

Supporting Healthy Bones: Improving the Nutrition and Medication Education Included in a Peer-Lead Exercise and Wellness Curriculum

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Osteoporosis, a disease of the bone, is estimated to affect ten million Americans. Although individuals of both sexes are affected, women above age 50 years are particularly susceptible to bone fractures. Dietary modification, including inclusion of vitamin D and calcium in the diet or via supplementation; participating in routine weight-bearing exercise; and being aware of other risk factors that can increase susceptibility to bone loss, including use of medications that promote bone loss or increase fall risk, can help improve bone health and overall wellness. The purpose of this study was to evaluate the impact of revision of the nutrition and medication education curriculum provided as part of the Project Healthy Bones program run by the Division of Aging Services, Department of Human Services, State of New Jersey. Four groups of program participants from the Hamilton, Lawrenceville, Trenton, and Franklin Senior Centers were educated for five weeks on the following topics: the importance of vitamin D in calcium absorption in the body; choosing the healthier options of food with higher calcium content by reading food labels and other resources; other nutrients for bone health and foods to avoid; medications that treat osteoporosis and medications that increase fall risks. Participants completed a three-day food regimen log, called the calcium diary, by watching their diet, considering use of calcium supplements, and recording the amount of calcium consumed for an average of the three days. The calcium diary was completed before and after the calcium education was delivered and the data was analyzed. Participants also submitted medication lists; these were evaluated for containing medications that may have a deleterious effect on bone health and increase fall risk. Medication therapy consultation was provided on an individual basis. 30 participants completed the nutrition education survey. According to these surveys, 16/30 (53%) changed the calcium intake in their diet and 16/27 (59%) adjusted how they took their calcium supplement; however, only 8 completed both pre- and post-education calcium diaries for analysis. Of these, one increased calcium intake but was still not at goal and one was taking excessive calcium prior to and after receipt of the education; the other participant's calcium intakes remained largely unchanged. On a Likert scale (1 = not useful, 10 = very useful), participants rated the calcium diary exercise at 8.5, suggesting this was a useful activity. 21 participants complete the medication education survey. Of these, 14/19 (73.7%) reported intent to share their medication lists with their doctor or pharmacist. Participants were able to increase dietary calcium, but were reluctant to reduce calcium supplement intake without consulting their provider. Additional education on the effects of medications on bone health prompted participant action and discussion with their providers.

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