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Anti-Depressants in Migraine

Reviewed for medical accuracy and, with expert contributions by Dr. Nick Silver and Migraine Ireland Editorial Panel, with thanks.

Anti-depressants are an effective and commonly used form of treatment for migraine. Many Migraineurs and their carers may be wondering what the role of Anti-Depressant medication is in migraine treatment. This article hopes to answer some questions you may have.

It's important that you always fully understand why you are taking any medication you are prescribed. If you are unsure why you have been prescribed anti-depressants, arrange to speak with your doctor.

Why Are Anti-Depressants Prescribed in Migraine?

- Anti-Depressants are medicines that were first made to treat mental health conditions such as depression. It is natural that some may find their use in migraine prevention confusing because of the term "Anti-Depressant".
- Anti-Depressants are prescribed for Migraine patients because they are effective in helping prevent Migraine. This means, when taken regularly, they can reduce frequency of Migraine attacks, give relief from Migraine symptoms, and improve quality of life.
- When prescribing medication that is right for you, your doctor will take into effect your whole medical history as well as other factors such as your age or gender. For example, some medications that treat migraine, are not suitable for heart conditions. Some medications can treat more than one condition at the same time.
- Anti-Depressants are especially helpful in treating people who have depression and migraine, because they can treat both conditions. However Anti-Depressants are still used to treat people with migraine who are not depressed too.
- For this reason, you may find you are on a different medication than someone else you know with migraine.

AMITRIPTYLINE

A common example of an Anti-Depressant type used migraine are TCAs (Tricyclic Anti-Depressants such as *Amitriptyline*) The dose of amitriptyline used is much lower than that which is used for depression. (In fact, it is rarely used nowadays for depression). The mechanism by which amitriptyline works is not well understood. But we know that it is a very effective drug in management of headache.

How Long Do Anti-Depressants Take to Work?

- Anti-Depressants are used in the treatment and prevention of Migraine over a longer term. It is important to note that all the anti-migraine drugs- including those that work on a number of different pathways in the brain such as amitriptyline and venlafaxine, have a long “latency”. This means that they take at least 8-10 weeks for an effect on migraine.
- The hope is that after taking anti-depressants for the duration of weeks needed to take effect, you may begin to feel relief from migraine.
- If you are concerned that your medication is not taking effect, check-in with your doctor to talk about this.

Side Effects

People who start these drugs often experience side effects including dry mouth, sleepiness, and weight gain. It’s important to be aware of this. The side effects usually settle down, and patients are encouraged to persevere for at least 3 months of treatment in migraine care.

- Speak to your doctor if you have any concerns about side effects.
- You can read more about side effects of anti-depressants here: <https://www.nhs.uk/mental-health/talking-therapies-medicine-treatments/medicines-and-psychiatry/antidepressants/side-effects/>

Anti-Depressants and Sleep in Headache

Antidepressants and sleep, as all antidepressants (with exception of bupropion and trazodone) may have a negative impact on sleep architecture, resulting in poor quality sleep which may increase fatigue, worsen headache, and reduce concentration etc. This is particularly the case with drugs such as amitriptyline. It is also really important in migraine as many patients will have comorbid restless legs syndrome (which is primarily a sleep disorder). Doctors might choose to avoid TCA treatment in:

- defined restless legs syndrome.
- those who wake unrefreshed regularly and wake a lot or dream a lot in sleep (a marker of frequent waking).

- those with significant fatigue, even on headache-free days

How Do Anti-Depressants Prevent Migraine?

To understand how Anti-Depressants help preventing Migraine, it helps to first understand The Nervous System because Migraine is understood to be a disorder of how the nerves work in the brain. Anti-Depressants help prevent Migraine because of the way they affect chemicals in the brain called **Neurotransmitters**.

The Nervous System

Our brain uses a system, called The Nervous System, to send and receive messages to and from the rest of our body.

This system is made up of millions of tiny nerves, that run from the brain through our spinal cord, or back bone.

From the spinal cord, the system of nerves runs to the rest of our body, including all of our organs and muscles.

From our nervous system, our brain receives information about the rest of the body and our surroundings.

In response to this information, it releases chemicals/hormones called Neurotransmitters, which make our bodies react. This is how the brain tells the body to do different things.

The Neurotransmitters then return to the brain, and the brain stores them for use again. This storage process is called "Reuptake".

A Little More About Neurotransmitters

Serotonin is one of the main Neurotransmitters hormone/chemicals that we talk about in regard to Anti-Depressants and Migraine. **Norepinephrine** is another type. Both have many functions in the body.

Having more of these neurotransmitters freely in circulation in our nervous system is understood to help prevent migraine because migraine is understood to be a disease of how the nerves work in the brain.

For this reason, medications that work on neurotransmitters are often used as a treatment for migraine. Scientists are still researching how neurotransmitters work and their role in migraine.

There are many different types of such medications, and they all work in different ways on neurotransmitters. Anti-depressants are one type, some other types include beta-blockers and triptans.

Anti-depressants help prevent migraine by blocking the reuptake stage of the neurotransmitters in the brain. This means that instead of being stored for later, neurotransmitters are kept circulating in our nervous system.

Because migraine is understood to be a disease of how the nerves work, it is thought that having more neurotransmitters flowing, instead of in storage, helps relieve and prevent migraine symptoms.

Depression and Migraine

Depression and Migraine are what are called **Comorbidities** of each other, meaning they have a higher than coincidental chance of being diagnosed in the same person. This means that people who have migraine are at a higher risk of depression than those without migraine, and vice versa.

However, being prescribed an anti-depressant for migraine does not mean you are depressed. Depression is a complex and serious condition of its own, and anti-depressants are but one of the treatment options for depression.

If you are concerned about your mental health, this will need to be fully assessed by your GP. If you notice that you are experiencing low moods, low confidence, anxiety, sadness or any other concerns or changes in your overall mental health it is **essential** that you speak to your GP about this to ensure you are fully supported in getting the best care possible.

While this care might include Anti-Depressant medication too, this will be a decision that is made between you and your doctor after detailed assessment of your mental health needs, and your physical health needs including your migraine treatment.

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