

# People with acute calcium pyrophosphate face doubled risk for fracture

April 29 2024, by Lori Solomon

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Fracture risk is nearly doubled in individuals with acute calcium pyrophosphate (CPP) crystal arthritis, according to a study recently published in *Arthritis & Rheumatology*.

Sara K. Tedeschi, M.D., M.P.H., from Brigham and Women's Hospital in Boston, and colleagues compared fracture risks (humerus, wrist, hip, or pelvis) in 1,148 patients with acute CPP crystal arthritis (1991 to 2023) versus 3,730 matched controls.

The researchers found that glucocorticoids and osteoporosis treatments were more frequent in the acute CPP crystal arthritis cohort, yet fracture incidence rates were twice as high in the acute CPP crystal arthritis cohort (11.7 per 1,000 person-years versus 5.5 per 1,000 person-years for controls). Results persisted even in an adjusted analysis (hazard ratio, 1.8).

"Although a number of studies have investigated clinical conditions preceding the diagnosis of CPPD [calcium pyrophosphate deposition], few have evaluated long-term outcomes in patients with CPPD," the authors write.

"Our observation of elevated [fracture risk](#) in patients with acute CPP crystal [arthritis](#) supports the need for additional prospective studies of bone turnover markers, bone density, and effects of osteoporosis treatments in patients with CPPD, as well as future mediation analysis to understand the potential contribution of CPPD [treatment](#) on fracture risk."

One author disclosed ties to the pharmaceutical industry.

**More information:** Sara K. Tedeschi et al, Fractures in Patients With Acute Calcium Pyrophosphate Crystal Arthritis Versus Matched Comparators in a Large Cohort Study, *Arthritis & Rheumatology* (2024). [DOI: 10.1002/art.42798](https://doi.org/10.1002/art.42798)

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