Vegan and Vegetarian Living

By: Crystal Lira, DTR
c.lira@rocketmail.com

Disclaimer

- All the information in this presentation is for educational purposes only.
- This information is not designed to mitigate, diagnose, treat, or cure any type of disease, health condition, or nutrient deficiency.
- Should you suspect a nutrient deficiency, please visit your primary care physician and express your concerns.

Lifestyle Choices

Veganism= the dietary practice of abstaining from the use of all animal and animal products, including animal by-products, and an associated philosophy that rejects the commodity status of animals. A follower of veganism is known as a **vegan.**

Vegetarianism= the practice of abstaining from animal products; animal flesh products specifically. A follower of vegetarianism is known as a **vegetarian.**

- *Veganism and vegetarianism are lifestyle choices that do not support every human equally physiologically. Everyone has individual dietary needs, which vary from person to person, that depend on one's current health status, physical activity level, genetic predisposition and unique nutrient needs.*

Nutrient Precautions

Should you choose to practice a vegan or vegetarian diet, you must take proper precautions to ensure that all of your nutrient needs are being met to maintain proper physiological function and quality of life.

Recommended Dietary Allowance (RDA): numerical recommendations of vitamins and minerals that healthy individuals should consume daily to avoid developing deficiencies. Recommendations vary with gender and age and were developed by the Food and Nutrition Board of the Institute of Medicine.

Vitamin B12

(cobalamin)

Function: Provides our cells with energy for proper function, supports healthy homocysteine levels (a pro-inflammatory amino acid), protects the myelin sheath (protective coating) of brain neurons and thus, boosts cognitive function, supports a positive mood and supports proper cellular and DNA replication

- **Food sources:** animal flesh foods

- Some will argue that B12 can be found in vegetable foods such as:
  - -soy foods (soy beans, miso, tempeh, natto, etc.)
  - -brewers yeast
  - -some algae/seaweeds

However, these forms of B12 are called ***noncobalamin analogues***, which are **NOT** utilized and do not function the same way in the body as true cobalamin does.

- Food-bound B12 has a complicated process that it must go through in the body in order to be absorbed and utilized. Therefore, it is strongly recommended that one rely on a good quality supplement for meeting B12 needs, especially one that is sublingual and in the ***methylcobalamin*** form, which is the *active form* of B12 that your body requires.

Signs of B12 Deficiency

- Numbness in legs, hands or feet
- Anemia
- Fatigue and weakness
- A swollen, inflamed tongue
- Decline of general cognitive function
- Possibly a cause of Alzheimers disease

Iron

Function: needed for the formation of red blood cells and **hemoglobin**, the protein that is bound to red blood cells and is responsible for transporting oxygen from your lungs to your tissues during blood circulation

- **Food sources:** meat products (especially red meat), green leafy vegetables, legumes and fortified products (such as grains)

-***Heme iron:*** type of iron found in meat products
-***Non-heme iron:*** type of iron found in vegetable products and is not absorbed as well as heme iron

- Consuming Vitamin C-rich foods with iron-rich foods will enhance the amount of iron that is absorbed by the body.

Signs of Iron Deficiency

- Pale skin
- Dull, thin, sparse hair
- Headaches
- Fatigue and weakness
- Anemia

Vitamin D

Function: enhances the immune system, regulates calcium and phosphorus absorption for bone and teeth health, and supports blood sugar balance

- **Food sources :** animal products (animal flesh and animal derived products including lard, eggs form naturally raised chickens and fortified dairy)
- There are several forms of vitamin D:
  -*D2 (ergocalciferol)*= form found in plants

  -*D3 (cholecalciferol)*= form found in animal synthesized by our skin when exposed to sunlight

One should not rely solely on sun exposure to achieve optimal Vitamin D status. Depending on skin color and sun rays that are available, one may not create adequate dermal vitamin. Should you choose to supplement with Vitamin D, it is recommended that you utilize the D3 form, as this is the form that is created and preferred by the human body.

Signs of Vitamin D Deficiency

- Muscle aches or weakness
- Mood disorders
- ***Osteomalacia*= softening of bones**
- ***Osteoporosis*= weak, brittle bones**
- ***Rickets*= a disease in children that results in bowed legs, knock-knees, bowed chest and/or knobs on ribs**

Vitamin A

Function: participates in protein synthesis and cell differentiation, needed for healthy skin and hair, insures proper vision, supports reproduction and enhances the immune system

- **Food sources:** animal fats, including cod liver oil, and full-fat dairy foods

- Dark green, yellow and orange produce contain beta carotene, a substance that our bodies can convert into true Vitamin A (*retinol*), but it can only do this successfully under optimal nutrient stores and bodily functions

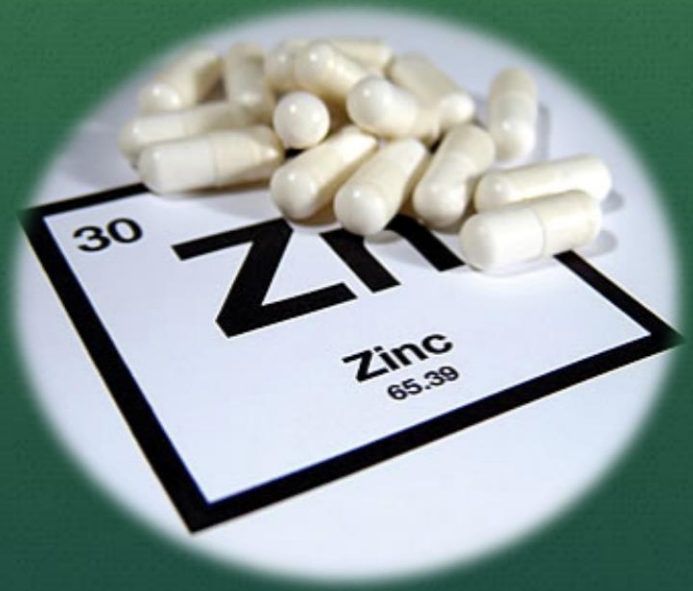
Signs of Vitamin A Deficiency

- Blindness, especially night blindness
- ***Keratinization***= accumulation of keratin in a tissue (keratin is a hard, inflexible protein found in hair and nails)

Zinc

Function: enhances the immune system, maintains normal taste perception, participates in cell reproduction, and tissue growth and repair, and appropriate fetal development, transports Vitamin A in blood

- **Food sources:** red meats, poultry, and shellfish (best sources), eggs, lentils, nuts, beans, seeds (pumpkin), brewer's yeast, and green vegetables



Signs of Zinc Deficiency

- Lack of appetite, possibly due to loss of taste
- White spots on fingernails
- Growth retardation
- Impaired immune system
- Diarrhea
- Vitamin A deficiency

Essential Fatty Acids

(omega-3s [*alpha linolenic acid*])

Function: the body uses it them for energy, essential for cell membrane integrity and function of ALL human cells, inflammation modulation, healthy hair, skin and nails

- **Food sources:** Cold water fatty fish (salmon, sardines, anchovies and mackerel) and fish oil supplements (best sources), flax, hemp, and chia seeds, avocados, nuts (walnuts, pecans, macadamia nuts), eggs from naturally raised chickens

- Plant sources of omega-3s must first be converted into eicosapentaenoic acid (EPA) and docosohexaenoic acid (DHA) before they can function beneficially in the body. However, efficient conversions may be limited to present health conditions, stress, junk food consumption, genetic inadequacies, nutrient deficiencies, etc.

❖ ***FISH DERIVED OMEGA-3S ARE ALREADY IN EPA/ DHA FORM, THUS, YOUR BODY DOES NOT NEED TO COMPLETE ANY EXTRA WORK!***

Omega-6s ***(linoleic acid)*** are essential to health as well, but must be consumed in moderation, and are not usually needed to be supplemented with. Our Standard American Diet is very omega-6 rich (vegetable oils, processed and fried foods, margarine, conventionally raised meat products) and omega-3 deficient. When omega-6s overbear our intake of omega-3s, inflammation can occur.

Signs of EFA Deficiency

- Dry, scaly, itchy and/or flaky skin such as eczema
- Allergic tendencies such as hayfever or asthma
- Slow growing, brittle hair and nails
- Cravings for fatty foods
- Attention problems
- Emotion issues (mood swings, depression, anxiety, etc.)
- Chronic inflammation that results in joint pain, autoimmune disease, etc, if not corrected

Things to keep in mind when supplementing:

- If you choose to practice a vegan or vegetarian diet, take caution in choosing supplements, as many contain gelatin as a primary ingredient, especially in encapsulated forms.
- Regardless of the RDA, he dosage needed to be taken varies between individuals.
- To get a better idea on what/how much you should be supplementing with, it is recommended that you have a Nutrient Panel Blood Test performed by your doctor.

Questions?