Osteoporosis prevention education interventions intended to increase the osteoporosis preventive behaviors of weight-bearing physical activity and calcium consumption in young individuals have been found to be ineffective. An osteoporosis prevention education intervention was developed and modeled after an effective health threat prevention education intervention based on the health belief model, which emphasized the health threat’s visible severity and proximal time of onset. To test its effectiveness, it was experimentally researched in a sample of 109 college women who were students in an undergraduate health education course, and were randomly assigned to either the treatment or a control group to receive the osteoporosis prevention education intervention or a stress management intervention, respectively. The treatment group did not positively alter their osteoporosis health beliefs or increase self-reported weight-bearing physical activity and calcium consumption compared to the control group. And the control group who received the stress management intervention showed a significant increase in health motivation while the treatment group who received the osteoporosis prevention education intervention did not. A probable reason is that due to the distal time of onset of osteoporosis, young individuals may not be concerned with modifying their behaviors to prevent the disease. Recommendations for future research and effective ways to promote weight-bearing physical activity and calcium consumption are provided.