

Pre Clinical Studies

AUTHOR	STUDY	OUTCOME MEASURE	RESULTS
Walsh et al 2007	Effect of US on tendon-bone healing - sheep model	Healing of tendon/ bone junction	improved healing
Cook et al 2001 Clinical orthopaedics and related research	Improved cartilage repair after US - rabbit model	Cartilage Healing	daily US had positive effect on osteochondral damage
Leung et al 2008, Journal of Orthopaedic Research	Low-Magnitude High-Frequency Vibration Accelerates Callus Formation, Mineralization, and Fracture Healing in Rats	acceleration of healing	low-magnitude high-frequency vibration (enhances healing in the closed femoral shaft fracture in rats.
Pilla et al 1990, Journal of Orthopaedic Trauma	Non Invasive Low Intensity pulsed Ultrasound Accelerates Bone Healing in the Rabbit	acceleration of healing	Ultrasound treated bone as strong in torsion as intact fibulae, increased periosteal reaction
Walsh et al 2007, J Biomed Mater Res B Appl Biomater 2007	Effect of low intensity pulsed ultrasound of healing of an ulna defect filled with a bone graft substitute	rate of defect healing	LIPUS resulted in more new bone growth at wk 4 and 12 compared to control and increased VEGF expression LIPUS th
Walsh et al 2007, Athroscopy	Effects of Low Intensity Pulsed Ultrasound on Tendon Bone Healing in an Intra articular sheep knee model	Healing at tendon/bone junction	LIPUS resulted in improved ability to withstand increased load at tendon/bone junction
Lu et al, 2008 Ultrasound in Medicine	Low Intensity Pulsed Ultrasound Accelerated Bone tendon junction healing through regulation of vascular endothelial growth factor expression and cartilage formation	Healing of tendon/ bone junction	LIPUS resulted in enhanced healing at bone/tendon junction
Cook et al, 2001 Clinical Orth and Related Research	Improved Cartilage Repair After Treatment with Low Intensity Pulsed Ultrasound	Healing of Osteochondral Defect	Ultrasound treatment significantly improved the morphologic features and histologic characteristics of the repair cartilage