

Essential Amino Acids and the Plant-Based Foods That Contain Them

Animal-based foods (meats, eggs, dairy) contain all 8 essential amino acids so they are not listed here. Fruits do have essential amino acids; however they are very low in milligrams. Most of the vegetables, grains and nuts listed have amino acids ranging from 100 to over 2000 milligrams (based on a 200 calorie serving)

Also the foods listed may be more beneficial in particular forms, such as the seed instead of the plant, raw instead of cooked.

And finally, if a food is listed in all amino acid categories, you may want to check nutritional values to ensure that you are getting the appropriate amounts. See the article on “*Eat your protein! Stay healthy!*” at <http://ahicatlanta.com/articles/eat-protein-to-stay-healthy.html>. A good website to check values is Self Nutrition Data at <http://nutritiondata.self.com>

Essential Amino Acid High-Content Plant-Based Foods

- **Isoleucine:** seaweed, watercress, pumpkin leaves, swiss chard, Chinese cabbage, horseradish tree (the leafy tips), spinach, kidney beans, alfalfa seeds, sunflower seeds, sesame seeds, soy, baking yeast, soy, wheat, almonds, rice, bananas, apricots, peaches, avocados, persimmons, apricots, dates, kiwi, apples, oranges, cranberries, blueberries, plantains
- **Leucine:** seaweed, pumpkin leaves, watercress, horseradish tree (the leafy tips), alfalfa seeds, turnip greens, kidney beans, sesame seed, sunflower seeds, soy, peanuts, rice, bananas, apricots, peaches, guavas, avocados, figs, persimmons, raisins, pears, dates, apples, kiwi, olives, blueberries
- **Lysine:** watercress, seaweed, parsley, soy, wheat, buckwheat, amaranth, apricots, bananas, tamarinds, avocados, peaches, guavas, dates, oranges, pears, plantains, plums, watermelon
- **Methionine:** seaweed, sesame seeds, whole wheat, rice, peaches, avocados, figs, peaches, oranges, kiwi, pears, grapes, raisins, apricots, plantains, guavas, plums, blueberries, cantaloupe, ripe olives, persimmons (note the level of methionine in soy is so low that it is considered to make soy a bad choice for a complete protein.)
- **Phenylalanine:** seaweed, watercress, pumpkin leaves, horseradish tree (the leafy tips), kidney beans, spinach, turnip greens, skunk cabbage, broccoli raab, swiss chard, amaranth leaves, cottonseed, sesame seeds, sunflower seeds, pigeon peas, lupin seeds, soy, whole grains, peanuts, almonds, avocado, rice, avocados, apricots, bananas, raisins, peaches, plums, figs, persimmons, oranges, dates, pears, grapefruit, elderberries, apples, star fruit, ripe olives

- **Threonine:** watercress, seaweed, pumpkin leaves, spinach, skunk cabbage, horseradish tree (leafy tips), turnip greens, kidney beans, soybeans, alfalfa seeds, sesame seeds, sunflower seeds, soy, wheat, some nuts, rice, peaches, apricots, bananas, guavas, figs, avocados, raisins, pears, dates
- **Tryptophan:** oat bran, seaweed, spinach, watercress, soybeans, horseradish tree (leafy tips) pumpkin leaves, mushrooms, turnip greens, broccoli raab, turnip greens, parsley, spinach, winged bean tubers and leaves, mustard greens, asparagus, beet greens, mushrooms, mung beans, kidney beans, bamboo shoots, lettuce (red leaf, butterhead, iceberg), mustard greens, amaranth leaves, chicory greens, asparagus, soybeans, cauliflower, Chinese cabbage, chives, kale, broccoli, taro leaves, zucchini, radicchio, kelp, collards, brussel sprouts, navy beans, pinto beans, swiss chard, lima beans, hearts of palm, broadbeans, savoy cabbage, green and red peppers, okra, turnips, winter squash, onions, green and yellow snap beans, celery, cucumber, some hot chili peppers, radishes, tomatoes, potatoes, pumpkin, green peas, garlic, corn, sesame seeds, cottonseed, sunflower seed, chia seeds, peanuts, rice, apricots, raisins, avocados, apples, plums persimmons, guavas, figs, kiwi, dates, oranges, peaches
- **Valine:** seaweed, watercress, mushrooms, horseradish tree(leafy tips) pumpkin leaves, snowpeas, snap peas, turnip greens, kidney beans, spinach, skunk cabbage, broccoli raab, sunflower seed, sesame seed, cottonseed, soy, peanuts, whole grains, rice, bananas, peaches, figs, apricots, avocado, guavas, raisins, dates, pears, apples, persimmons, kiwi, cranberries, ripe olives, blueberries, oranges