

## Dextrose Prolotherapy for Shoulder Pain and Instability

Can sugar water injections help with shoulder pain due to microinstability of the joint? Possibly. A recent case series from doctors in New York showed that dextrose prolotherapy, or injections of sugar water, improved shoulder pain and function in two out of three women with shoulder pain and loss of function related to hypermobile Ehlers-Danlos Syndrome (hEDS) or general hypermobility. While only a subset of Chiari patients also has hEDS, even more have shoulder stability issues due to compression of the nerves that activate the shoulder muscles, and shoulder pain is one of the most commonly reported Chiari symptoms.

Dextrose prolotherapy has been around as a potential joint therapy for decades, but recently has been receiving more attention. Originally, it was thought that the sugar water injections acted as an irritant which triggered a local immune response which led to natural healing of the joint. However, more recent research suggests that its beneficial effects are not that simple and the full mechanisms at play are not known.

In the report, two of the women – one with hEDS and one with general hypermobility – both showed instability of one or both shoulders on physical examination and imaging. In addition, they reported high levels of pain and restricted use of the joint(s) due to the pain. After only one or two injections, they both reported significant improvement in both pain and functional use of their shoulders. The third case was a woman with Chiari, hEDS, and cervical instability. She had suffered from years of shoulder pain. However, for her the injections only provided a temporary, modest level of relief.

Conclusions can't be drawn from case studies, but a separate review of the research on dextrose prolotherapy indicates that there has been a recent trend of more rigorous studies with positive results. However, the same review stresses that there are no clinical guidelines on how to administer the therapy; meaning that concentration levels, frequency, and location of the injections are not standardized. In addition, criteria for who or what conditions the therapy is likely to work for have not been established, nor is it clear if potential relief is temporary, long-term, or variable.

Conquer Chiari will continue to monitor the research literature, report on any advancements in this area, and look into the feasibility of a research project specifically involving Chiari patients.

**Sources:** Dextrose Prolotherapy for the Treatment of Chronic Shoulder Pain in Patients With Joint Hypermobility: A Case Series. Michalak N, Banks D, Kane L, Siefferman J. Clin Med Insights Arthritis Musculoskelet Disord. 2024 Jul 24;17:11795441241264821. doi: 10.1177/11795441241264821. eCollection 2024. PMID: 39055287

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<https://now.aapmr.org/therapeutic-injection-of-dextrose-prolotherapy-perineural-injection-therapy-and-hydrodissection/#:~:text=Prolotherapy%20with%20dextrose%20continues%20to,12>

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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.*