

Do obesity and smoking impact healing after wrist fracture surgery?

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Both obesity and smoking can have negative effects on bone health. A recent study led by a team at Beth Israel Deaconess Medical Center (BIDMC) examined whether they also impact healing in patients who have undergone surgery for fractures of the wrist, or the distal radius,

which are among the most common bone fractures. Such fractures account for 5 percent to 20 percent of all emergency room fracture visits, and affected patients can experience challenges with daily living as well as potentially serious and costly complications.

For the study, published in the *Journal of Hand Surgery*, the investigators analyzed data on patients surgically treated for a distal radius fracture between 2006 and 2017 at two trauma centers. The 200 patients were divided into obese and non-obese groups (39 and 161 patients, respectively) and were also characterized as current, former, and never smokers (20, 32, and 148 patients, respectively) based on self-reported cigarette use.

At three-month and one-year follow-ups after [surgery](#), both the obese and nonobese groups achieved acceptable scores that pertained to patient-reported function in the upper extremity—close to those of the [general population](#). The two groups were also similar in regards to range of motion and bone alignment. At three months, smokers demonstrated worse scores related to arm, shoulder, and hand function and a lower percentage of healed [fractures](#), but these effects improved over the course of a year. Complications were similar between groups.

"Overall we found that we can achieve excellent clinical and radiographic outcomes with surgery for displaced wrist fractures in patients who are obese and in those who smoke," said senior author Tamara D. Rozental, MD, Chief of Hand and Upper Extremity Surgery at BIDMC and Professor of Orthopedic Surgery at Harvard Medical School. "Our results show that treatment for distal radius fractures in obese and [smoking](#) patients is safe, and these patients may be treated like the general population with similar long-term results. Their short-term outcomes, however, demonstrate higher disability and, in the case of smokers, slower fracture healing."

Rozenal stressed that obesity and smoking are currently considered among the two most important preventable causes of poor health in developed nations, and both are modifiable risk factors. "As such, we believe that lifestyle interventions focusing on [weight loss](#) and smoking cessation should be emphasized whenever possible," she said.

More information: Matthew J. Hall et al, The Impact of Obesity and Smoking on Outcomes After Volar Plate Fixation of Distal Radius Fractures, *The Journal of Hand Surgery* (2019). [DOI: 10.1016/j.jhsa.2019.08.017](#)

Provided by Beth Israel Deaconess Medical Center

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