Topic 3

Anti-aging and Osteogenic Loading

Building Bone Density With Safety and Comfort
Many medical professionals, including the US Surgeon General cite impact as the most effective way to increase or maintain bone mass density (US Surgeon General, 2004). The changes in bone mass density result from compression of the bone through the high-loads of impact, as the body adapts by retaining more minerals adding to density of bone mass. As we age, necessary impact levels to affect bone become unsafe, and therefore impractical. However, bioDensity allows people to realize this physical benefit to occur in a very safe self-regulated way.

Benefits to Midlife, and Elderly Individuals
With bioDensity, one can safely apply forces to the body far beyond typical body weights.The bioDensity normative data shows the average Leg Press (after 4 uses) for females between the ages of 50 to 75 (n=1409) equals 804 lbs. The corresponding average for males of this age group (n=562) equals 1264 lbs.bioDensity normative data shows the average Leg Press (after 4 uses) for females between the ages of 76 to 99 (n=128) equals 480 lbs. The corresponding average for males of this age group (n=81) equals 706 lbs. These outputs represent loads many times the typical body weight in both these age groups, and provide forces essential for bone compression, resulting in growth of bone mass density (Marcus, 1996). bioDensity user-volunteered, patient DXA Scans have shown an average 4.5% bone mass gain for individuals in the program for 3 years (n=7) (Jaquish, et al. 2012). Case reports from patients and physicians confirm these results.

Patients/users Consistently Report the Following Improvements in Quality of Life:

- Increases in bone mass density.
- Increases in motor neuron recruitment.
- Increases in mobility, comfort, and pain reduction.
- Improvements in posture and breathing giving a feeling of greater energy.

Neuromuscular Recruitment and Rapid Health Changes
Bone density and neuromuscular recruitment work together. As bone mass becomes less porous, with bioDensity, nerves within the bone are more protected thereby enhancing comfort. As comfort increases, individuals can engage the larger amounts of motor neuron activation, which is further enhanced by the nature of bioDensity movement positions. The neurological change of motor learning begins this way, and as the individual repeats and speeds the action, greater neural adaptive response takes place (Hebb, 1949). Use of bioDensity engages the greatest amount of cells possible and directly stimulates greater neural activity. Reported force production increases with bioDensity use indicates greater neuromuscular recruitment, which will enhance balance, posture, breathing, reflexes and speed.

Physician Testimonial
“Once learning about this device, I not only prescribed patients exercise/therapy sessions with it, but I also engaged in the use of the device myself. My personal use saw an increase in spinal density and maintenance in hip density within normal T-score range. The spine was osteopenic and was less so after bioDensity use. Equally important was that my full body force production capability increased by 169% in the eight months of using the osteogenic loading protocol."
- Eleanor Hynote, M.D.
President of the American College for the Advancement of Medicine Medical Director for Phoenix Wellcare

1. U.S. Surgeon General (2003). Bone health and osteoporosis: a report of the Surgeon General. Rockville, Md. : U.S. Dept. of Health and Human Services, Public Health Service, Office of the Surgeon General; Washington, D.C.: U.S. G.P.O., 2004. p. 223.
2. Marcus, R. (1996). “Skeletal Impact of Exercise”. The Lancet. November 1996. 384(9038): 1326-1327.
3. Jaquish, J. Singh, R. Hynote, E. Conviser, J. (2012). Osteogenic Loading: A New Modality To Facilitate Bone Density Development. JIR.
4. Users/Patients from worldwide bioDensity network, 114 locations. Server data analysis complete. 08-01, 2012.
5. Hebb, D. (1949). The Organization of Behavior. A Neuropsychological Theory. New York, NY: Wiley.

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