

PBH Produce for Performance Webinar (02.20.19)

Questions and Answers – Per Leslie Bonci

- **Reference for 6 µg B12- Dietary Reference Intakes**
- **To answer the question on omnivore be vegetarian diets and performance**

[Vegetarian diet doesn't compromise athletic performance: Study](#)

18-Nov-2016 By Annie Harrison-Dunn

Vegetarian diets do not compromise athletic performance and may even help aerobic capacity, according to a study comparing elite vegetarian and omnivore athletes.

[HTTPS://WWW.NUTRAINGREDIENTS.COM/ARTICLE/2016/11/18/VEGETARIAN-DIET-DOESN-T-COMPROMISE-ATHLETIC-PERFORMA](https://www.nutraingredients.com/article/2016/11/18/vegetarian-diet-doesn-t-compromise-athletic-performance)

- **Correction on krill-** it is a shrimp like fish so vegans would NOT use it but pescovegetarians could
- **Question about clients wanting to alter body composition.**

For those looking to decrease body fat - 1-2 pounds a week maximum, and for weight gain- 0.5-1 pound a week, I don't have them change their diets drastically

For those looking to decrease body fat, I look for ways to cut the excess calories in beverages, snacks and at the same time, increase the produce and protein on the plate

For those looking to increase mass, I would go as high as 1 gram protein/pound body weight and then also look to increase calories in beverages as well as adding a little more food, particularly protein, carbs, fat to every eating occasion

- **Question of the negative effects - if any of increasing plant intake while including lean proteins vs eliminating animal foods.**

Excellent question and absolutely NO deleterious impact. This is what I was alluding to in the familiarity rules slide at the end. One can increase plants in tacos, stir-fries, stews, sauces, soups, burgers to add more produce to the plate and this is often a great way to get more produce into otherwise reluctant clients.

- **What role do carotenoids have on the immune system?** J Nutr 2004; 134:257S-61S

Carotenoids can potentially reduce the effects of reactive oxygen species including detrimental effects on the immune system.

Milk question I am assuming from plants vs animals. See chart below to compare the nutritional differences. Chocolate milk is a great recovery beverage.

[Chocolate milk for recovery from exercise: a systematic review and ...
https://www.fisiologiadelejercicio.com/.../Chocolate-milk-for-recovery-from-exercise....](https://www.fisiologiadelejercicio.com/.../Chocolate-milk-for-recovery-from-exercise...)

WHAT'S IN YOUR POUR

Milk/"milk"	Cals	Fat(g)	Pro (g)	CA(mg)	K+ (mg)	cost
Dairy milk	80-140	0-8	8	300	366	\$0.26
soy	60-110	1.4-4.5	8	450	150	\$0.50
pea	70	4.5	8	450	450	\$0.66
hemp	70-140	5	3	300-500	100	\$0.86
flaxseed	50	2.5	0	300	0	\$1.12
almond	30-90	2.5	1	450	160	\$0.50
cashew	60-130	2.5-10	<1-4	450	25	\$1.50
peanut	150	11	6	24	200	\$1.50
macadamia	50	5	1	450	0	\$0.99
Hazelnut	110	3.5	2	300	75	\$0.69
coconut	45-80	4.5	0	450	40	\$0.57
oat	130	2.5	4	350	120	\$0.64
rice	120	2.5	1	300	65	\$0.66
quinoa	70	4.5	2	300	77	\$0.86

- **Good oil to cook with:**

Olive, canola, sesame seed oil, peanut oil, soybean oil and to use on foods: walnut oil, avocado oils

- **Orange juice does not adversely affect statins**

- **There have been several studies on soy and breast cancer. Soy does NOT increase breast cancer risk.**

1. Caan BJ, Natarajan L, Parker B, Gold EB, Thomson C, Newman V, Rock CL, Pu M, Al-Delaimy W, Pierce JP. Soy food consumption and breast cancer prognosis. *Cancer Epidemiol Biomarkers Prev.* 2011;20:854-58.

2. Guha N, Kwan ML, Quesenberry CP Jr, Weltzien EK, Castillo AL, Caan BJ. Soy isoflavones and risk of cancer recurrence in a cohort of breast cancer survivors: the Life After Cancer Epidemiology study. *Breast Cancer Res Treat.* 2009;118:395-405.
3. Kang X, Zhang Q, Wang S, Huang X, Jin S. Effect of soy isoflavones on breast cancer recurrence and death for patients receiving adjuvant endocrine therapy. *CMAJ.* 2010;182:1857-62.
4. Dong JY, Qin LQ. Soy isoflavones consumption and risk of breast cancer incidence or recurrence: a meta-analysis of prospective studies. *Breast Cancer Res Treat.* 2011;125:315-23.

- **Iodized sea salt:** Brand include Morton and Hain.

- Good source to find produce in season

<https://www.seasonalfoodguide.org/>

<https://www.fieldtoplate.com/guide>

- On the What's Enticing Slide

The protein rec of 0.3 g/kg or 0.13 g/lb as soon as possible post training and also 0.13 g/lb across 4-5 meals/day- this was also referenced in slide 22.

In general the recommendations for athletes - these are general guidelines for protein needs but distribution over the day is important.

Strength and endurance- 0.6-0.8 g/lb/d

Teenage athletes: 0.9-1.0 g/lb/day

Those trying to decrease body fat but maintain muscle- 0.9-1.0 g/lb/d

For those who work out 3 times a week

Same recommendation 0.13 g/lb/day over 4-5 meals

- **DRI for vegan athletes** – Consider NIH Office of Dietary Supplements Fact sheets
- For high school athletes to augment calories
If they do dairy: cheese, eggs, milk
Eggs if they eat them
Hummus- maybe the school would consider
Veggie burgers- maybe the school would consider
TVP or veggie crumbles can be used for tacos, spaghetti sauce
- **If athletes want to go towards a plant based diet - make haste slowly to avoid GI distress and also educate them on the importance of adequate fluid intake.**

- **I do sometimes recommend that my athletes have body composition and RMR tested.** For the Chiefs, we do this, but at the high school level, or my individual clients, I may recommend that they do this particularly if we are trying to set realistic weight and body comp goals.

- **Most plant based proteins are not complete protein so they can be lower in the branch chain amino acids, particularly leucine.**

So best ways to do this is to recommend:

Soy foods

Beans

Nuts

<https://vegfaqs.com/best-vegan-food-sources-leucine/>

- **Arterial flexibility and sports performance - the more flexible the artery, the better the blood flow.** Better delivery of oxygen to the exercising muscle.
- **Why is there a higher intake of protein on the body fat loss plate than the muscle gain plate?**

In losing body fat, we don't want to lose muscle and need to keep the calories lower. Protein helps with satiety and produce helps to increase fiber.

On the muscle gain plate, there is enough protein, enough carbs but also room to add more calories in fat and beverages. Muscle gain does not happen just by protein alone.

- **The question on food sources of nutrients of concern slide 16** - the concern alludes to the nutrients that vegetarian athletes need to eat enough of and those foods are listed on the slide.
- **Phytonutrients and phytochemicals are the same, and antioxidants, polyphenols, carotenoids are all phytonutrients and found in fruits, vegetables, grains, nuts/seeds.**
- I wish I could say that my athletes are all getting enough produce. The easiest way to boost intake is:

Having it around and ready for them

Cut up watermelon

Fruit cups to go

Salad

Fruit/veggie smoothies

Acai and other bowls

- **Some of my athletes eat more produce because they like it, some do because they think they should, some do because they are trying to watch calories, some do as an additional source of fluid.**
- **#ColorYourWorld refers to the beautiful array of hues of fruits and vegetables.**
- **Research on collagen** - the studies pertaining to the protocols used in athletes on collagen synthesis are based on bovine derived collagen.
- Sometimes supplements may be warranted:

To correct a deficiency
 To augment the diet
 For food safety reasons

Companies: I recommend my athletes to look for products with the NSF certified for sport label. There is a NSF app as well.

- **Fortification can be a way to add micronutrients to a product or in some cases macronutrients.** In a vegan burger you won't see whey added and even if turmeric is added, it will most likely be in small amounts. You are more likely to see Vitamin and/or mineral fortification.
- **Yes older athletes or active people most certainly benefit from eating well.**

Chris Rosenbloom and Bob Murray have written a wonderful book: *Food and Fitness Over 50*
- **The question on slide 22** 1.04-1.4 g protein/pound/day is the recommendation for those athletes restricting calories but not wanting to decrease muscle mass. It would be 2.3-3.1 g/kg/day (Stokes et al Nutrients,2018 10, 180)