

Eye Misalignment May Be Common In Chiari Children

Eye misalignment can appear well beyond infancy in children with Chiari I. In a new study of children seen by pediatric eye specialists, researchers estimated that 5% of those with Chiari I had been diagnosed with strabismus by age 1, 17% by age 5, 27% by age 10, and 36% by age 15. Strabismus means that the eyes do not point in the same direction. To determine this, researchers reviewed records from the Children's Hospital of Philadelphia spanning 2009 to 2025. Of more than 149,000 children seen by its eye service, 591 had Chiari, including 286 with type I. The study checked Chiari diagnoses against clinical records and included only strabismus diagnosed by an ophthalmologist.

There are several forms of strabismus. Esotropia means that one or both eyes turn inward, toward the nose; exotropia means they turn outward. Accommodative esotropia is an inward turn associated with the effort to focus, often related to farsightedness. Nonaccommodative esotropia is an inward turn that does not straighten simply with glasses. The researchers cataloged these patterns, but reported their frequencies for all Chiari types combined, so we do not know the most common type for just Chiari I.

Similarly, the authors combined Chiari types in reporting that 38% of children with Chiari had strabismus versus 18% without Chiari. However, even being pooled this is much higher than the generally reported 4% national average. Interestingly, however, the medical records indicated that in only a fraction of the cases did the ophthalmologist believe that Chiari had caused the strabismus.

It is unfortunate that this study reported so many pooled results instead of separating the Chiari types. It is not clear why the authors chose to do this. Although this study is limited to one hospital system, it does suggest that a similar study using one of the larger medical record networks would be worth pursuing.

Source: Chen A, Tucker A, Jin F, Yu Y, Binenbaum G. Relative risk and onset of strabismus in children with Chiari malformation. J AAPOS. Published online 2026. doi:10.1016/j.jaapos.2026.105302

Please consider a \$10 donation as Conquer Chiari's educational material is free to read, but not free to produce:



<https://www.conquerchiari.org/donate>

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](#).