Eletriptan (Relpax) is used to treat an acute migraine attack. The incidence of adverse effects is dose-related. Eletriptan will not prevent migraines from occurring or decrease the number of attacks. It will only treat a migraine headache that is already occurring.

ii) Ergotamine – e.g. Ergodryl, Cafergot. These medications are not commonly used. They stop the pain by narrowing the blood vessels, which helps the throbbing pain. They are rarely prescribed and not suitable for frequent migraine attacks. The combination of ergotamine

and caffeine is used to prevent and treat migraine headaches. It is available in tablet and suppository form.

3. Medication For Prevention

People who experience frequent or severe migraine attacks, or respond poorly to migraine specific medications may benefit from preventive drug therapy. The aim of these medications is to reduce the frequency and or severity of migraine attacks.

a) Beta-blockers
Beta-blocker medications are aimed at treating heart disease and high blood pressure but are also effective in preventing migraine e.g. propranolol is commonly prescribed to reduce the frequency of migraine.

b) Anti-depressants
This class of medications are used primarily to treat depression but have also been found to be useful in preventing migraines e.g. amitriptyline.

c) Anti-convulsants
These medications are used to treat seizures or epilepsy. However, in recent years, some anticonvulsant drugs have also been reasonably effective in reducing the frequency of migraine attacks and are reasonably well tolerated.
e.g. sodium valproate (Epilim), topiramate (Topamax).

d) Seratonin Antagonists
These can reduce the severity and frequency of migraine e.g. methysergide (Deseril).

4. Complementary Treatment

Complementary treatment is available for people who are concerned about the side effects of medications and are seeking non-medical options. Complementary treatment should not be undertaken alone, but should be considered as part of an overall treatment method to improve the control of migraine. It is important to keep your doctors and complementary practitioners informed of all treatments, therapies and drugs that you are taking.

Various treatments include:
a) Vitamins /Minerals
e.g. Vitamin B2, Ginger

d) Relaxation
This involves any technique that assists in lowering stress levels e.g. Deep breathing, massage, yoga, meditation, rest and biofeedback.

e) Other methods of therapy may include acupuncture, physiotherapy and chiropractic.