Vegetarian Nutrition on the SU Campus

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What is Vegetarianism?

Vegetarianism is a way of living in which plant-based foods are emphasized in an individual's diet and animal-based foods are excluded in varying degrees. While vegetarianism may be fairly new to many in the Western hemisphere, it has been practiced for centuries in other parts of the world.

There are various forms of vegetarianism often defined by the extent to which animal products are excluded from the diet. Below is a list that describes types of vegetarians.

Lacto-ovo vegetarian	vegetarians who include dairy products and eggs as the only animal-based foods in their diet
Ovo vegetarian	vegetarians who include eggs but not dairy products
Lacto vegetarian	vegetarians who include dairy products but not eggs
Pesce vegetarian	vegetarians who include fish in their plant-based diet
Pollo vegetarian	vegetarians who eat poultry
Fruitarian	vegetarians who eat only what falls from a plant, such as raw fruits, nuts, and berries. Fruitarians do not consume plant products that result in the death of the plant. A fruitarian diet does not meet the nutrient requirements for long-term sustenance and good health and should not be followed on a long-term basis.

Vegan
Vegetarians who do not eat any animal products, including eggs, dairy products, or other animal- derived products such as honey, and gelatin.

Note: **lacto** = dairy
Ovo = eggs and egg products
Pesce = fish
Pollo = chicken or poultry

Some vegans also choose to eliminate all animal-derived products from their lifestyle, avoiding animal-based products such as wool, silk, leather, and cosmetics and soaps.

What vegetarianism is not

The decision to incorporate more plant-based foods and to reduce or eliminate animal-based foods should not be done as a way to lose or gain weight. Vegetarianism is not a diet; it is a lifestyle change. Weight management depends on many issues, not just on the kinds of foods an individual chooses to consume.

Why vegetarianism?

There are many reasons people choose to become vegetarian. Some reasons include:

- Religious or spiritual reasons (ex. Seventh Day Adventists)
- Ethical concerns associated with animal well being
- Environmental and energy conservation issues (ex. land, water, and energy resources in raising cattle vs. agriculture)
- Health reasons
- Peer or family influence

Health benefits and vegetarianism

Vegetarian and vegan lifestyles can be healthy. However, a plant-based diet does not automatically ensure a healthy diet if a person eats only bagels, rice, and salads. Variety, balance, and moderation are applicable to plant-based diets as well as to non-plant-based diets. The key to healthy vegetarian eating habits is to eat a variety of foods including whole grains, nuts, seeds, beans fruits, and vegetables, ensuring balanced consumption of important nutrients in proper amounts. The American Dietetic Association's (ADA) position paper about vegetarian diets states: "Scientific data suggests positive relationships between a vegetarian diet and reduced risk for several chronic degenerative diseases and conditions, including obesity, coronary artery disease, hypertension, diabetes mellitus, and some types of cancer. Vegetarian diets, like all diets, need to be planned appropriately to be nutritionally adequate. It is the position of the ADA that appropriately planned vegetarian diets are healthful, are nutritionally adequate, and provide health benefits in the prevention and treatments of certain diseases."

(Visit ADA's web site at www.eatright.org for full text of position paper).

Some benefits of following a plant based diet include:

- A reduction in blood cholesterol levels (due to decrease in animal-based foods where cholesterol and high amounts of saturated fat are found).
- Increases in folic acid which is known to reduce levels of homocysteine (high homocysteine levels are linked to increased risk of heart disease)
- Lower rates of Type 2 Diabetes, hypertension, colon and prostate cancer

Nutrition in plant-based diets:

Foods contain varying amounts of nutrients. Individuals following vegetarian or vegan diets may need to pay

attention to certain nutrients to ensure they are consuming an adequate level of these. It's simple to obtain necessary nutrients from non-animal sources with a little knowledge of where to find them. Knowing what foods are rich in what nutrients may help achieve a balanced and varied eating pattern. This section includes information on a list of nutrients important to individuals who are choosing a plant-based lifestyle.

How do you know how much to get?

Dietary Guidelines were first published in 1980, and by law are reviewed, updated (if necessary), and published every five years.
The key recommendations from the 2005 guidelines include:

1.) Adequate Nutrients within Calorie Needs
- Consume a variety of nutrient-dense foods and beverages within and among the basic food groups while choosing foods that limit intake of saturated and trans fats, cholesterol, added sugars, salt, and alcohol.

2.) Weight Management
- To maintain body weight in a healthy range, balance calories from foods and beverage with calories expended
- To prevent gradual weight gain over time, make small decreases in food and beverage calories and increase physical activity

3.) Physical Activity
- Engage in regular physical activity and reduce sedentary activities to promote health, psychological well-being, and a healthy body weight.

4.) Food Groups to Encourage
- Choose a variety of fruits and vegetable each day
- Consume 3 or more ounce-equivalents of whole-grain products. In general, at least half of the recommended grains should come from whole grains.
- Consume 3 cups per day of fat-free or low-fat milk products or equivalent milk products.

5.) Fats
- Keep total fat intake between 20 and 35 percent of calories while limiting amounts of fats and oils high in saturated and/or trans fatty acids.
- Choose lean, low-fat, or non-fat proteins and aim for cholesterol to be less than 300mg per day.

6.) Carbohydrates
- Choose fiber-rich fruits, vegetables, and whole grains often
- Choose and prepare foods and beverages with little added sugars or caloric sweeteners

7.) Sodium and Potassium
- Consume less than 2,300 mg (approximately 1 teaspoon of salt) sodium per day.
- Choose and prepare foods with little salt. At the same time consume potassium-rich foods, such as fruits

and vegetables.

8.) Alcoholic Beverages
- Those who drink alcoholic beverages should do so sensibly and in moderation- defined as the consumption of up to one drink per day for women and up to two drinks per day for men.

9.) Food Safety
- Handle foods properly: watch for cross-contamination, expiration dates, and cooking and reheating to proper temperatures.
- Hand washing is the biggest prevention as far as food safety.

Meet recommended intakes by adopting a balanced eating pattern, including:

MORE…
- Dark green vegetables
- Orange vegetables
- Legumes
- Fruits
- Whole grains
- Low-fat and milk products

LESS….
- Refined grains
- Total fats (especially cholesterol, and saturated and trans fats)
- Added sugars
- Calories

For more information access the *Report of the Dietary Guidelines Advisory Committee on the Dietary Guideline for Americans, 2005* on the web at www.health.gov/dietaryguidelines/dga/2005/document.

The USDA has also released the MyPyramid food guidance system which can explain nutrient needs on a more individual level. To find this link go to www.mypyramid.gov

Vitamin B 12

Vitamin B12 also known as cobalamin is one of the many B vitamins.
Involved in…
- Protein metabolism and other energy producing reactions
- Production of red blood cells and condition of nerve impulses
- Unlike other water soluble vitamins, our bodies can store B12, and bacteria normally residing in our small intestine produce small amounts of it.

How to find it?
- B12 is found naturally only in animal products.

This can be a cause of concern for vegans. They can obtain this nutrient from foods fortified with vitamin B12. Although the recommended intake for vitamin B12 for

adults is very low, if adequate amounts are not consumed, a supplement may be needed to prevent a serious deficiency.

Food	Amount	Vitamin B12 (micrograms)
Total cereal	1 cup	6.0
Product 19	1 cup	6.0
Nutritional Yeast	1 tbsp	4.0
Raisin Bran	1 cup	1.5
Fortified Soymilk	1 cup	1.0
Milk	1 cup	0.9
Yogurt, plain, non-fat	1 cup	0.6
Egg	1 large	0.56

Strict vegetarians may be at increased risk of developing a vitamin B12 deficiency if adequate sources of this vitamin are not consumed.
Clinical cases show a lack of vitamin B12 can cause…

- Pernicious anemia- in which red blood cells are not produced adequately or are destroyed.
- Neurological impairments

Prolonged deficiency of vitamin B12 may be irreversible and result in…

- Permanent mental deterioration
- Paralysis and ultimately death

How much do we need?

The suggested amount of vitamin B12 is 2.0 micrograms per day for individuals ages 14 to 50 years old.

Calcium

Calcium is an important mineral. Ninety-nine percent of calcium in our body is found in our bones and teeth; the rest is found in our bloodstream. Calcium is necessary to properly form strong, healthy bones. A calcium deficiency can contribute to osteoporosis (porous bones). Osteoporosis results in fractures because weak, porous bones can no longer withstand the weight of our own body. Osteoporosis is not a natural process of aging and can be prevented.

Calcium is also involved in:

- Nerve condition
- Muscle functioning
- Blood clotting

Evidence suggests that diets high in sodium, caffeine, and phosphorous tend to increase bone calcium loss. A major source of sodium in the American diet comes from salted, processed foods, while one of the highest sources

of phosphorous comes from consumption of soda pop. Some studies suggest that diets high in animal protein also increase calcium loss. It seems consuming plant-based proteins does not have the same effect on calcium loss compared to consuming animal-based protein.

Good sources of calcium:

- Tofu processed with calcium sulfate, which contains more calcium than tofu processed with nigari (magnesium chloride).
- Dark, leafy vegetables such as broccoli and kale
- Dairy products such as milk, cheese, and yogurt
- Calcium-fortified orange juice and calcium-fortified soy and rice milks
- Salmon or sardines with the bones
- Almonds

How much do we need?

Suggested intake amount for men and women (not pregnant or lactating) are as follows:

Age	**Calcium/day**
14-18	1,300 mg
19-50	1,000 mg
51-70	1,200 mg

Note:
Be cautious not to consume too much calcium. High levels of calcium (2,500 mg or more a day) may cause constipation. Some studies also suggest high calcium intake may contribute to formation of kidney stones in individuals prone to them.

Vegetarian sources of calcium

Food	**Estimated calcium content (milligrams / serving)**	**Serving Size**	**Estimated calories per serving**
Blackstrap molasses	340	2 tablespoons	90
Cow's milk	300	1 cup	90-120
Spinach (cooked)	245	1 cup	40
Natto	190	½ cup	190
Kale (frozen and then cooked)	180	1 cup	40
Great northern beans (canned)	140	1 cup	300
Tofu, raw	130	½ cup	95
Collards	239	1 cup cooked	190
Fortified Soy Milk	367	1 cup	130

Note:
Amount of calcium listed in a food does not necessarily represent the total amount absorbed by our bodies. The total amount absorbed depends on many factors, including interactions with other nutrients (from same or other foods), a person's age, and other factors.

- ✶ Spinach, chard, beet greens, and rhubarb contain a substance called oxalic acid. Oxalic acid binds with and may decrease calcium absorption.
- ✶ Read the label. Some soy and rice milks are calcium-fortified, while others are not. Calcium content varies.

Protein

Amino acids are the building blocks of protein, there are 20 different amino acids found in food. Our bodies have the capacity to make different proteins by linking a different assortment of amino acids together.

- ✓ Our bodies can make 11 of the 20 amino acids. These are called non-essential amino acids.
- ✓ Essential amino acids (those our bodied cannot make) must be obtained from food.

While plant-based diets may be somewhat limited in essential amino acids, a healthy level of protein intake can be achieved with a variety of foods. Protein is very abundant in our food supply. When calorie intake is adequate, protein status is adequate in vegetarians and non-vegetarians alike.

Protein is needed to:

- Build and maintain muscle tissue
- Form red blood cells
- Produce cells involved in our immune system
- Produce hormones and enzymes

How much protein do we need?

To maintain adequate protein status, consume appropriate amounts and a variety of proteins every day to balance the body's losses. Our bodies normally lose a certain amount of protein every day through normal wear and tear of our tissues.
The rule of thumb is to aim for 0.36 g per pound of body weight. This equals about 60 grams for an adult male and about 50 grams for adult female of average weight. However, protein requirements vary from person to person.

- Endurance athletes may need an increased range of 0.45 to 0.64 grams of protein for every pound of body weight (75- 105 grams for an adult male athlete and 62- 87 grams for an adult female athlete). The amount depends on the sport and intensity of the athletic performance. Athletes need more protein because of increased muscle wear and tear and to replace energy used during exercise.

- Some laboratory studies suggest individuals who only eat plant proteins may have higher protein needs. Some literature suggests a recommendation for vegans is an increased range of 0.45 to 0.64 grams of protein for every pound of body weight.
- It is not necessary to eat proteins from different plant sources at every meal. Aim for a variety of complimentary proteins (legumes, grains, seeds and nuts) throughout the entire day.

Studies have shown that most individuals naturally combine these complementary proteins in their diets throughout the day.

Examples Include:
- rice eaten with beans or lentils
- peanut butter on whole grain bread
- Corn tortillas and refried beans

Sources of protein (other than meat):
- Dairy products
- Eggs
- Legumes (beans and peas)
- Nuts, nut butters
- Seeds
- Nutritional yeast
- Soy products (tofu, soy milk, tempeh)
- Grains (whole wheat, quinoa, brown rice and barley)

Some types of vegetarian protein substitutions:

Tofu (bean curd)
Made from the milky liquid extracted from soybeans

TVP (textured vegetable protein)
Textured vegetable protein is basically defatted soy flour which has been processed and dried to create a substance with a sponge-like texture which may be flavored to resemble meat. TVP is a good source of fiber and high quality protein; it's often fortified with vitamin B12

Tempeh
A high protein food made from partially cooked, fermented soybeans. Tempeh provides more texture than tofu and holds up better in stir fries.

Seitan
Gluten is the protein in wheat that causes bread dough to become stretchy and springy when kneaded. Seitan (also called wheat gluten or wheat meat) is made by soaking high gluten wheat flour with water and kneading the mixture until it starts to solidify. The resulting dough is then boiled to give it a firmer texture. Seitan can be used to make a meatless meatloaf, or in use for dishes calling for a firmer soy product. Seitan comes in many different flavored varieties.

Legumes Beans, chickpeas, lentils, and peas all fit in this category. Each of these has many varieties such as:
Beans: kidney, great northern, and black beans

Chickpeas: also known as garbanzo beans
Lentils: red, yellow, and green lentils
Peas: black-eyed, yellow, and green peas

These can be utilized in soups, stews, on salads, as a side dish, pureed as a dip, blended for sauces and spreads on sandwiches.

Dietary Fat

Dietary fat is a necessary nutrient. Our bodies need fat for proper growth and body function. Without fat, our bodies would be unable to produce hormones, transport certain vitamins, or keep our bodies warm. Dietary fat is not the same as body fat (adipose tissue). Dietary fat does not automatically turn into body fat. Dietary fat in itself is not necessarily fattening. Excess calories of any type contribute to weight gain and storage of energy in the form of body fat.

Dietary fat is essential for many functions:

- Fat insulates and cushions our internal organs
- Fat provides necessary energy for metabolic reactions
- Fat carries vitamins A, D, E, and K
- Fat is essential in producing many hormones and is related to the proper functioning of estrogen as well as sexual development
- Fat provides satiety (feeling of fullness) and contributes to flavor and texture in foods

Types of dietary fats:

Saturated Fats: Usually solid at room temperature, comes from animal products.

Trans Fats: Come mostly from highly processed foods such as chips, cookies, and many other snack foods. These foods go through the process of hydrogenation (adding hydrogen). This process makes these foods solid at room temperature, resistant to spoilage, and have a longer shelf life.

- Saturated and Trans fats play a similar role on the body, they both tend to raise LDL ("bad") cholesterol levels and lower HDL ("good") cholesterol. As of January 2005 trans fat information must be present on the Nutrition Facts label.

☺ SU dining facilities have switched over to a trans fat free oil for cooking.

Monounsaturated Fats (MUFA) and Polyunsaturated Fats (PUFA):
These fats are liquid at room temperature and are found in many oils, nuts, seeds, and fish. Most of the fats you eat should be polyunsaturated and monounsaturated fats. PUFA's contain some essential fatty acids that are

(necessary for health). MUFAs and PUFAs do not raise LDL ("bad") cholesterol levels in the blood, and MUFAs protect HDL ("good") cholesterol.

Polyunsaturated Fats (PUFA) include:

Omega 3's and Omega 6's:
Both these essential fatty acids are forms of polyunsaturated fats. There are known as n essential fatty acids because they are not made in the body and need to be obtained through foods.

- **Omega 3's** are important in the construction of cell membranes therefore are a huge part of heart health including keeping cholesterol levels low and reducing blood pressure and hypertension. This essential amino acid has also been found in some studies to reduce the risk of diabetes and inhibit proliferation of cancer cells.
- **Found in:** flax, dark green leafy vegetables, fish, canola oil, walnuts and some vegetables

- **Omega 6** is the chief polyunsaturated fat in the North American diet. It is also known as linoleici acid.
- Omega 6's are found in cereals, whole grain bread, and baked goods.
- **Found in:** safflower oil, soybean oil, and sunflower oil.

- Note: Too many Omega 6's promote inflammation, blood clotting and constricted blood vessels. Because Omega 6's interfere with Omega 3's, we should consume more Omega 3's than Omega 6's. A 3:1 ratio is recommended.

Omega 3's and flax. Flax can be purchased in ground meal and sprinkled on cereals, yogurts or placed in any baked items such as muffins, breads, etc.

- Flax seed oil can be purchased and mixed in with soup, entrees, or spreads.

How much dietary fat do we need?

- The current recommendation of health professionals states that no more than 30 percent (1/3) of our daily total calories come from dietary fat (66 grams based on a 2,000 calorie diet).
- Saturated and Trans fats should be grouped together and limited to 10% of total calories per day (20 grams based on a 2,000 calorie diet).
- Try to choose foods with lower amounts of trans fat, saturated fat and cholesterol.

Many Americans consume more than 30 percent of their total calories from dietary fat. A reduction of dietary fat may reduce the risk of heart disease. However, a diet too low in dietary fat can also be detrimental. Diets supplying less than 20 percent of the total daily calories from dietary fat may affect reproductive function, lower the absorption of beta carotene and has not shown to increase athletic performance.

Individuals who restrict fat (consume much less than what is recommended for good health) may experience:

- Fatigue
- Loss of endurance
- Hair loss
- Skin problems
- Vitamin deficiencies
- Impotence (in men)
- Depressed immune function
- Irregular menstrual cycles (in women)
- Infertility

Sources of dietary fat

The most obvious sources of dietary fats are oil, butter, and margarine, which we add to foods. However, animal and plant-based foods have naturally occurring fats. Including:

- Nuts (including soy)
- Seeds
- Olives (and olive oil)
- Avocados
- Cheese
- Eggs
- Plant butters (such as peanut butter, sesame seed butter AKA tahini)

Iron

Iron is an essential mineral needed for proper growth. It is also an important part of hemoglobin (found in red blood cells) and myoglobin (found in muscle tissue), two proteins that store and carry oxygen in our bodies.

Adequate dietary iron intake prevents iron-deficiency anemia. Without enough iron, the body cannot produce hemoglobin and thus the oxygen cannot be transported to cells throughout the body. Without adequate oxygen you become fatigued, pale, and weak, and may feel more sensitive to colder temperatures.

Women tend to be more prone to iron-deficiency anemia than men, partially due to blood loss associated with the menstrual cycles. Women especially should make certain to obtain adequate amounts of absorbable iron. Since the iron in meat is the best absorbed form in food, vegetarians need to pay close attention to getting enough iron.

Iron comes in two forms:

Heme Iron-

- More readily absorbed in our bodies
- About 40 percent of iron in meat, poultry and fish contain this form of iron

Non-heme Iron-

- Not as easily absorbed but comprises the majority of

total dietary iron
- 60 percent of iron in meat, poultry and fish contain this form of iron
- Plant foods contain this form of iron (whole grain, wheat germ, nuts, seeds, raisins, prunes (and juice), and potato skins

The amount of iron absorbed from food varies depending on many factors:

- ✶ Individual's iron stores
- ✶ Other substances present in foods, examples:
  - Vitamin C breaks iron away from phytates (non-heme binder in plant food) making non-heme iron more easy for the body to absorb
  - Tannins in tea, some wines, and coffee may also reduce absorption of iron
  - Calcium and high fiber diets tend to inhibit the absorption of iron
- ✶ Person's age

For iron/vitamin C combinations, try:

- Sandwich with tomatoes on whole wheat or iron-enriched bread and a low fat protein filling
- Orange juice and fortified cold cereal for breakfast
- Spinach, swiss chard, cabbage, broccoli, and other dark-green leafy vegetables contain iron and vitamin C.

How much iron do we need?

Recommended amounts of iron are as follows:

Age	**mg of iron recommended**	
	Women	**Men**
11-18	18	12
19-50	18	8
51 +	8	8
Pregnant	27	
Lactating Women	18	

Too much iron can be harmful to your health. Please consult your doctor if you are considering iron supplements.

Zinc

Zinc is a mineral needed for proper growth and maturation of sexual organs. If zinc intake is consistently low it can effect growth in children, impair our sense of taste and appetite, and delay would healing. Zinc is also involved in many chemical reactions in our body that affect cell growth, our immune system, producing new proteins and hormones, and forming blood cells.

The amount of zinc absorbed by the body is affected by many factors. A high fiber diet and the presence of phytates in many plant-based foods may reduce the absorption of zinc. Once again, variety, balance, and moderation are key to achieving adequate amounts of nutrients including zinc.

How much do we need?
Requirements for zinc are as follows:

Age	**mg of zinc**	
	Women	**Men**
11-50	12	15
51+	15	15

Sources of Zinc:

- Breads, cereals, and grains such as wheat germ, barley, bran flakes, and oatmeal
- Vegetables such as corn, kelp, peas, collards
- Legumes such as beans, peas, lentils, peanuts
- Soy products
- Nuts and seeds such as brazil nuts, pumpkin seeds, squash seeds
- Dairy products
- Other sources include eggs, seafood, and meat

Vitamin D

Vitamin D is a fat-soluble vitamin and is also considered a hormone. The primary function of vitamin D is to maintain normal levels of calcium in the blood. It also plays an important role in the immune system, skin, and pancreas. Humans can make vitamin D when the skin is exposed to adequate natural sunlight. We can also obtain vitamin D through food.

How much do we need?

Requirements for vitamin D are as follows:

Age	**micrograms of vitamin D**
Infants, and children up to age 13	5
Adults ages 14-50	5
50-70	10
70+	15

Inadequate intake of vitamin D causes rickets in children and osteomalacia in adults. Rickets is associated with skeletal deformities, growth disturbances, muscle twitches, irritability, listlessness, muscle weakness, and fractures. Osteomalacia is characterized by gradual softening and bending of the bones with varying severity of pain.

Too much vitamin D can be toxic and may lead to deposits of calcium in the soft tissues of the body and can cause damage to some organs. Please consult with your doctor about vitamin D supplements.

Sources of vitamin D:

- 98 percent of all fluid milk and other milk-based products in the United States are fortified with vitamin D
- Several brand of soy milk are fortified with vitamin D (Please read the label)
- Many commercial breakfast cereals are vitamin D fortified
- Other sources are herring, salmon, sardines, chicken liver, shrimp, egg yolk, cream cheese, oysters, butter
- Exposure to natural sunlight (in moderation)

Putting it all together on campus

Meal planning of any kind requires a little time and thought. If you follow a vegetarian or a vegan lifestyle, there are many options for you on campus.

Dining Centers

At the dining centers, you will benefit from reviewing the menu before you pick up a tray. Food for Thought, the Syracuse University printed menu for the dining centers shows you in advance what will be offered that day as well as foods that are available every day. You can also view the menu on our website at http://foodservices.syr.edu. Vegetarian and vegan options are labeled on our menu. For information on nutritional analysis also please visit our website.

We have tested numerous vegan and vegetarian recipes and have increased the quantity and variety of these options. In addition, there are endless possibilities if you use your creativity for mixing and matching food items at the dining centers for a well-balanced meal.

All staff has been informed and educated about vegan and vegetarian foods. No cross-contamination occurs and all foods have been prepared and cooked correctly according to vegan/vegetarian standards.

If any further concerns and questions occur please ask anyone from the management staff. For assistance with vegetarian and vegan meal planning, contact one of the Registered Dietitians on campus (at Foodservices or the Health Center)

Snack bars
If you eat at the campus snack bars, you will be able to choose some vegan and vegetarian items, such as soups, hummus, sandwiches, and specialty salads, as well as fruit, juices, and soy milk.

Finding key nutrients in foods on campus:

Vitamin B12:

- A variety of vitamin B12 fortified breakfast cereals are available (almost all cereals available on campus are fortified with B12)
- Fortified soy milks (chocolate, vanilla, and plain are available)
- Nutritional yeast (at every dinning center if you can't find it, ask!)

Calcium:

- Tofu products on vegetarian hot line and sandwich cold line. Examples include, nayonnaise, sweet-n-sour tofu, sesame pasta with tofu and olives, tofu and garlic sauce, tofu casserole, tofu primavera, tofu stuffed potatoes, tofu Creole, and many others
- Spinach (available in some hot meal options such as spanikopita and garlic spinach, while there is always spinach available at the salad bar along with other dark leafy vegetables)
- Cow's milk and soy milk is always available in the dining centers as well as at the snack bars.
- A variety of beans, tofu, or tempeh contain calcium in which multiple dishes are served on the hot line and kidney beans and chick peas are available on the salad bar every day.

Protein:

- An array of dairy products; milk, ice cream, and yogurt
- Soy milk and soy yogurt and soy ice cream bars
- Peanut butter, hummus and nuts are available daily
- Eggs are always available
- Each meal offers vegan/vegetarian entrees made either with beans, other legumes, grains, and soy proteins.

Dietary Fat:

- Fat can be found in almost all foods found in the dining centers. No focus should be given on these foods, just avoid too many saturated and trans fats products.
- Syracuse University Food Services provides each dining facility with trans fat free frying oil, spreads, and other products.

Iron:

- Many vegan/vegetarian dishes contain iron-rich foods, such as beans and other legumes.
- A vast array of breakfast cereals are available
- Whole grain breads are available every day along with other hot cooked grains (quinoa, wheat berries, and couscous)
- Hummus, peanut butter, tofurkey, vegan ham, and vegan sliced cheeses are available every day at the dinning centers.
- Dark green leafy vegetables are available daily at the salad bars

Zinc:

- This can be found in many dishes made with whole grains, beans and other legumes (for example: rice 'n greens, vegetable and tofu lo mein, southwest black bean soup, vegan chili, vegan bean taco, BBQ

tempeh, and Creole beans and rice)
- Soy and cow milk and yogurt are always a readily available source
- Soy products such as tofurkey, vegan ham, tofu, and tempeh are all other examples in which you can find in the dining centers

Vitamin D:
- Fish-based dishes are offered several times a week
- Dairy products and soy milk are always available at dining centers

Practical Use of Dining Centers:
Breakfast-
- Don't forget to sprinkle some nuts or nutritional yeast on your cereal or yogurt to boost nutrient content.
- Add fresh fruit to your cereal, waffles, or pancakes for extra vitamins.
- Juice, cereal, and milk (soy or cow) is a fast and quick way to have a nutritious breakfast but short on time.
- Placing kale or broccoli in your omelet is a great way to get your calcium with protein at the same time.

Lunch/Dinner-
- Make a sandwich with whole grain bread, tofu product/hummus, and your choice of vegetables for a well-rounded entrée.
- Check out the vegetarian/vegan line for whole grains (available everyday) and add some vegetables and tofu for a nutrient packed entrée.
- Don't forget the salad bar for colorful veggies, strive to have at least three different colors on your plate.
- Don't forget to top off your salads with tofu, or shredded tofurkey, vegan ham, vegan cheese, or beans to add protein, zinc, and iron.
- Don't forget the microwave! This can be an easy to way to make any hot entrée you want, just place tofu or tempeh, you favorite vegetables add some soy sauce off the salad bar and place in the microwave for a few minutes. Otherwise just ask an employee to sauté it up for you.
- Don't neglect soups and hot vegetables for side dishes and to boost your vegetable nutrient and fiber intake.

Tips for vegetarians

- Eat your breakfast cereals. Fortified breakfast cereals and cow's or soy milk will provide you with significant nutrients.
- Build meals around protein sources that are naturally low in fat, such as beans, lentils, and rice. Don't overload meals with high-fat cheeses to replace the meat.
- Calcium-fortified soy-based beverages can provide calcium, Vitamin D and Vitamin B12 in amounts similar to milk. They are usually low in fat and do not contain cholesterol.
    *Note: Rice milk is a poor substitute for cow's milk as it does not provide these nutrients in comparable amounts

- Many foods that typically contain meat or poultry can be made vegetarian, simply by replacing the meat with tofu, tempeh, or TVP or simply by placing no meat or substitute. This can increase vegetable intake and cut saturated fat and cholesterol intake.
- A variety or vegetarian products look (and may taste) like their non-vegetarian counterparts, but are usually lower in saturated fat and contain no cholesterol (unless they are fried).
- Many Asian and Indian restaurants offer a varied selection of vegetarian dishes.

Food Works

Food Works is a small campus grocery located in Watson Hall in the new Menschel Media Center. FWII is another campus grocery located in DellPlain Hall. Food Works is open from 10 am to 10 pm Monday through Thursday and 10 am to 6pm on Fridays. FWII is open Sunday through Thursday from 5pm to 10pm. Supercard and cash are accepted at both. Food Works does now accept credit cards. These two campus grocery stores carry a variety of vegetarian and vegan items. Stop by Food Works or call 443-3594 for information about Food Works or FWII.

- Check out the following online sites for great vegetarian and vegan recipes:

www.vegetariantimes.com
www.vegweb.com
www.vrg.org

MyPyramid

The United States Department of Agriculture (USDA) has developed MyPyramid: Steps to a healthier you. The new "MyPyramid" reflects the New Dietary Guidelines for Americans which balances what we eat with physical activity.

Located at MyPyramid.gov this site allows individuals to focus on caloric needs by placing age, sex, and physical activity into a formula which estimates calorie needs along with food group amounts. There is also a section for vegetarians with tips on making your diet complete.

Basic key points (based on a 2,000 calorie diet) are:

Grains:
- Make half your grains whole
- Eat 6 oz every day

Vegetables:
- Vary your veggies
- Eat 2 ½ cups every day

Fruits:
- Focus on Fruits
- Eat 2 cups every day

Milk

- Get your calcium rich foods
- Get three cups every day

Meat and Beans:

- Go lean with protein
- Eat 5 ½ oz every day

Aside from the basic food groups:

- Find a balance between food and physical activity

Be physically active at least 30 minutes most days of the week

- Know the limits on fats, sugars, and salt (sodium)

Anatomy of My Pyramid (making sense of MyPyramid as a symbol):

Activity-the steps represent activity
Moderation-narrowing of each food group, wider base stands for food with little or no solid fats or added sugars while the top stands for foods containing more added sugars and solid fats.
Personalization-MyPyramid stands for individualizing pyramid based on each persons needs.
Proportionality- Shown by the widths of each food group suggesting how much of each group should be consumed.
Variety- This is symbolized by the 6 color bands and that all groups are needed each day for good health.
Gradual Improvement-Encouraged by the slogan and the steps needed for their diet and lifestyle each day.

Have Questions?

- Visit our web site at http://foodservices.syr.edu for additional information regarding Syracuse University Food Services.
- Call Ruth Sullivan, MSEd, RD at 443-9884 for nutrition questions or issues regarding foodservices at the dining centers.
- Call Michelle Gallant, R.D. at 443-9002 for confidential nutrition counseling at the Syracuse University Health Center.
- Visit http://www.vrg.org/nutrition/adapaper.htm for information on vegetarian and vegan meal planning

Have suggestions?

- E-mail us at mealtalk@syr.edu and let up know how we can help you or if any questions or concerns

For more information, please contact:

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References

American Dietetic Association*, www.eatright.org*
Dietary Guidelines for Americans, *www.health.gov*
Vegetarian Resource Group*, www.vrg.org*
The Vegetarian Way, by Virginia Messina and Mark Messina
The Phytopia Cookbook, by Barbara Gollman and Kim Pierce
Vegetarian Times Magazine, www.vegetariantimes.com
Vegan in Volume
Vegan Handbook
The Complete Idiot's Guide to being Vegetarian, by Suzanne Havala
MyPyramid.gov
Food Values of Portions Commonly Used: Bowes & Church
Dietary Reference Intakes: The Essential Guide to Nutrient Requirements: Institute of Medicine