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A Crash Course in Migraines

By Joy Udoh
Artwork by Beatrix Parola

Watching my mom cringe in pain and place her hand to her head always confused me as a child. I would frown in worry and ask her what the problem was, and she would mutter that she had a bad headache. Never experiencing the sensation myself, I wasn't sure how painful it could possibly be and would ask her to describe it despite the fact it was most likely a struggle to respond. She would shake her head and answer, 'You wouldn't know till it happens to you'.

Years later, my eyes tightly shut as I rub my temples and silently beg for the excruciating pain to stop, I can't help but think about how right she was that day. However, where she was simply suffering from a bad headache, I have had to deal with a much bigger beast: migraines. Although my mother couldn't describe how she felt, dealing with migraines for years and experiencing the pain has made it easier to articulate the sensation not only to myself but to my parents and doctor who do not suffer from it. During the early stages before my diagnosis, I thought they were simply terrible headaches. However, the debilitating nature of the pain and how it prevented me from being able to do anything alerted me to the fact that I was dealing with something much more than that.

Migraines differ in every individual from its symptoms, to its intensity, to the duration of time that it lasts. Therefore, I can only write in specifics based on my personal experiences with it. However, due to extensive research that is being done on this condition, there is a plethora of general information that covers the many symptoms that are associated with it as well as the different ways it manifests in individuals. With this article, I would like to share the basic information about this illness, ways it can be managed as well as the current research being carried out in the Neuroscience field.

According to the Migraine Research Foundation, a migraine is an extremely debilitating collection of neurological symptoms that usually includes a severe recurring intense throbbing pain that occurs on one side of the head but can be felt on both sides depending on the intensity of the attack. They can cause significant pain for hours and usually drive patients who suffer from it to find a quiet and dark place to lie down. Sometimes, migraines are preceded by auras, which are sensory warning symptoms that warn an individual that a migraine is coming. Not many individuals have auras that precede their migraines, and some of the individuals that do experience them may not identify them as such. During my diagnosis process, I had described the periods where my vision would blur before the pain would hit to my doctor. Through this, he was able to diagnose my migraines as one that is preceded by an aura. Auras can come in the form of blind spots, shimmering sets or stars, flashes of light, muscle weakness, and much more. In my case, they are blindspots. They usually occur an hour before the pain begins and last for less than that. Despite the fact they aren't completely understood, staff at the Mayo Clinic believe that they are electrical or chemical waves that move across the part of the brain that processes visual signals. As the wave spreads, it may cause these visual hallucinations and, in turn, serve as an informant about the impending arrival of its counterpart.

Dealing with migraines, especially as a college student, is a nightmare. It prevents me from concentrating, getting work done and even communicating well with others. As a result, it is important to learn as much as possible about how it manifests personally. Apart from prescribed medication, certain lifestyle changes have to take place to help keep migraines at bay and to maintain a healthy mind and body. One of the most important aspects of this is identifying and avoiding triggers.

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Triggers occur in most people who experience migraines. However, there are cases where there are no triggers at all. The common triggers that most people have are certain foods, stress, strong scents, loud music, intense sunlight, bright screens, the amount of sleep an individual gets, and many more. It differs in every individual, but the most important thing is identifying them through observation and patience so that they can be avoided. One of the trickiest triggers to manage is stress. As proven by psychologists, stress is a phenomenon that people constantly experience during the day. Classes, deadlines, and impending tests all contribute to it. It is one of the main keys for survival and thinking quickly, but too much of it can be detrimental to a person's health. This point applies to migraines as well; according to The Migraine Trust, if a migraine-prone individual experiences too much stress, it could amplify the severity of the pain as well as the frequency with which the migraines occur. This is something I can attest to. During busier days in my week where I have upcoming deadlines and tasks with which I have to make sure I keep up, the pressure feels considerably higher. The most important things I have learned on days like these are to stay as level headed as possible and not to over-exert myself because if I begin to feel stressed out and to overwork myself, it would only backfire and trigger a migraine, which would prevent me from doing any work at all.

Additionally, good sleeping habits are also very important in preventing migraines. Research has shown that poor sleep can be associated with more frequent and severe migraines, which makes it important to create a stable sleep pattern with the appropriate hours of rest. It should be noted that too much sleep can trigger migraines as well, so a balance has to be created. Finally, eating habits have a strong effect on people who suffer from migraines; notwithstanding the fact that certain foods can be migraine triggers for different sufferers. People who skip meals risk developing a headache, but migraine sufferers are even more sensitive to the effect of lack of food. Small healthy snacks, especially on busy days where getting a proper meal may be a challenge, just might be the thing that keeps the attack at bay.

Currently, there is no cure for this condition. However, researchers are working tirelessly to demystify migraines, and eventually to discover a cure for it. Discoveries leading to this are continuously being made in the field of neuroscience. According to various studies, migraines may have long-lasting effects on the brain's structure. This includes the raised risk of brain lesions, white matter abnormalities which can be seen in Figure 1, as well as altered brain volume compared to people without the disorder. However, the manner of these changes is yet to be explained by scientists.

Based on research at the University of Pennsylvania School of Medicine, a new study reports that 'the network of arteries supplying blood flow to the brain is more likely to be incomplete in people who suffer migraine. The variations in arterial anatomy lead to asymmetries

in cerebral blood flow that might contribute to the process triggering migraines.' In other words, the structure of blood vessels in people who suffer from migraines are different from people who don't suffer from it. This anomaly may contribute to the process that triggers migraines. Figure 2B represents the blood vessel structure of an individual who does not suffer from migraines, while Figure 2C represents the blood vessel structure of an individual who suffers from it.

Furthermore, scientists at the University of California- San Francisco have identified a genetic mutation that is strongly associated with a typical form of migraine. Scientific leaps such as these have been made throughout the years and are paving the way to discovering the mechanism of this condition and, hopefully, a cure for it.

Although migraines still remain elusive to the world of science, people like me that suffer from this condition have to manage it as well as we possibly can to be able to achieve the things we wish to on a daily basis. They are unpredictable and uncontrollable most of the time. According to the Migraine Research Foundation, they are much more aggressive during a person's peak years and even more frequent in women, which are two categories I fall within. You may not suffer from this condition, but one in four households in the United States includes someone with a migraine. When they are paralyzed by agony that you can't seem to understand, remaining as silent as possible would be the strongest way of expressing your understanding and support. The pain itself is indescribable, but even if I was able to put it into words, you wouldn't know till it happens to you. ●

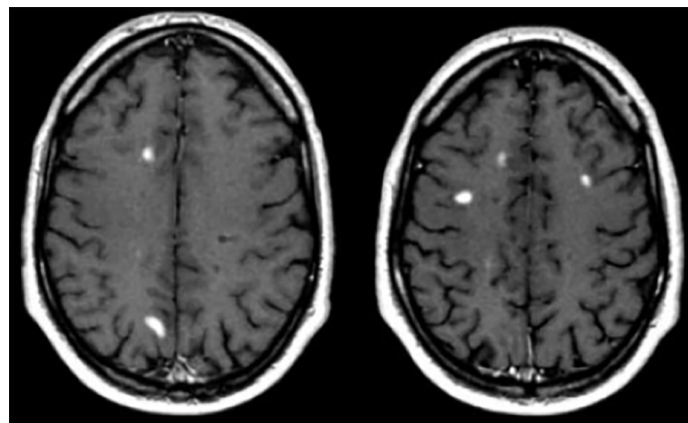


Figure 1

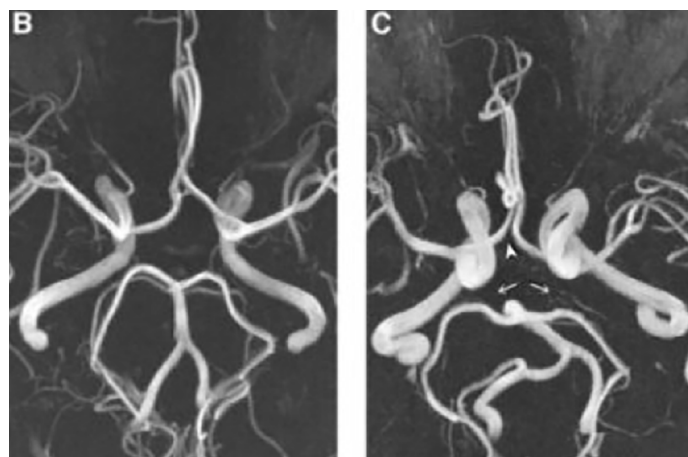


Figure 2