

Why emotional abuse in childhood may lead to migraines in adulthood

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Credit: AI-generated image ([disclaimer](#))

Child abuse and neglect are, sadly, more common than you might think. According to a 2011 study in [JAMA Pediatrics](#), more than five million U.S. children experienced confirmed cases of maltreatment between 2004 and 2011. The effects of abuse can linger beyond childhood – and

migraine headaches might be one of them.

Previous research, including our own, has found a link between experiencing [migraine](#) headaches in adulthood and experiencing emotional abuse in childhood. So how strong is the link? What is it about childhood emotional abuse that could lead to a physical problem, like migraines, in adulthood?

What is emotional abuse?

The Centers for Disease Control and Prevention [defines childhood maltreatment as](#):

Any act or series of acts of commission or omission by a parent or other caregiver that results in harm, potential for harm, or threat of harm to a child.

Data suggest that up to [12.5 percent of U.S. children](#) will experience maltreatment by their 18th birthday. However, [studies using self-reported data](#) suggest that as many as 25 to 45 percent of adults in the U.S. report experiencing emotional, physical or sexual abuse as a child.

The discrepancy may be because so many cases of [childhood abuse](#), particularly cases of [emotional or psychological abuse](#), [are unreported](#). This specific type of abuse may occur within a family over the course of years without recognition or detection.

The link between emotional abuse and migraines

Migraine is a type of [chronic, recurrent moderate to severe headache](#) affecting about [12-17 percent](#) of the people in the U.S. Headaches, including migraine, are the fifth leading cause of [emergency department](#)

[visits](#) and the sixth highest cause of [years lost due to disability](#). Headaches are about three times more common in women than men.

While all forms of [childhood maltreatment](#) have been shown to be linked to migraines, the strongest and most significant link is with emotional abuse. Two studies using nationally representative samples of older Americans (the mean ages [were 50](#) and [56 years old](#), respectively) have found a link.

We have also examined the emotional abuse-migraine link in young adults. In our [study](#), we found that those recalling [emotional abuse](#) in childhood and adolescence were over 50 percent more likely to report being diagnosed with migraine. We also found that if a person reported experiencing all three types of abuse (physical, emotional and sexual), the risk of being diagnosed with migraine doubled.

Why would emotional abuse in childhood lead to migraines in adulthood?



Credit: Juan Pablo Serrano Arenas from Pexels

The fact that the risk goes up in response to increased exposure is what indicates that abuse may cause biological changes that can lead to migraine later in life. While the [exact mechanism](#) between migraine and childhood maltreatment is not yet established, research has deepened our understanding of what might be going on in the body and brain.

Adverse [childhood experiences](#) are known to upset the regulation of what is called the hypothalamic-pituitary-adrenal (HPA) axis, which controls the release of stress hormones. In plain English, that means experiencing an adverse event in childhood can disrupt the body's response to stress. Stress isn't just an emotion – it's also a physical

response than can have consequences for the body.

Prolonged elevation of these stress hormones can alter both the structure and function of the brain's limbic system, which is the seat of emotion, behavior, motivation and memory. MRIs have found alterations in structures and connections within the limbic system both in people with a history of [childhood maltreatment](#) and [people diagnosed with migraine](#). [Stressful experiences](#) also disrupt the immune, metabolic and autonomic nervous systems.

Both [childhood abuse](#) and [migraine](#) have been associated with elevation of c-reactive protein, a measurable substance in the blood (also known as a biomarker), which indicates the degree of inflammation. This biomarker is a well-established predictor of cardiovascular disease and stroke.

Migraine is considered to be a [hereditary](#) condition. But, except in a small minority of cases, the genes responsible have not been identified. However, stress early in life induces alterations in gene expression without altering the DNA sequence. These are called [epigenetic changes](#), and they are long-lasting and may even be passed on to [offspring](#). The role of [epigenetics in migraine](#) is in the early stages of investigation.

What does this mean for doctors treating migraine patients?

Childhood maltreatment probably contributes to only a small portion of the number of people with migraine. But because research indicates that there is a strong link between the two, clinicians may want to bear that in mind when evaluating patients.

Treatments such as cognitive behavioral therapy, which alter the

neurophysiological response to stress, have been shown to be effective treatments for [migraine](#) and also for the psychological effects of [abuse](#). Therefore CBT may be particularly suited to persons with both.

Anti-epileptic drugs such as valproate and topiramate are FDA-approved for migraine treatment. These drugs are also both known to [reverse stress-induced epigenetic changes](#).

Other therapies that [decrease inflammation](#) are currently under [investigation for migraine](#).

Migraineurs with history of childhood abuse are also at higher risk for [psychiatric](#) conditions like depression and anxiety, as well as for medical disorders like [fibromyalgia and irritable bowel syndrome](#). This may affect the treatment strategy a clinician uses.

Within a migraine clinic population, clinicians should pay special attention to those who have been subjected to maltreatment in [childhood](#), as they are at [increased risk of being victims of domestic abuse and intimate partner violence as adults](#).

That's why clinicians should screen migraine patients, and particularly women, for current abuse.

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