

Nº de abstracts = 45

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Effects of combined whole-body vibration and resistance training on muscular strength and bone metabolism in postmenopausal women.

Bemben DA, Palmer IJ, Bemben MG, Knehans AW.: Bone, 2010, 47(3):650-6. Bone Density Research Laboratory, Department of Health and Exercise Science, University of Oklahoma, Norman, OK 73019, USA.

Whole-body vibration (WBV) has been shown to be osteogenic in animal models; however, its application in humans is not clear. The purpose of this study was to examine the effects of an 8-month program involving WBV plus resistance training on bone mineral density (BMD) and bone metabolism in older postmenopausal women. Fifty-five estrogen-deficient postmenopausal women were assigned to a resistance training group (R, n=22), a WBV plus resistance training group (WBVR, n=21), or a control group (CON, n=12). R and WBVR performed upper and lower body resistance exercises 3 days/week at 80% 1 Repetition Maximum (1RM). WBVR received vibration (30-40 Hz, 2-2.8 g) in three different positions preceding the resistance exercises. Daily calcium intake, bone markers (Bone alkaline phosphatase (Bone ALP); C-terminal telopeptide of Type I collagen (CTX), and BMD of the spine, dual femur, forearm, and total body (DXA) were measured at baseline and after the intervention. At baseline, there were no significant group differences in strength, BMD, or bone marker variables. After 8 months of R or WBVR, there were no significant group or time effects in Bone ALP, CTX, or total body, spine,

left hip or right trochanter BMD. However, right total hip and right femoral neck BMD significantly (por=75% occlusion. Percent occlusion was associated with total years kayaked (P or=1 day/week (P Conclusions: Kayakers are the first inland population to experience exostoses at the rates seen in coastal populations (e.g., surfers). When used long-term, earplugs may be protective.

Laterality of exostosis in surfers due to evaporative cooling effect.

King JF, Kinney AC, Iacobellis SF, Alexander TH, Harris JP, Torre P, Doherty JK, Nguyen QT.:

Otology & neurotology, 2010

31(2):345-51.

Division of Otolaryngology-Head and Neck Surgery, University of California San Diego, La Jolla, California 92103, USA.

Objectives: 1. To correlate exostosis severity with ear canal evaporative cooling. 2. To assess hearing and complications after canalplasty.

Study design: Retrospective chart

review.

Subjects and Meth

od : A

retrospective chart review from 1990 to 2007 at a university tertiary referral center.

Results

: Surfers from the west coast of the United States were twice as likely to have severe exostoses in the right ear compared with the left. Evaporative cooling from a predominant northerly wind direction during the coldest water temperature months in this region may contribute to this lateral bias because surfers on this coast spend most of their time facing west. Few postoperative complications were identified. No cases of facial nerve injury or entry into the temporomandibular joint occurred. Differences in preoperative versus postoperative pure-tone hearing thresholds were not significant.

Conclusion

: Exostosis severity seems to correspond to the ear that is more exposed to the predominant coastal wind. We propose that evaporative cooling in a cold water environment contributes to greater progression of exostoses in the ear with more exposure to the predominant wind. Exostosis removal using the postauricular approach carries a low complication rate.

Combining hypoxic methods for peak performance.

Millet GP, Roels B, Schmitt L, Woorons X, Richalet JP.: Sports medicine (Auckland, N.Z.), 2010 40(1):1-25. Institute of Sport Science, University of Lausanne, Lausanne, Switzerland.

New methods and devices for pursuing performance enhancement through altitude training were developed in Scandinavia and the USA in the early 1990s. At present, several forms of hypoxic training and/or altitude exposure exist: traditional 'live high-train high' (LHTH), contemporary 'live high-train low' (LHTL), intermittent hypoxic exposure during rest (IHE) and intermittent hypoxic exposure during continuous session (IHT). Although substantial differences exist between these methods of hypoxic training and/or exposure, all have the same goal: to induce an improvement in athletic performance at sea level. They are also used for preparation for competition at altitude and/or for the acclimatization of mountaineers. The underlying mechanisms behind the effects of hypoxic training are widely debated. Although the popular view is that altitude training may lead to an increase in haematological capacity, this may not be the main, or the only, factor involved in the improvement of performance. Other central (such as ventilatory, haemodynamic or neural adaptation) or peripheral (such as muscle buffering capacity or economy) factors play an important role. LHTL was shown to be an efficient method. The optimal altitude for living high has been defined as being 2200-2500 m to provide an optimal erythropoietic effect and up to 3100 m for non-haematological parameters. The optimal duration at altitude appears to be 4 weeks for inducing accelerated erythropoiesis whereas