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*“Aging Well in the 21<sup>st</sup> Century” with the HNRCA  
Tufts Faculty Webinar – Unanswered Q&A*

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**Questions and Answers for Bess Dawson-Hughes, MD**

Q: How do I determine what the appropriate dose of potassium bicarbonate is for me? I don't know what is an mmol.

**A:** We used potassium bicarbonate for our study because it is easier to assess compliance with pills than with fresh produce. The better approach to acid-balance is to consume an acid-base balanced diet. This can be achieved by eating about 9 servings of fruits and vegetables, 6 servings of grains, along with the recommended amount of protein (0.8 grams per kg of body weight) daily. This is consistent with the Dietary Guidelines for Americans.

Q: One of the speakers noted that women given a dose of 67.5 mg of bicarbonate had more leg strength. Do you recommend this supplement for post-menopausal women? And if so, what dose? I have osteopenia so am wondering if this would be a good to add to my regimen, in addition to lots of load-bearing exercise.

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Q: Please give a comment on recommendation on a diet rich in wholegrains, which sound acid-producing.

**A:** Whole grains contribute acid, but they have important health benefits. You can achieve acid-base balance by eating about 9 servings of fruits and vegetables, 6 servings of grains (hopefully whole grains), along with the recommended amount of protein (0.8 grams per kg of body weight) daily. This is consistent with the Dietary Guidelines for Americans.

Q: If I eat oatmeal with raisins - does this balance the bad acidic impact?

**A:** Whole grains contribute acid, but they have important health benefits. You can achieve acid-base balance by eating about 9 servings of fruits and vegetables, 6 servings of grains (hopefully whole grains), along with the recommended amount of protein (0.8 grams per kg of body weight) daily. This is consistent with the Dietary Guidelines for Americans.

Q: What is the difference of D and D3?

**A:** Vitamin D comes in two forms, D2 (ergocalciferol from plant sources) and D3 (cholecalciferol from animal sources). “D” is nonspecific in that it doesn’t specify the source.

Q: When I go to buy vitamin D, it says vitamin D3. Is that the same thing?

**A:** Vitamin D comes in two forms, D2 (ergocalciferol from plant sources) and D3 (cholecalciferol from animal sources). “D” is nonspecific in that it doesn’t specify the source.

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Q: Is it bad to take Vitamin D 5,000 if doctor recommends, based on blood panel?

**A:** No, not if your doctor recommends it.

Q: Should Vitamin D intake be based on blood panel result from doctor?

**A:** For the general population, screening vitamin D levels is not recommended but meeting intake recommendations is recommended (for adults up to age 50 years, 600 IU/d, and for older adults, 800 IU/d). Vitamin D screening is usually done in individuals at high risk for low vitamin D levels.

Q: Prof. D-H: What effect does moderate exercise have on Ca balance, especially in females? Can you eat too much alkali?

**A:** It would be hard to do this from diet alone. Dietary acid-base balance is achieved by eating about 9 servings of fruits and vegetables (along with no more than 6 servings of grains and the recommended amount of protein, 0.8 grams per kg of body weight) daily. Most people won't consume more than 9 servings per day of fruits and vegetables.

Q: The high Protein intake of Americans contributes to loss of Calcium in the urine - was this controlled in the Vitamin D/Ca++ study cited? What about coffee/tea intake?

**A:** The protein intake of the supplemented and placebo groups in this large study was balanced. We have not analyzed the tea and coffee intakes of the two groups, but it is highly likely that they too were also balanced by the randomization.

Q: 00 IU of vitamin D and 428 mg of Calcium. My endocrinologist suggested I take one pill two times a day, per the directions on the pill bottle, but to take one in the morning and one in the evening since the body can't absorb all those vitamins at one time.

**A:** The protein intake of the supplemented and placebo groups in this large study was balanced. We have not analyzed the tea and coffee intakes of the two groups, but it is highly likely that they too were also balanced by the randomization.

Q: How much vitamin K for osteopenia in addition to calcium and vitamin D? Do antacids have an effect on acid levels in older adults?

**A:** Yes, most antacids add alkali. The most common antacids are composed of calcium carbonate and calcium citrate. Both add alkali because the carbonate and citrate are metabolized to bicarbonate.

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**Questions and Answers for Roger Fielding, PhD**

Q: Where in Greater Boston can an elder obtain group exercise incorporating these principles?

**A:** A good first stop is your local YMCA. They have a variety of programs some of which are targeted for older adults. You can also check your local community senior center. Many of them offer some exercise programming.

Q: Is exercising on an elliptical equal to walking for these purposes?

**A:** The elliptical trainer can be a reasonable alternative to walking. Some people prefer it as there is less pressure on the joints and optimal for people with arthritis of the knees and hips.

Q: What are the best exercises to improve balance and minimize risk of falling?

**A:** A combination of aerobic exercise (eg; walking, cycling, swimming) three to five days per week and strength/resistance training 2 to 3 days per week.

Q: What is the diet supplement used in the muscle study?

**A:** A four-ounce beverage containing 20 g of whey protein 800 IU of vitamin D and small amounts of other micronutrients.

Q: Does high intensity resistance training have an impact on the resting metabolic rate?

**A:** Resistance training can increase resting metabolic rate a small amount if there are measurable increases in muscle mass from the training. Would usually occur over 3 to 6 months.

Q: I'll be 74 years old in July, and I wonder: first, can I make the exercise drink myself; and second, how can I have my upper body strength tested? I believe my legs are fine, but I do get winded after repeating a strenuous dance several times back-to-back.

**A:** There are several over the counter protein supplement drinks specifically for seniors that are available. You could also make something close to the drink using whey protein powder (20 g per serving) and water and maybe flavor with some fruit or berries. Strength testing is not routinely performed as part of a clinical/medical exam. You might want to discuss with your own PCP and see what they think you should do.