Medical Policy: Bone Growth Stimulator			
Prepared By:	Elena Antonelli, M.D.	**Reviewed Date:**	06/26/2017
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POLICY

Criteria for the use of Ultrasound Bone Growth Stimulators:

Fresh Fractures: Most fresh fractures heal without complications with standard fracture care, i.e., closed reduction and cast immobilization. LIPUS is not indicated following intramedullary nail treatment of tibia fractures. However, low-intensity ultrasound treatment may be considered medically necessary for the treatment of some fresh, closed or Grade I open fractures in skeletally mature adults when at least one of the following significant risk factors for delayed fracture healing or nonunion are present:

1. Diabetes;
2. Osteoporosis;
3. Steroid Therapy;
4. Currently Smoking; or
5. Fractures associated with extensive soft tissue or vascular damage.

Other factors that may indicate use of ultrasound bone healing depending on their severity may include: Obesity, nutritional or hormonal deficiency, age, low activity level, severe anemia, infection, or comminuted or other especially complicated fractures.

Nonunions: Low intensity ultrasound treatment may be considered medically necessary in patients with nonunion of skeletal bones, excluding the skull and vertebrae, when all of the following criteria are met:

1. At least three months have elapsed since the date of fracture and the initiation of conventional fracture treatments.
2. Serial x-rays have confirmed that no progressive signs of healing have occurred;
3. The fracture gap is one centimeter or less;
4. The fracture is adequately immobilized (Leung, 2004) (BlueCross, 2007)

Criteria for the Use of Non-Invasive Electrical Bone Growth Stimulators:

Nonunions: Nonunion of long bone fracture (5-10% exhibit signs of delayed or impaired healing) must meet ALL of the following:

1. The two portions of the bone involved in the nonunion are separated by less than one centimeter; AND

2. Location in the appendicular skeleton (the appendicular skeleton includes the bones of the shoulder girdle, upper

extremities, pelvis, and lower extremities); AND

3. The bone is stable at both ends by means of a cast or fixation; AND

4. A minimum of 90 days has elapsed from the time of the original fracture and serial radiographs over three months show no progressive signs of healing (except in cases where the bone is infected, and the 90-day waiting period would not be required). (Saxena, 2005) (BlueCross, 2007) (Regence, 2015)

Criteria for Use for Invasive or Non-Invasive Electrical Bone Growth Stimulators:

Either invasive or noninvasive methods of electrical bone growth stimulation may be considered medically necessary as an adjunct to spinal fusion surgery for patients with any of the following risk factors for failed fusion:

1. One or more previous failed spinal fusion(s)

2. Grade III or worse spondylolisthesis

3. Fusion to be performed at more than one level

4. Current smoking habit (Note: Other tobacco use such as chewing tobacco is not considered a risk factor);

5. Diabetes, Renal disease, Alcoholism; or

6. Significant osteoporosis, which has been demonstrated on radiographs

(Kucharzyk, 1999) (Rogozinski, 1996) (Hodges, 2003)

REFERENCE(S)

ODG Knee and Leg (updated 05/12/17) - Online Version

ODG Low Back (updated 05/12/17) - Online Version

Anthem Blue Cross Medical Policy: Electrical Bone Growth Stimulation. Policy #DME.0004. 8/16/13.

Official Disability Guidelines, Knee and Low Back Chapters. Work Loss Data Institute. 8/14/13. http://www.odg-twc.com/odgtwclist.htm.