

# Potatoes

- 1. Make a chart comparing the nutrient values of the following potato products: baked potato (without toppings), mashed potatoes, boiled potato, potato chips (fried), potato chips (baked), French fries, and hash browns (or tater tots). Use similar serving sizes (e.g., ½ cup) for each product. In your chart, include columns for calories, fat, carbohydrate, protein, vitamin C, vitamin B6, niacin, iron, fiber, sodium, and calcium. Describe the differences in fat, caloric, and nutrient content between these products. Draw conclusions as to why there are differences.**

Primary/Secondary-level response:

*Nutrient charts will vary. Comparing the differences in fat, calories, and nutrient content will demonstrate to students how food preparation can have a significant impact on nutrient values. For example:*

- Mashed potatoes, French fries, and tater tots are very high in calories and fat, due to added fat and oils used in the preparation.
  - The boiled and baked potatoes are much lower in calories and fat because the cooking methods do not require any added fat.
  - Baked and boiled potatoes also have the highest amount of vitamin C and fiber since the skin is left on.
  - Mashed potatoes have the most calcium (presumably because it is prepared by adding milk or a dairy product that is a good or excellent source of calcium).
  - Mashed potatoes and tater tots are very high in sodium.
  - The baked potato chips have less fat than the fried potato chips and are also higher in calcium. The fried potato chips are higher in vitamin C. Neither provides a good source of other nutrients such as fiber, iron, and vitamin B6.
- 2. Plan a meal that includes a potato. The meal should be low in calories, fat, and sodium and provide at least 20% of the recommended Daily Value for iron, fiber, and calcium. Which potato recipe would you select? What other foods (grains, fruits, vegetables, meat/beans, dairy products) would you include to make a complete, balanced meal? Which vitamins are included in your meal?**

Primary/Secondary-level response:

*Student answers will vary. Encourage students to use chart from previous question as a resource. The following recipe criteria may also be used (from the Network for a Healthy California Recipe Guidelines).*

*Recipes must contain the following:*

- At least one serving\* of a fruit and/or vegetable per 250 calories.
- Each serving of food may contain only limited amounts of fat.
  - Total fat is equal to or less than ( $\leq$ ) 35% of total calories
  - Saturated fat is less than ( $<$ ) 10% of calories
  - Trans fat is less than ( $<$ ) 0.5 g per serving
- Each serving of food may offer equal to or more than ( $\geq$ ) 0.014 g/kcal of naturally occurring fiber (28g of fiber/2000 calories).
- Each serving of food may contain less than ( $<$ ) 600 mg of sodium per serving.
- Each serving of food may contain only limited amounts of added sugars or caloric sweeteners.
  - Added sugars may not exceed 15% of total calories

*\*A serving is defined as:*

- $\frac{1}{2}$  cup fresh, frozen, or canned\*\* fruit or vegetable
- $\frac{1}{2}$  cup cooked peas or beans
- 1 cup leafy greens
- $\frac{1}{4}$  cup dried fruit
- 4 ounces ( $\frac{1}{2}$  cup) 100% fruit or vegetable juice

*\*\*Canned fruit packed in 100% fruit juice.*

3. **California grows 4% of the nation’s potato crop, but its share of exports is more than 30%. Hypothesize why California’s crop accounts for a large proportion of the country’s exports. Investigate where California’s potatoes are sold. Track California’s potatoes as they travel from the farm to processing or to the market. Find out if the potatoes sold at your local grocery store are California grown. If not, from where do they come? Based on your findings, draw a conclusion as to why California contributes to such a large percentage of potato exports.**

Primary/Secondary-level response:

*Students’ findings and conclusions will vary by region.*

- A majority of US grown potatoes are grown in the “interior” states, with more than half coming from Idaho. As a result, these potatoes are generally shipped to the coastal states, rather than exported out of the country (which would contribute to larger shipping costs).
- Due to California’s proximity to Asia, Russia, and eastern Africa, California grown potatoes are exported to these regions (lower shipping costs) where they are able to keep for long periods of time and supply a basic food staple for these populations.

Sources:

[www.cdfa.ca.gov](http://www.cdfa.ca.gov)

[www.nal.usda.gov/fnic/foodcomp/search](http://www.nal.usda.gov/fnic/foodcomp/search)

[www.indepthinfo.com/potato](http://www.indepthinfo.com/potato)

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