

1 APPENDIXES

A) INVESTIGATION SURVEY

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Participants,

My name is Katerina Schreiberova, a native of the Czech Republic. I am conducting a survey to collect data for my master thesis. My primary focus is researching plant-based diets, its distribution and implementation in human diets and possible health benefits. The survey consists of 11 questions and should only take a minute of your time.

Thank you for your time,

Best

Katerina Schreiberova

pls, check the box if you are related to BOKU Universtiy, Vienna (student, teacher, academic staff)

Please circle or fill in your answers:

1. Height in cm: _____

2. Weight in kilos: _____

3. My gender is:

Female

Male

4. My age is (yr):

Less than 25

25-29

30-39

40-49

50-59

60 and more

5. My education is:

High school

College

Bachelor's degree

Master's degree
More than Master's degree

6. Type of your diet:

Standard usual diet, don't think about it

Vegetarian

Vegan

Whole plant-based

Non-listed ➤ please specify _____

7. Amount of fruit & vegetable* portion in your diet a day:

Don't eat it at all or small amount if so

Each meal includes $\frac{1}{4}$

Each meal includes $\frac{1}{2}$

Each meal includes $\frac{3}{4}$

Each meal includes more than $\frac{3}{4}$

* also count seeds, nuts and beans

8. Amount of whole raw (uncooked) fruit & vegetable* portion in your diet a day:

Don't eat it at all or small amount if so

Each meal includes $\frac{1}{4}$

Each meal includes $\frac{1}{2}$

Each meal includes $\frac{3}{4}$

Each meal includes more than $\frac{3}{4}$

* also count seeds, nuts and beans

9. My health is:

I am diagnosed for serious cardiovascular disease (CVD), cancer or obesity

Suffer only from regular illnesses time to time

I am not diagnosed for CVD for sure and don't have even other health issues

I am healthy

10. Would I go on plant-based diet if there is possibility of my health improvement?

Yes, I would

No, I wouldn't

11. Would I go on plant based diet in future to sustain agriculture and also decrease carbon footprint on the environment by this change?

Yes, I would

No, I wouldn't

As a survey participant, I would like to receive the concept of final thesis via email:

B) SUMMARY OF MICRONUTRIENTS IN FOODS

Table 1: The vitamins, their principal functions and deficiency diseases.

| Vitamin | | Functions | Deficiency disease |
|-----------------|-----------------------------------------|-----------------------------------------------------|--------------------------------------------------|
| A | Retinol B - Carotene | Visual pigments in the retina; cell differentiation | Night blindness |
| D | Calciferol | Maintenance of calcium balance | Rickets, osteomalacia |
| E | Tocopherols Tocotrienols | Antioxidant, especially in cell membranes | Extremely rare: serious neurological dysfunction |
| K | Phylloquinone Menaquinones | Coenzyme in enzymes | Impaired blood clotting |
| B ₁ | Thiamin | Coenzyme in pyruvate | Beriberi |
| B ₂ | Riboflavin | Coenzyme in oxidation & reduction reaction | Seborrheic dermatitis |
| B ₆ | Pyridoxine Pyridoxal Pyridoxamine | Coenzyme in transamination and decarboxylation | Disorders of amino acid metabolism |
| B ₁₂ | Cobalamin Pantothenic acid | Coenzyme in transfer of one-carbon fragments | Pernicious anemia, peripheral nerve damage |
| niacin | Nicotinic acid | Coenzyme in oxidation & reduction reaction | Pellagra: photosensitive dermatitis |
| folic acid | | Coenzyme in transfer of one-carbon fragments | Megaloblastic anemia |
| H | Biotin | Coenzyme in carboxylation reactions | Dermatitis |
| C | Ascorbic acid | Coenzyme in hydroxylation | Scurvy |

Source: Gibney (2009)

Table 2: Plant source vitamins

| | |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Vitamin A | Avocado, bell peppers, canteloupe, carrots, chili peppers, collard greens, mangoes, spinach, sweet potatoes |
| Vitamin B | Brown rice, cabbage, fermented foods, legumes, nutritional yeast, nuts-almonds, brazil nuts, cashews, peanuts, quinoa, seeds, wild mushrooms |
| Vitamin C | Bok choy, broccoli, brussels sprouts, citrus fruit, papaya, pineapple, raspberries, strawberries |
| Vitamin D | Bertain mushrooms including chanterelle, oyster, portobello, shiitake, and cremini |
| Vitamin E | Almonds, avocados, brazil nuts, chia, quinoa, sunflower seeds, walnuts |
| Vitamin K | Basil, beet greens, bok choy, broccoli, kale, pumpkin seeds, spinach, turnips |

Source: Olien (2015)

Table 3: Percent calories from protein of certain foods

| | |
|-----------|-------------------------------------|
| Broccoli: | 44% Cal from protein (4% from fat) |
| Kale: | 28% Cal from protein (1% from fat) |
| 2 % milk: | 26% Cal from protein (36% from fat) |

| | |
|-----------------------|--------------------------------------|
| Cheddar Cheese: | 25% Cal from protein (75 % from fat) |
| Navy Beans: | 23% Cal from protein (4% from fat) |
| Whole Milk: | 21% Cal from protein (48% from fat) |
| McDonald's Hamburger: | 20% Cal from protein (33% from fat) |

Source: USDA (2000); International Osteoporosis Foundation (2016)

Table 4: Protein content of certain foods

| | |
|---------------------------|----------|
| Lentils cooked, 1 cup | 18 grams |
| Black beans cooked, 1 cup | 15 grams |
| Chick peas cooked, 1 cup | 15 grams |
| Hemp seeds, 3 tablespoons | 9 grams |

Source: The Vegetarian Resource Group (2016A)

Table 5: Plant source minerals

| | |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| calcium | apricots, brussels sprouts, butternut squash, cabbages, chard, dandelion leaves, figs, pistachios, plums, sesame seeds or tahini, spinach, turnips |
| magnesium | avocado, bananas, beet greens, brazil nuts, cashews, kiwis, peas, prunes, squash |
| potassium | broccoli, cabbage, carrots, cherries, currant, kiwi fruit, mushrooms (white), peanuts, sweet potato |
| iron | coconut, legumes (beans and peas), macademia nuts, oats, raisins, sesame seeds, sun-dried tomatoes, watercress |
| copper | apricots, cashews, coconut, hazlenut, kale, peaches, pecans, portobello mushrooms, shitake mushrooms, walnuts |
| zinc | green peas, lemongrass, oats, pecans, pumpkin seeds, shitake mushrooms, spinach |
| phosphorus | alfalfa sprouts, avocados, broccoli, celery, chia seeds, kiwi fruit, pistachio, wild rice, zucchini, watercress |
| manganese | blueberries, chillies of any color, collard greens, currant, eggplant, garlic, grapes, leeks, pumpkin sees, raspberries |
| selenium | brazil nuts, broccoli, brussels sprouts, coconut, garlic, grapefruit, mushrooms, spinach, sunflower seeds |

Source: Heimendinger (1995); Ness (1997); Rui (2003)

Table 6: Calcium content of certain foods

| | |
|--------------------------|--------|
| Broccoli cooked, 2 cups: | 360 mg |
| Milk, 1 cup: | 300 mg |
| Figs, 10 medium, dried: | 270 mg |

Source: The Vegetarian Resource Group (2016B)

Table 7: Potassium and sodium content of certain foods

| | |
|---------------------------|-------------------------|
| Potato, medium | 845mg (+ 16 mg sodium) |
| Black beans cooked, 1 cup | 800 mg (+ 6 mg sodium) |
| Banana, medium | 450 mg (+ 1 mg sodium) |
| Skim milk, 1 cup | 400 mg (+125 mg sodium) |
| Cheddar cheese, 2 ounces | 56 mg (+350mg sodium) |

Source: Olien (2015)

1.1 List of Appendixes

- A) Investigation sheet
- B) Summary of micronutrients in plant-based foods