



Benefits of LivMD

- ✓ Safe and easy to use
- ✓ Designed for portability
- ✓ Smart vibrations
- ✓ 25 years of research

Low Intensity Vibration

is a Safe and Effective Treatment for Osteoporosis

LivMD is safe and effective treatment for osteoporosis
built on a foundation of basic and applied science.



REHACARE PTY LTD

PO Box 71, Cherrybrook NSW 2126

PHONE

1300 653 522

WEB

www.rehacare.com.au



Rehacare



References

Rubin, C, Recker, R, Cullen, D, Ryaby, J, McCabe, J, & McLeod, K. - Journal of Bone and Mineral Research (2004)

Prevention of postmenopausal bone loss by a low-magnitude, high-frequency mechanical stimuli: a clinical trial assessing compliance, efficacy, and safety.

Gilsanz, V, Wren, T, Sanchez, M, Dorey, F, Judex, S, & Rubin, C. - Journal of Bone and Mineral Research (2006)

Low-Level, High-Frequency Mechanical Signals Enhance Musculoskeletal Development of Young Women With Low BMD

Rubin, C, Capilla, E, Luu, YK, Busa, B, Crawford, H, Nolan, DJ, Mittal, V, Rosen, CJ, Pessin, JE, Judex, S. - PNAS (2007).

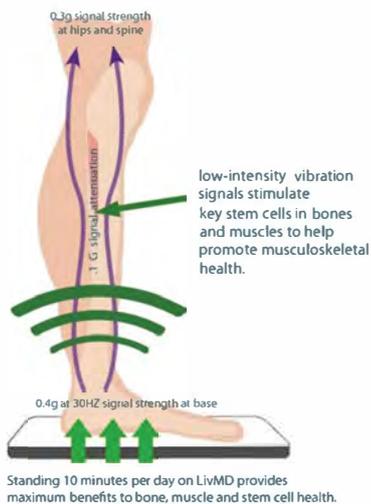
Adipogenesis is inhibited by brief, daily exposure to high-frequency, extremely low-magnitude mechanical signals

Ozcivici, E, Luu, YK, Adler, B, Qin, YX, Rubin, J, Judex, S, & Rubin, C. - Nature Reviews. Rheumatology (2010)

Mechanical signals as anabolic agents in bone

Leung KS, Li CY, Tse YK, Choy TK, Leung PC, Hung VW, Chan SY, Leung AH, Cheung WH – Osteoporosis International (2014)

Effects of 18-month low-magnitude high-frequency vibration on fall rate and fracture risks in 710 community elderly—a cluster-randomized controlled trial



Benefits of LivMD

25 years of research

Professor Clinton Rubin – (Biomedical Engineer) is Founder and Chief Science Officer of Marodyne

Smart vibrations

- Automatically calibrates to each user
- Delivers 0.4g of LIV stimulus precisely at 30Hz

Safe and easy to use

- Only 10 minutes a day
- MDD certified
- ISO approved

Designed for probability

The compact designed device is easy to store and move

Osteoporosis is a disease of the bones. It happens when you lose too much bone, make too little bone or both to the point of high risk of fracture. Low intensity vibration (LIV) is a safe and effective non-drug intervention for osteoporosis, treating the musculoskeletal system.

Osteoporosis causes bones to become weak and brittle — so brittle that a fall or even mild stresses like bending over or coughing can cause a fracture. Osteoporosis-related fractures most commonly occur in the hip, wrist or spine.

Bone is living tissue that is constantly being broken down and replaced. Osteoporosis occurs when the creation of new bone doesn't keep up with the removal of old bone. Studies suggest that approximately one in two women and up to one in four men age 50 and older will break a bone due to osteoporosis.

Research has shown that low intensity vibration delivers mechanical signals to the skeleton. This promotes a positive signal, which stimulates the muscle and bone function and improves bone and muscle strength and health.

A 1-year placebo-controlled research study of postmenopausal women demonstrated that low-level vibration can effectively inhibit bone loss in the spine and femur.

The mechanism of LIV on maintaining or growing bone mineral density is achieved in part by activating osteoblast activity (bone builders) and inhibiting osteoclast activity (bone resorbing).

Research has also shown that LIV promotes mesenchymal stem cell differentiation towards osteoblastogenesis (bone formation) and away from adipogenesis (fat formation).

Another study showed that short bouts of LIV increased bone and muscle mass in the weight-bearing skeleton of young adult females with low BMD.



A third study in a large group of women over 60 years or age showed a significant reduction in falls and fractures in the group that used LIV compared to a normal exercise group.

Based on these scientific findings and other research the LivMD device has been developed as a non-drug treatment to fight osteoporosis.

User experiences

"My mother got her LivMD for Christmas and she started using it then for 10 min a day. Mom recently insisted on having another bone scan when seeing her endocrinologist even though she knew that insurance would not cover. She was eager to see what the LivMD might have done for her. The results are as follows with comparison to her 2013 scores: Spine: -2.4 > -2.1; Femur -3.2 > -2.7; Forearm: -2.0 > -1.9. To say that she was excited as she told me this over the phone the night after her results is an understatement. Her endocrinologist was happy too and remarked that she would be sharing this result with her peers. She told Mom to continue with the vibration platform and her Vitamin D."

"I have been using the LivMD low intensity vibration plate for ~a year now and this week I had my follow up DEXA exam. I wanted to let you know that my bone density statistics have increased significantly since my last exam in 2012! My overall T-score is - 2.4 and the bone density in the lumbar spine has increased by 6.5% and in the right femur it has increased by 8.3%."

