## **Celiac Center**

Beth Israel Lahey Health Beth Israel Deaconess Medical Center

## **Combining Vegetarian and Gluten-Free Diets**

A healthy vegetarian and gluten-free diet can be achieved with the proper guidance! Below are some tips and tricks on how to enjoy a nutritionally adequate vegetarian and gluten-free diet. Please see a registered dietitian for further guidance.

**Protein:** Individuals following a vegetarian diet need to consume more protein as plant protein is less available for the body to absorb than animal protein. However, most people, including, vegetarians, get plenty of protein in their diets.

- Consume a diet rich in soy products, dried beans, lentils, seeds, nuts, dairy products, eggs, whole gluten-free grains and meat alternatives.
- ✓ Gluten-free whole grains, such as amaranth, buckwheat groats, millet, sorghum, quinoa, and teff, are great sources of protein.
- ✓ Meat alternatives, seasoned tofu, and tempeh must be labeled gluten-free. Seitan is never gluten-free as it is made from wheat gluten.

**Vitamin B12 and Folate:** B12 is mainly found in animal products. Some vegetarians, especially vegans,\* may be prone to a diet low in B12.

- ✓ Include sources of B12 in your diet, such as eggs, dairy, and fortified non-dairy beverages.
- ✓ A B12 supplement is likely needed for vegans and some vegetarians. Please consult your doctor or dietitian for further information.
- ✓ The vegetarian diet is usually rich in folate, a vitamin widely found in leafy green vegetables.

**Iron:** Iron bioavailability in plants is lower than sources from meat. Vegetarians are recommended to consume a larger amount of iron to meet their needs.

- ✓ Include sources of iron in your diet, such as dried beans, soy, dried peas, nuts, seeds, and gluten-free whole grains, such as amaranth, teff, and quinoa.
- ✓ Select fortified gluten-free breads and cereals whenever available.
- ✓ Consuming foods that contain vitamin C, such as oranges, tomatoes, or broccoli can increase the amount of iron you absorb.

**Zinc:** The body's ability to absorb zinc from plants is lower than from meat sources, mainly due to the higher phytic acid content in plants. Phytates are compounds in plants that interfere with the absorption of calcium, zinc, and iron. Vegetarians may require larger amounts of dietary zinc.

✓ Include sources of zinc in your diet, such as dried beans, soy products, gluten-free whole grains, nuts, cheese, and seeds.

**Calcium:** Continue to consume calcium-rich foods when transitioning to a gluten-free/vegetarian diet.

- ✓ Include sources of calcium in your diet such as dairy products, low oxalate greens (broccoli, kale, collards, Chinese cabbage, and bok choy), tofu (in calcium-fortified water), fortified non-dairy beverages, fortified juices, legumes, tofu, tempeh, nuts, seeds, and gluten-free whole grains such as amaranth, brown rice, buckwheat and teff.
- ✓ Oxalates in some foods, such as spinach and Swiss chard, greatly reduce calcium absorption, making these vegetables a poor source of usable calcium.

Vitamin D: To help the absorption of calcium in your body, consume sources of vitamin D throughout the day. It may be difficult to meet vitamin D needs with food, however.

- ✓ Good sources of Vitamin D include fortified milk or non-dairy gluten-free beverages fortified fruit juice, eggs, and tempeh. Although your body can make vitamin D via sunlight exposure at certain times of the year, we do not recommend using sunlight as a source of vitamin D.
- ✓ Vitamin D supplements are recommended for vegetarians with a limited intake of vitamin D rich foods. Also, gluten-free diets often do not contain enough vitamin D. Ask your doctor to check your vitamin D level and recommend the correct amount of vitamin D supplementation for you.

**Omega 3s:** Vegetarians who consume little if any DHA and EPA (fish-based forms of omega-3 fatty acids) may need additional ALA (a plant-based form of omega-3 fatty acid) for conversion to DHA and EPA.

✓ Good sources of ALA include flaxseeds, walnuts, canola oil, and soy products.

**Fiber:** Dietary fiber is plant material that the body does not easily digest. Fiber can help bulk stool, prevent constipation, and contribute to a heart-healthy lifestyle. It is often lacking in a gluten-free diet.

✓ Good fiber sources include dried beans, lentils, fruits, vegetables, nuts, seeds, and glutenfree whole grains such as brown rice, quinoa, buckwheat, millet, teff, sorghum, and amaranth.

\*Veganism and the Gluten-free diet: Gluten-free vegans may need to pay additional attention to the nutrients above, such as B12, as they do not consume eggs or dairy. Certain nutrients may be difficult to obtain on a vegan diet and may require supplementation. Talk to your doctor or registered dietitian about creating a vegan/gluten-free diet meal plan that works for you.

All gluten-free grains/flours, non-dairy beverages, mock meats, tofu, tempeh, nuts, seeds, packaged foods and supplements should be labeled gluten-free.

