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Migraines

With each day that passes, there are millions that suffer from migraines. They feel symptoms that they think are just preemptive warnings of a major headache. They suffer through thinking that others have the same problems. Some days they can’t even get out of bed, but they push onward. Those that have never had a migraine, or know anyone that has had one, think very little or nothing of them. They think an aspirin will quell the pain and the suffering can get back to work as if nothing else is happening. This is one of the main reasons that those that suffer from migraines don’t think anything of their migraines or don’t go out of their way to get a diagnosis from a neurologist. This is also the reason that the number of people suffering is probably much higher than the estimated 148 million worldwide. For the most part, migraine sufferers can have a few attacks a month, but chronic migraine sufferers can be in pain up to fifteen days out of the month.

 “The migraine is one of the oldest ailments known to mankind,” (Dr Mandal). The word migraine comes from the Greek word hemicrania, meaning “pain in half of the head.” Migraines date back to around 1500 B.C. by ancient Egyptians. In the Ebers papyrus, an Egyptian medical papyrus, they were called painful headaches. Then Hippocrates described blurred vision and flashing lights and relief felt after vomiting in 400 B.C. Arataeus of Cappadocia described one sided headache, vomiting, and time between migraines as symptom free in the second century. Avicenna, an Islamic philosopher mentioned in his textbook on medicine that eating, drinking, sounds, and lights made the symptoms worse, but that being in a dark room helped them pass (Dr Mandal).

 Migraines are one of the most common illnesses in the world. Many migraines go undiagnosed, leading specialists to believe they are much more common. High risk people include women, anyone between 18 and 44, those who have depression, anxiety, sleep problems, or with a family history of migraines. An estimated 8 out of 10 migraine sufferers are women. About 1 in 4 women will have one migraine throughout their life. The commonality of migraines can have a straining impact on a person’s life. Hypothetically, if a person has a migraine once a month, a less severe migraine lasts about 4 hours, that is half a work day, of being in such pain the person would only want to curl up in a dark room with no sounds to let the pulsating stop. Afterwards they have a nausea that makes them want to vomit up everything. No one would want to be at work during that time, so they would have to take sick time to go home and suffer in silence. Considering the less severe ones last 4 hours with more severe migraines lasting closer to three days. “Nine out of 10 people cannot work or perform daily activities during a migraine attack,” (Migraine Statistics). If a person has a migraine for 4 hours each month, that means they would have to take around 12 sick days a year. Given a 3-day migraine, would make the person have to take 36 days a year. Chronic migraines sufferers could have up to 15 days a month spent with a migraine (Migraine statistics). Half a month with a migraine adds up to around 180 days a year suffering with a migraine.

 The most undiagnosed migraines occur in children and teens, the reason being is that they may work differently than in adults. “About 10% of children age 5-15 and up to 28% of teens get migraines,” (AAPSN). Migraines run in families, the chances are better if both parents have them, nearly 90%. “Some research ties infant colic to the risk of developing migraines as a child,” (Migraine Statistics). There have been reports of babies as young as 18 months having migraines. A rarity, true, but nonetheless a scary situation for an unknowing parent. Before puberty, boys are more susceptible to migraines, but that begins to go the other way through the teens. At 17, girls begin having them more often. By then, around 23% of girls and 8% of boys will have a migraine. “Children who suffer from migraines are absent from school twice as often as other students,” (AAPSN).

 There are several causes for Migraines: family history, gender, stress, sleep, exercise, food, and weather. Getting a lot of or not enough sleep or higher than normal stress levels are all triggers. Exercise can both cause and reduce migraines, depending how often one exercises. Various foods and additives, such as MSG and aspartame, are common triggers; along with dehydration. Different weather is a major cause of migraines. “Stormy weather with changes in barometric pressure, extreme heat or cold, bright sunlight and glare, high humidity or very dry air all can be triggers,” (AAPSN). Because migraines are more likely to occur in women than in men, roughly three times as likely, there are some other triggers that could be a cause in women. A fluctuation in hormones, which happens during puberty, menstruation, and pregnancy are linked to migraines. “Women whose migraine attacks occur in association with their menstrual cycle are likely to have fewer attacks and milder symptoms after menopause,” (NINDS). After the pregnancy, there is a higher-than-normal chance of migraines due to the estrogen levels being so high during pregnancy followed by a plummet in the hormones afterward. “About 25% of women have a migraine within two weeks of delivery, and almost half of women have one within the first month,” (American Migraine Foundation).

 “Migraines, which affect children and teenagers as well as adults, can progress through four stages: prodrome, aura, attack, and post-drome,” (Mayo clinic). Each of the stages of a migraine have different symptoms which may or may not occur. Some stages can lead directly into the next stage, while others may take a day.

 “Hours or days before a headache, about 60% of people who have migraines notice symptoms,” (WebMD). The following are some of the symptoms that have been reported before a migraine, or prodrome: constipation or diarrhea, mood changes, food cravings or lack of appetite, stiff neck, increased urination, fluid retention, and frequent yawning or fatigue. The spectrum of symptoms is a good warning that within a day or two, a migraine will be occurring. This is good because the person knows a migraine is approaching, and bad for the same reason.

 “For some people, an aura might occur before or during migraines,” (Mayo clinic). Migraines tend to grow from a headache and could possibly get worse with more activities performed. They can come with nausea and weakness and happen as little as once a year or as often as four times a month, depending on the severity. Right before a migraine there may be a few warning signs called an aura, which start gradually and last around an hour. “An aura can include visual disturbances, such as flashes of light or blind spots, or other disturbances, such as tingling on one side of the face or in an arm or leg and difficulty speaking,” (Mayo clinic). Other people have reported having hallucinations, tunnel vision, or temporary blindness as well ringing in their ears and their limbs feeling heavy.

 “A migraine headache often begins as a dull ache and grows into throbbing pain,” (WebMD). General symptoms of a migraine include headaches, problems concentrating, difficulty sleeping, speaking, nausea, vomiting, sensitivity to light or sounds, feeling faint, and muscle stiffness. These symptoms come on slowly, but can be aggravated by physical activity. The headache is usually unilateral, happening on one side of the head but could intensify to the entire head. “About 80% of people have nausea along with a headache, and about half vomit,” (WebMD). A number of reports showed that those that do vomit tend to feel better afterwards.

 Post migraine symptoms, or post-drome, can last around a day after the attack. Symptoms include fatigue, food cravings, lack of appetite, mood changes, constipation, diarrhea, and pain from lights or sounds (WebMD). There are also reports of feeling sore where the migraine occurred, and difficulty thinking. The mood changes fluctuate from feeling refreshed to feeling depressed, these vary with each migraine which can lead to confusion of not knowing how the person will feel afterwards.

 “Not everyone who has migraines goes through all stages,” (Mayo clinic). This could be considered a good or a bad thing, depending on the perception. Not having the prodrome stage may sound good, but knowing they are warning signs of an oncoming migraine will leave little time to prepare for the attack. No aura occurring could reduce the confusion, but that means the attack comes immediately. It seems the best occurrence of not going through a stage would be the post-drome or attack. Not having an attack is commonly called a silent migraine, which can be even scarier. Those that have experienced a silent migraine have had visual disturbances, alterations to color, and sensitivity to light, sound, and odors lasting around half an hour. But without a headache, the aura experience is worse and leaves the person confused as to what happened. Not having a post-drome stage would be beneficial in that the feeling of being drained would not occur. Another negative to not going through all of the stages is that they may make the attacks worse. This common illness has the potential to be destructive in a person’s life and with their relationships.

 “Migraines are often undiagnosed and untreated,” (Mayo clinic). Neurologists are able to diagnose migraines based on symptoms, medical history, and a few physical and neurological exams they can administer. Keeping a headache diary and recording the symptoms will help neurologists with their diagnosis and tracking the progress and severity between visits. “Occasionally, tests like bloodwork, MRI, or lumbar punctures may be recommended,” (AAPSN).

 Several home remedies have been found to soothe some migraine pain. Relaxation techniques, plenty of fluids, exercising regularly, and resting in a quiet dark room while placing a cool cloth or ice pack on the forehead are helpful. “Keeping healthy, regular routines can help prevent or reduce the frequency and severity of migraines,” (AAPSN). Eating meals consistently and avoiding processed foods and additives while drinking lots of water have been found to reduce the frequency of migraines. Stopping medications and establishing a sleep schedule have also been found to help in reduction.

 “Evidence shows an increased sensitivity after each successive attack, eventually leading to chronic daily migraine in some individuals,” (NINDS). Because of this, various treatments have been administered to study their effectiveness. There are a few treatments for relieving pain or preventing future migraines. But with all medications, side effects come with pain relief. Ibuprofen can help, but taken too long causes ulcers. Some prescription drugs can help with a lot of the symptoms but may cause vomiting or be unsafe for people at risk of strokes or heart attacks. A few newer pain treatments significantly help with the headache pain and treatment of acute migraines; but can have sedation effects. There are some opioid medications, but they are highly addictive. Anti-nausea drugs help with vomiting but must be accompanied with pain medications. The relief from pain can be found in medications recommended by a neurologist. “Keep in mind that medication overuse headaches may start if these are used daily or frequently,” (AAPSN).

 “There are two ways to approach the treatment of migraine headache with drugs: prevent the attacks, or relieve the symptoms during the attacks,” (NINDS). A recent treatment done with triptans, a drug designed for treating cluster headaches and migraines, has found the use of this drug is more effective than ergotamines and analgesics. Ergotamines narrow blood vessels around the brain, while analgesics are pain relievers. Triptans were also found to narrow the blood vessels around the brain, inhibit inflammation, help with light and sound sensitivity, and increases the blood oxygen level in pathways. “Triptan drugs work like a brain chemical called serotonin. This helps quiet down overactive pain nerves. In other words, triptans reverse the changes in your brain that caused your migraine,” (WebMD). Triptan can come in different forms: a shot, nasal spray, or orally. Whatever form it takes, it is best taken very soon after the headaches begin and the pain is not severe. There may be side effects, such as dizziness, dry mouth sleepiness, nausea, tingling sensations, tightness in the throat, feeling weak and heavy limbs. They tend to go away on their own, but be sure to console a doctor before taking triptans as they have been linked to heart attacks and strokes.

 Several other drugs have been used to prevent migraines. Coincidentally, the drugs were taken for other reasons but found to have results affecting the frequency of migraines. “Drugs that were more effective than placebo for episodic migraine in at least three trials include [amitriptyline](https://www-sciencedirect-com.lopes.idm.oclc.org/topics/medicine-and-dentistry/amitriptyline), lunarizine, [fluoxetine](https://www-sciencedirect-com.lopes.idm.oclc.org/topics/medicine-and-dentistry/fluoxetine), [metoprolol](https://www-sciencedirect-com.lopes.idm.oclc.org/topics/medicine-and-dentistry/metoprolol), [pizotifen](https://www-sciencedirect-com.lopes.idm.oclc.org/topics/medicine-and-dentistry/pizotifen), [propranolol](https://www-sciencedirect-com.lopes.idm.oclc.org/topics/medicine-and-dentistry/propranolol), [topiramate](https://www-sciencedirect-com.lopes.idm.oclc.org/topics/medicine-and-dentistry/topiramate), and [valproate](https://www-sciencedirect-com.lopes.idm.oclc.org/topics/medicine-and-dentistry/sodium-valproate),” (Diener and Dodick). These drugs have been found to almost all be equally effective, reducing migraines by half a day to almost two days. However, there do seem to be adverse effects to taking the drugs so more studies for better effective drugs are necessary.

 New antibodies being tested in clinical trials are showing promise. ALD403 and LY2951742, two new treatments were published in 2014, along with the results of AMG334. The trials were better than their placebo counterparts. Another study was done on high frequency and chronic migraines with a drug called TEV-48125. There was an average of 3.5 days less of migraines with the weakest dose introduced going up to 6 days at the most potent dose for the frequent migraines. In the chronic migraine holders, the test was done by hours reduced in a week. The results of change were that in the minimal group, there were nearly 60 hours of reduction while in the highest group were about 67.5 hour reduction. These results show the effectiveness of the new drugs, and their tolerability of adverse effects is favorable. Two other positive advantages of these new drugs are that they only need to be taken once a month and they need to be injected. The long-term results and safety of the drugs aren’t available for them currently. Another approach being done is a combination of simvastatin and vitamin D3. A trial done showed a change of around 8 days in the treatment group.

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