

How Common Is Chiari Among People with Headaches?

It is well known that headaches, especially ones located in the back of the head (occipital) and aggravated by straining (Valsalva), are the signature symptom of Chiari, but now an international study has identified how commonly Chiari is found among people with headaches bad enough to get an MRI done. The study looked at a random sample of 2305 people of all ages who were referred to the MRI department at two hospitals to investigate headaches. For each person, the extent of tonsillar herniation was classified as healthy (<3mm), tonsillar ectopia (3-5mm), or Chiari (>5mm) and the primary headache location, duration, severity, and Valsalva aggravation was tabulated along with the accompanying symptoms nausea, photophobia (sensitivity to bright lights), phonophobia (sensitivity to loud noises), speech disorder, and vertigo.

Overall, 46 people (2%) had what was classified as tonsillar ectopia, while 33 (1.4%) had herniations of 5mm or more and were classified as Chiari; meaning that 3.4% of the large sample had tonsillar herniation of at least 3mm. Interestingly, the majority of each group rated their headache severity as moderate, but there were significant differences between the groups for the other headaches aspects. In terms of duration, 70% of the Chiari group reported headaches that lasted hours or less, compared to 35% of the tonsillar ectopia group and only 13% of the healthy group. For location, 88% of the Chiari group reported their headaches were primarily in the occipital region (back of the head), compared to 40% of the tonsillar ectopia group and 12% of the healthy group. Finally, 82% of the Chiari group reported their headaches were aggravated by Valsalva activities, compared to 57% for the tonsillar ectopia group and 13% for the healthy group. Overall, the headaches for the Chiari group were more clearly defined as the classic Chiari headache, while the headaches for the other two groups were more diverse. Finally, the only symptom that was significantly different between the groups was vertigo. Specifically, 76% of the Chiari group also experienced vertigo, compared to only 18% for the other two groups.

While research has shown that the extent of herniation is not strongly correlated with overall symptom severity or surgical outcome, there is growing evidence, such as this report, that it may be associated with the classic Chiari headache.

Source: Assessing the Prevalence of Ectopic Cerebellar Tonsils and Accompanying Symptoms in Individuals with Various Headaches. Azarkar G, Nemati S, Vafadar S, Sharifzade GR, Ziaee A, Ashrafi H. J Belg Soc Radiol. 2023 Oct 3;107(1):80. doi: 10.5334/jbsr.3264. eCollection 2023. PMID: 37808341

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