



## Why Don't All Fractures Heal?

This is a very complicated subject but I think I can offer a few points which would help you realize why fracture healing cannot be guaranteed. When a fracture occurs, and the body begins the process of healing the fracture, the patient should think about the process like a race between the formation of bone tissue to heal the fracture and scar tissue growing between the bone ends preventing healing. I like to think about scar tissue like weeds. You don't have to do much to get weeds to grow in your garden. Similarly, scar tissue is an unwelcome process in the *"garden of fracture healing."*

Scar tissue seems to be particularly present when there is too much movement at the fracture ends, if the bone has been opened to the outside as in a compound fracture, or if infection has been present in the wound. There are also certain parts of the body which have less blood supply than others and in these areas scar tissue seems to readily grow, as well.

Bone healing, on the other hand, or callus as it is termed medically, is like really good grass that you would love to have growing in your yard.

Therefore, the question - "which is easier to grow?" Everyone knows the answer to this. You don't even need to be a gardener to figure it out.

Patients almost always think about fracture healing like carpentry. If the doctor set the fracture right and got the bone ends together, whether he did this by closed means or open surgery, the fracture should heal, right? WRONG.

The patient should think about fracture healing like gardening - not carpentry. It's easier to get angry with a person (in this case, the doctor who is taking care of the fracture) rather than with Mother Nature.

However, in the vast majority of cases in which fractures do not heal, the treatment was appropriate and correct. Failure of a fracture to heal is disturbing to the patient mostly, but also to the physician who is trying to care for that patient. When fractures do not heal, other techniques must be considered including the electrical stimulation of bone or open surgery, which often includes fixation with metal devices and bone grafting either from the patient or use of a bone graft substitute.



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