

Chiari Patients May Be At Higher Risk For Suicide

*****Content Warning: This update focuses on suicide and includes sensitive material that may be upsetting. If you or someone you know needs support, please contact the National Suicide and Crisis Lifeline by calling 988.*****

As part of the Psychological Impact of Chiari project, Conquer Chiari researchers have shown that a high percentage of adult Chiari patients are at an elevated risk for suicide. Suicidal ideation and behaviors have not previously been studied in the Chiari population, but patients often live with chronic pain, depression, and disability, which are all well known risk factors.

In this first of its kind study, 372 Chiari patients filled out an on-line survey that included validated measures of pain, disability, depression, anxiety, and loneliness. In addition, the survey included the Columbia Suicide Severity Rating Scale Screen (C-SSRS Screen). The C-SSRS Screen is a shortened version of a widely used tool which was designed to be administered by anyone and without any training. It contains 5 progressive questions on suicidal ideation in the past 30 days and one question on suicidal behavior history. The responses are then scored as No Risk, Low Risk, Medium Risk, or High Risk. Higher scores on the Screen have been shown to be associated with increased odds of suicide during the following year.

To analyze the responses, the researchers grouped them as Low-Risk scores (No or Low) and High-Risk scores (Medium or High). Overall, 44% of the participants scored in the High-Risk group. The High-Risk group was on average 5 years younger than the Low-Risk group, but there were no differences in gender or Chiari surgical history between the groups. The High-Risk group however did score significantly higher on all the measures for pain, disability, and psychological distress than the Low-Risk group.

The researchers also used a statistical analysis which looked at the additional measures independently while controlling for the other factors. From this, they found that patients with a moderate level of depression or higher were more than four times as likely to score in the High-Risk group. Similarly, patients with severe or complete neck related disability were twice as likely to score as High-Risk. Interestingly, pain levels were not a significant independent predictor of scoring at High-Risk.

In the general population, suicide risk increases with age, with those over 65 being at the highest risk. In this study, however, patients under the age of 30 were three times more likely to score at High-Risk compared to patients over the age of 30. The reason for this is not clear and will require more research.

Chiari patients tend to see several different types of doctors during their diagnostic and treatment journey but are not routinely evaluated for depression or suicide risk. The results from this study indicate that clinicians should be aware of this potentially serious issue and maybe even consider using the C-SSRS Screen to identify those at risk. The results also indicate that this topic warrants further research to fully understand the implications and impact on the Chiari community.

Conquer Chiari has elected to make this journal paper open access, meaning it is freely available. The full publication can be found here: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0334599>

[Note: Rick Labuda, the Executive Director of Conquer Chiari, wrote this update and is also the lead author of the journal publication being discussed.]

Source: Labuda R, Nolan E, Rabinowitz EP, Delahanty DL, Klinge PM, Allen PA. Columbia suicide severity rating scale screen scores in adults with Chiari malformation Type 1. PLoS One. 2025;20(10):e0334599. Published 2025 Oct 16. doi:10.1371/journal.pone.0334599

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Conquer Chiari's research updates highlight and summarize interesting publications from the medical literature while providing background and context. The summaries do contain some medical terminology and assume a general understanding of Chiari. Introductory information and many more research articles can be found in the [Conquer Chiari Library](#).

Conquer Chiari is a 501(c)(3) public charity dedicated to improving the experiences and outcomes of Chiari patients through education, awareness and research.