

Over 1 million patients treated worldwide

BONE HEALING.

PROVEN.



exogen[®]

ultrasound bone healing system

Helping promote faster bone healing in just 20 minutes a day

EXOGEN is a fracture healing device that uses safe, effective low-intensity pulsed ultrasound to help stimulate the body's natural healing process¹

38%

faster healing of fresh fractures^{2,3}

86%

heal rate for fractures not healing on their own⁴

20^{min}

daily treatment that easily fits into your day



#1 prescribed bone healing system¹⁴

EXOGEN offers:

- Customer service support
- Built-in treatment tracking calendar
- Automated treatment reminders with the EXOGEN CONNECTS app



Actual size

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Frequently asked questions

Will EXOGEN help heal my fracture?

Clinical studies show that EXOGEN heals breaks not healing on their own at a high heal rate of up to 86%⁴ and speeds up healing of fresh fractures by 38%^{2,3}

Is EXOGEN treatment painful?

Most patients don't feel anything at the treatment site, while some patients report experiencing a tingling sensation.

How will I know if the EXOGEN unit is working?

Your device is working properly when you see the display screen counting down from 20 minutes during treatment. The treatment symbol will also cycle during treatment.

What if I don't place the EXOGEN transducer in exactly the right spot?

Best results are achieved when the EXOGEN transducer is placed at the location marked by your physician.

Will having two or more treatments per day result in better or faster healing?

Clinical studies have evaluated the effectiveness of EXOGEN with one 20-minute treatment per day with demonstrated healing acceleration. Multiple or longer-duration daily treatments have not been studied.

What if I miss a treatment?

Try to get back on schedule as soon as possible. To stay consistent with your treatments, check the treatment tracking calendar on your device. Identifying a consistent and convenient time to use EXOGEN each day helps minimize missed treatments. Automated treatment reminders can also be set up using the EXOGEN CONNECTS smartphone app.

Risk Factors

Up to 10% of fractures may be at risk of not healing⁵

Factors that may affect your healing:

- Smoking⁶
- Diabetes⁷
- Advanced age⁸
- Fracture location⁸
- Obesity⁹
- Nutritional deficiency¹⁰
- Sterioids¹⁰
- Certain medications¹¹
- Vascular insufficiency^{12,13}

EXOGEN CONNECTS

EXOGEN CONNECTS is a free smartphone app that allows you to set up automated treatment reminders, and provides helpful user information to support you throughout your treatment.



Visit the App Store to download **EXOGEN CONNECTS**

exogen[®]

ultrasound bone healing system

For additional information please visit www.exogen.com

Indications for Use

EXOGEN Ultrasound Bone Healing System is indicated for the non-invasive treatment of osseous defects (excluding vertebra and skull) that includes:

- Treatment of delayed unions and nonunions†
- Accelerating the time to heal of fresh fractures
- Treatment of stress fractures
- Accelerating repair following osteotomy
- Accelerating repair in bone transport procedures
- Accelerating repair in distraction osteogenesis procedures
- Treatment of joint fusion

†A nonunion is considered to be established when the fracture site shows no visibly progressive signs of healing.

There are no known contraindications for the EXOGEN device. Safety and effectiveness have not been established for individuals lacking skeletal maturity, pregnant or nursing women, patients with cardiac pacemakers, on fractures due to bone cancer, or on patients with poor blood circulation or clotting problems. Some patients may be sensitive to the ultrasound gel. Full prescribing information can be found in product labeling, at www.exogen.com, or by calling customer service at **1-855-771-0606** (toll free).

References

1. Azuma Y, Ito M, Harada Y, Takagi H, Ohta T, Jingushi S. Low-intensity pulsed ultrasound accelerates rat femoral fracture healing by acting on the various cellular reactions in the fracture callus. *J Bone Miner Res.* 2001; 16(4):671-80. 2. Heckman JD, Ryaby JP, McCabe J, Frey JJ, Kilcoyne RF. Acceleration of tibial fracture healing by non-invasive, low-intensity pulsed ultrasound. *J Bone Joint Surg Am.* 1994;76(1):26-34. 3. Kristiansen TK, Ryaby JP, McCabe J, Frey JJ, Roe LR. Accelerated healing of distal radial fractures with the use of specific, low-intensity ultrasound. A multicenter, prospective, randomized, double-blind, placebo-controlled study. *J Bone Joint Surg Am.* 1997;79(7):961-73. 4. Nolte PA, van der Krans A, Patka P, Janssen IM, Ryaby JP, Albers GH. Low-intensity pulsed ultrasound in the treatment of nonunions. *J Trauma.* 2001;51(4):693-703. 5. Einhorn TA. Enhancement of fracture healing. *J Bone Joint Surg Am.* 1995;77(6):940-56. 6. Scolaro JA, Schenker ML, Yannascoli S, Baldwin K, Mehta S, Ahn J. Cigarette smoking increases complications following fracture: a systematic review. *J Bone Joint Surg Am.* 2014;96(8):674-81. 7. Hernandez RK, Do TP, Critchlow CW, Dent RE, Jick SS. Patient-related risk factors for fracture-healing complications in the United Kingdom General Practice Research Database. *Acta Orthop.* 2012;83(6):653-60. 8. Bishop JA, Palanca AA, Bellino MJ, Lowenberg DW. Assessment of compromised fracture healing. *J Am Acad Orthop Surg.* 2012;20(5):273-82. 9. Foulk DA, Szabo RM. Diaphyseal humerus fractures: natural history and occurrence of nonunion. *Orthopedics.* 1995;18(4):333-5. 10. Gaston MS, Simpson AH. Inhibition of fracture healing. *J Bone Joint Surg Br.* 2007;89(12):1553-60. 11. Giannoudis PV, MacDonald DA, Matthews SJ, Smith RM, Furlong AJ, De Boer P. Nonunion of the femoral diaphysis. The influence of reaming and nonsteroidal anti-inflammatory drugs. *J Bone Joint Surg Br.* 2010;24(1):9-23. 12. Lerner A, Stein H, Soudry M. Compound high-energy limb fractures with delayed union: our experience with adjuvant ultrasound stimulation (EXOGEN). *Ultrasonics.* 2004;42(1-9):915-7. 13. Harwood PJ, Newman JB, Michael ALR. Mini-symposium: Basic science of trauma. An update on fracture healing and non-union. *J Orthop Trauma.* 2010 24:1. 14. iData Research Inc. Bone Growth Stimulator Market (long bone) in *Canadian Market Report for Orthopedic Biomaterials.* August, 2016:78-95.

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