

## Resúmenes de Publicaciones

### ASSOCIATION BETWEEN LOW LEAN BODY MASS AND OSTEOPOROTIC FRACTURES AFTER MENOPAUSE

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*OBJECTIVE: This study evaluated dual-energy x-ray absorptiometry-assessed whole-body bone-muscle relationship (bone mineral content/lean mass [BMC/LM]) as an indicator of its nonmechanical perturbations (ie, systemic) in pre- and postmenopausal women. A total of 3,205 women were studied, either healthy (no fracture [No Fx] groups, 1,035 premenopausal, 1,556 postmenopausal) or with recent fractures (Fx groups, 139 premenopausal, 475 postmenopausal) located at osteoporotic sites (hip, spine, long-bone metaphyses; Type II Fx, n= 386) or at other skeletal sites (Type I Fx, n= 228) to evaluate the impact of decreased muscle mass on fracture incidence before and after menopause. DESIGN: SD-scored graphs of BMC/LM proportionality were obtained from the No Fx groups as normal references. Based on the reference BMC versus LM curves obtained from their respective No Fx pre- and postmenopausal controls, BMC-LM SD scores were calculated for all women with fractures. RESULTS: BMC-LM SD scores in all premenopausal women with fractures and in Type I Fx*

*postmenopausal women were similar to the reference. In contrast, SD scores in Type II Fx postmenopausal women were lower than the reference, especially in those with hip fractures. Except for Type II Fx postmenopausal women, all groups showed linear and similar BMC versus LM curves. Type II Fx postmenopausal women showed nonlinear relationships, with progressively decreasing BMC and BMC-LM SD scores as their LM decreased. CONCLUSIONS: Results suggest that both LM and BMC-LM SD scores can help to differentiate between systemic and mechanical (disuse-related) osteopenial/osteoporosis after menopause. Low LM values or BMC-LM SD scores seem to constitute additional fracture risk factors beyond those usually detected in premenopausal women or in women with other types of fractures. This application of dual-energy x-ray absorptiometry technology may lead to more effective diagnosis and treatment at low cost.*

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