

JOOVV

Stimulate healing and improve bone health with red light therapy

In the 1990s, NASA discovered that red light therapy triggered natural plant growth in space. Soon after, it began exploring whether the therapy had medical applications for humans, as well. Three decades and thousands of peer-reviewed trials and studies later, there is a growing body of evidence supporting red light therapy as a means to stimulate the healing process, relieve inflammation and pain, and restore cellular function.



A class II medical device, Joovv delivers red and near-infrared wavelengths directly to the body using medical-grade LEDs. These wavelengths trigger a chemical reaction in the cells' mitochondria that, in turn, boosts ATP energy and enhances cell triggering. Red light therapy can help our members enhance their physical performance, reduce inflammation and decrease joint pain, and has been shown to improve osteoarthritis in numerous peer-reviewed studies.

BONE DENSITY BENEFITS

- Increases bone mineral density and bone structure: Preliminary research shows benefits for improving osteoporosis, including a boost in osteogenesis¹, increased stress load and preserved vertebrae strength²
- Strengthens bones: Increases osteoblast proliferation, collagen deposition, and bone neoformation when compared to bones not treated with red light³, and increases maximum bone tolerance⁴
- Improves bone healing: Accelerates bone healing in extraction sites, bone fracture defects and distraction osteogenesis⁵
- Reduces swelling from bone injuries: A proven anti-inflammatory treatment indicated by the FDA that has been shown to curb swelling in facial bone fractures⁶
- Enhances overall bone health: Increases natural collagen production, which is essential to healthy bones and skin⁷

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HEALTH AND WELLNESS BENEFITS

- Strengthens the immune system: Has been shown to increase immune cell populations through photobiostimulation, with implications for individuals with arthritis⁸, stimulates the immune system and increases the overall recruit of immune cells critical to fighting disease⁹
- Relieves pain and inflammation: Increases blood flow to damaged tissues and boosts the body's antioxidant defenses⁹; proven effective for reducing pain intensity and regenerating cartilage¹⁰, including in osteoarthritis¹¹
- Enhances athletic performance and recovery: Used by professional athletes worldwide, and recreational athletes of all ages, to improve time before exhaustion, improve muscular performance and accelerate recovery¹²
- Reduces soreness from exercise: Decreases reduces peripheral fatigue and muscle damage in postmenopausal women¹³, as well as among pro runners and soccer and rugby players
- Improves flexibility: Increases functionality and range of motion, including in those with osteoarthritis¹⁴
- Boosts skin health: Increases the natural production of collagen¹⁵ and enhances skin healing in a variety of conditions, including burns¹⁶
- Improves sleep quality: Enhances sleep duration and quality, and boosts the production of melatonin¹⁷

CONTRAINDICATIONS

Please consult your doctor before red light therapy treatments if you take photosynthesizing medications, or if you have a history of skin cancer or systemic lupus erythematosus. For more information on the risk associated with this modality, please visit the Joovv website (joovv.com).

¹ <https://www.ncbi.nlm.nih.gov/pubmed/29228439>

² <https://www.ncbi.nlm.nih.gov/pubmed/26719056>

³ <https://www.ncbi.nlm.nih.gov/pubmed/16706695#>

⁴ <https://www.ncbi.nlm.nih.gov/pubmed/20047683#>

⁵ <https://www.ncbi.nlm.nih.gov/pubmed/16706695#>

⁶ <https://www.ncbi.nlm.nih.gov/pubmed/28986000>

⁷ <https://www.ncbi.nlm.nih.gov/pubmed/30291464#>

⁷ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3617815/>

⁸ <https://www.liebertpub.com/doi/10.1089/bioe.2019.0026>

⁹ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5523874/>

¹⁰ <https://www.ncbi.nlm.nih.gov/pubmed/29909435>; <https://www.ncbi.nlm.nih.gov/pubmed/27913970>

¹¹ <https://www.ncbi.nlm.nih.gov/pubmed/28096711>

¹² <https://www.ncbi.nlm.nih.gov/pubmed/20961231>

¹³ <https://www.ncbi.nlm.nih.gov/pubmed/23895414#>

¹⁴ <https://www.ncbi.nlm.nih.gov/pubmed/22169831>

¹⁵ <https://www.ncbi.nlm.nih.gov/pubmed/24049929>; <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3926176/>; <https://www.ncbi.nlm.nih.gov/pubmed/19587693>

¹⁶ <https://www.ncbi.nlm.nih.gov/pubmed/27206919>; <https://www.ncbi.nlm.nih.gov/pubmed/29974280>; <https://www.ncbi.nlm.nih.gov/pubmed/25749659>

¹⁷ <http://europepmc.org/article/med/8979406>