Surgeons and studies disagree about whether displaced midshaft clavicle fractures should be treated surgically. A network meta-analysis of 22 randomized controlled trials was performed to determine the intervention with the highest chance of union at 1 year, the lowest risk of revision surgery, and the highest functional outcome scores.

MEDLINE, Embase, & Cochrane Central Register
Up to July 2018

248 papers
22 RCTs

Percentage of patients achieving union
Operative treatment associated with a higher chance of union
Operative treatment 96.7%
Non-operative treatment 88.9%

Plating was associated with a higher likelihood of union than intramedullary fixation

Risk of reoperation
No difference in reoperation among different surgical techniques

Functional scores
Surgical treatment did not result in improved outcomes scores for pain or function

Operative treatment for displaced midshaft clavicle fractures increases the likelihood of union but does not result in better functional outcome scores than non-operative treatment; most patients can avoid surgery altogether with little absolute risk of nonunion.

What Is the Best Evidence for Management of Displaced Midshaft Clavicle Fractures?
A Systematic Review and Network Meta-analysis of 22 Randomized Controlled Trials
Axelrod et al. (2019) | DOI: 10.1097/CORR.0000000000000986