

**Table 1 Summary of Results in Glucosamine Sulfate Trials**

Author(s)	Year	No. of Patients	Follow-up Period	Complications *	Results
Crolle and D'Este 7	1980	30	3 wk	None	Overall symptom score improved by 65% after week 1, additional improvement by 15% at week 3
Drovanti et al 18	1980	80	30 d	Few and minor	73.3% reduction in overall symptoms (nausea, compared with 41.3% in placebo group; constipation, cartilage specimens from glucosamine heartburn) group were "smoother" and more "orderly" than those in placebo group
Pujalte et al 19	1980	20	6-8 wk	No serious events (dizziness in 1)	Considerable alleviation of self-assessed degree of articular pain, tenderness, and swelling with glucosamine
D'Ambrosio et al 20	1981	30	3 wk	None	58% decrease in overall symptoms during initial week of therapy; additional 13% decline at day 21
Lopes Vaz 21	1982	40	8 wk	Mild (heartburn,epigastric pain, abdominal pain,nausea, headache)	Pain scores were lower for ibuprofen compared with placebo at week 1,lower for glucosamine compared with ibuprofen at week 8
Rovati 22	1992	252	4 wk	Mild (allergy and GI upset)	Reduction in symptoms was 55% in glucosamine group vs 38% in placebo group
Müller-Fassbender et al 23	1994	199	4 wk	35% ibuprofen, 6% glucosamine, (mild GI upset)	Quicker response time for pain relief with ibuprofen; ibuprofen benefits stabilized after week 2; patients receiving glucosamine continued to improve
Reichelt et al 24	1994	155	4 wk	Well-tolerated	Reduction in symptoms was 55% in glucosamine group vs 33% in placebo group
Qiu et al 25	1998	178	4 wk	16% ibuprofen, 6% glucosamine (mild sleepiness, nausea, GI upset)	At 4 weeks, both glucosamine and ibuprofen groups showed reduction in knee pain (57% vs 51%, respectively)and swelling (77% and 78%)