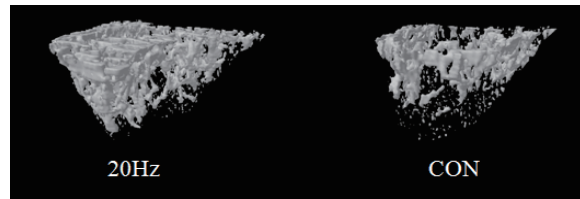
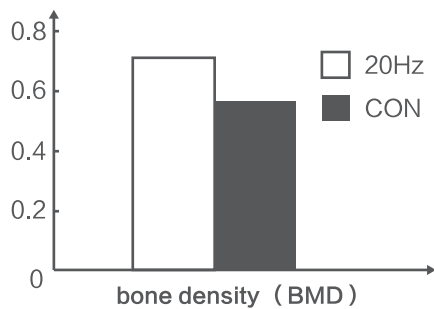


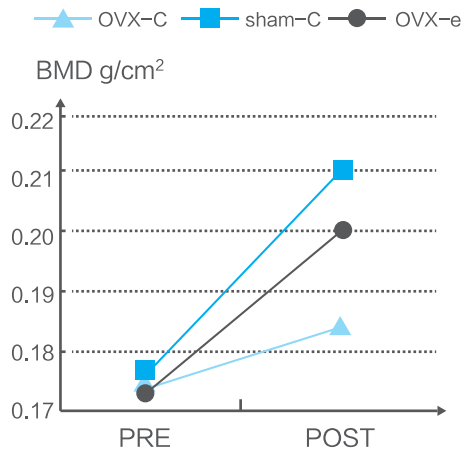
# PRINCIPLE AND CLINICAL EFFECT OF BONE REHABILITATION



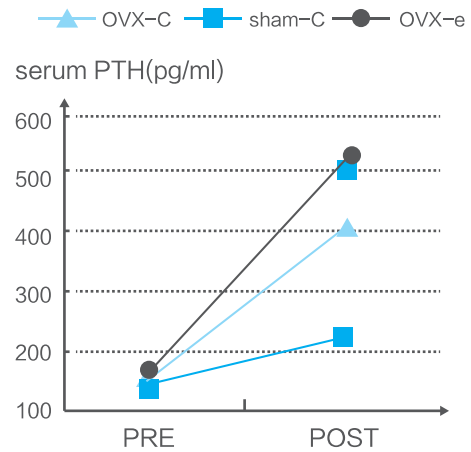
Three vertebral effects of spongy bone after 6 weeks

The Department of Medical Engineering of Yonsei University conducted an experimental study on "Some Vibration Stimulation Effects for Prevention of Osteoporosis". They stimulated spongy bone with 20 Hz vibration. Six weeks later, the data were obtained as shown above. As can be seen from the figure that part of vibration stimulation during six weeks deliberately increased bone density. Therefore, it can be concluded that vibration stimulation can prevent bone loss and reduce the risk of bone damage.

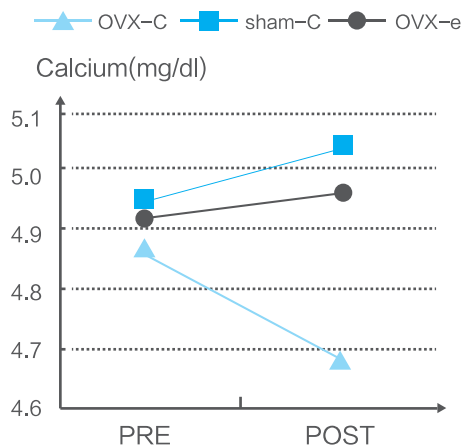
In 2007, the Korean Society of Sports Physiology conducted a trial on the effects of sonic vibration of the whole body on the prevention of osteoporosis in ovariectomized white mice. The data are as follows:



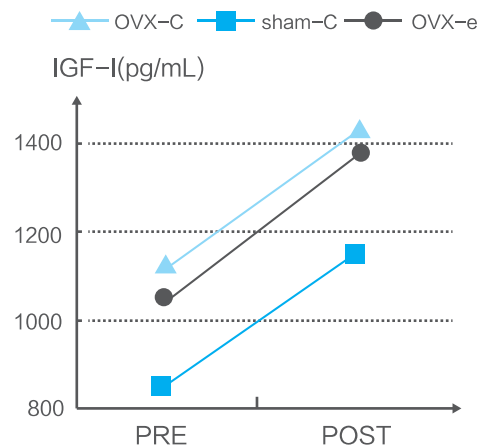
1. In the OVX-E group, which performed sonic vibration throughout the body, the bone density of the thigh bone is significantly higher than that of the OVX-C group ( $P < 0.05$ ).



2. In the OVX-E group, which performed sonic vibration throughout the body, the PTH level is significantly higher than that of the OVX-C group ( $P < 0.05$ ).



3. The ovx-e group, which performs sonic vibration throughout the body, has a calcium level that is significantly higher than that in the ovx-c group ( $p < .001$ ).



4. In the ovx-e group, which performed sonic vibration throughout the body, there is no statistically significant difference in the IGF-I level compared with the ovx-c group.

The data show that bone density can be increased and bone loss can be inhibited by PTH secretion, so it is effective in maintaining bone density in menopausal women and preventing osteoporosis.