

BONE GROWTH STIMULATORS

What is a bone growth stimulator? A bone growth stimulator is a noninvasive nonsurgical device to stimulate the healing of new fractures or to stimulate the healing of fractures that have not healed over a period of three to six months. The fractures that do not heal after three to six months are called nonunion fractures.

How do they work? The exact action of these bone growth stimulators is not known. There are three basic types of bone growth stimulators. Some devices use ultrasound and other devices use capacitive or electromagnetic fields to induce weak electrical currents in the bone. Irrespective of the modality, it is felt that these devices mechanically stimulate the bone cells to enhance healing of the fracture.

When are these devices utilized? These treatment modalities can be used to enhance the healing of stress fractures or recent fractures of the bone. Studies have shown the healing rate is enhanced when these devices are utilized for new fractures of bones of the wrist (radius) or shin bone (tibia). In addition, these devices are utilized to enhance healing of fractures that have not healed over a period of time. These fractures are called nonunions. Studies have shown that in those patients who experience fracture nonunions can heal their fractures without surgery in approximately 75 percent or more of the time. These devices can also be used as an adjunct to surgery for those patients who develop fracture nonunions.