



# POTATO NUTRITION HANDBOOK | 2015



Potatoes<sup>TM</sup>  
USA



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# INTRODUCTION



Potatoes USA (formerly the United States Potato Board) was established in 1971 by a group of potato growers to promote the **many benefits of eating potatoes**. Potatoes USA was one of the first commodity groups to develop and use an FDA-approved nutrition label and has long since promoted positive nutrition messages. As a result of these efforts, consumer attitudes toward potatoes remained mostly positive for over 30 years. Then, the low-carbohydrate diet craze swept the nation beginning in the early 2000s and took a toll on the relationship between America and its beloved potato, as indicated by a slight, yet noticeable, decrease in potato consumption. This caused the potato industry to ramp up its consumer marketing efforts, focusing on dispelling the myth that potatoes are fattening and educating the public about the inherent goodness of America’s Favorite Vegetable Side Dish.

In 2004, Potatoes USA began a formal Nutrition Science Program which compiled key potato research studies and began funding university research projects to protect the reputation of the potato. Potatoes USA positions itself at the forefront of potato nutrition research and monitors research and trends in the U.S. and overseas that could impact potato consumption in America. Potatoes USA works in partnership with the Alliance for Potato Research and Education (APRE), a potato organization established in 2011 to further establish a scientific foundation for potatoes in all forms.

This handbook is a compilation of all-things-potato as it relates to nutrition research and more. Beginning with potato nutrition facts and ending with a monthly calendar of ideas for news features, newsletters and blog posts, these pages are brimming with historical potato facts, techniques for cooking the potato in today’s “30-minute meal” mentality, and healthy recipes to keep the potato naturally nutritious and delicious.



For more information, visit  
[www.PotatoGoodness.com](http://www.PotatoGoodness.com)

## NEW IN 2015!

This edition includes new research (since 2012) highlighting the role of potatoes in all forms in a healthy diet and the addition of new recipes.



# POTATO NUTRITION FACTS

It's a surprise for many to discover one medium potato (5.3 oz) with the skin contains 45 percent of the daily value for vitamin C; as much or more potassium (620 mg) than bananas, spinach, or broccoli; 10 percent of the daily value of vitamin B6; and various other important vitamins and minerals, such as thiamin, riboflavin, folate, magnesium, phosphorous, iron, and zinc—all for only 110 calories and no fat.

Table 1: FDA Data for a 5.3 oz Potato with the Skin\*

| Calories (kcal)  | 110 | % Daily Value |
|------------------|-----|---------------|
| Fat (g)          | 0   | –             |
| Cholesterol (mg) | 0   | –             |
| Sodium (mg)      | 0   | –             |
| Potassium (mg)   | 620 | 18%           |
| Vitamin C (mg)   | 27  | 45%           |
| Vitamin B6 (mg)  | 0.2 | 10%           |
| Fiber (g)        | 2   | 8%            |

\*It should be noted that the FDA label represents a composite of varieties ("market-basket approach") based on typical U.S. consumption patterns (i.e., 70 percent russet, 18 percent white, and 12 percent red).

Based on the FDA label (Table 1), the following claims can be made for the potato:

- **An excellent source ( $\geq 20$  percent of the DV) of vitamin C**
- **A good source ( $\geq 10$  percent of the DV) of potassium**
- **A good source ( $\geq 10$  percent of the DV) of vitamin B6**
- **Low ( $\leq 140$  mg/serving) in sodium and cholesterol**
- **Fat-free ( $\leq 0.5$  g fat/serving)**



## Vitamin C

Potatoes provide 27 mg of vitamin C (45 percent of the current daily value), which can contribute to total daily requirements. This water-soluble vitamin acts as an antioxidant, stabilizing or eliminating free radicals, thus helping to prevent cellular damage. Vitamin C also aids in collagen production, a process that helps to maintain healthy gums and is important in healing wounds. Finally, vitamin C assists with the absorption of iron and may help support the body's immune system (Gropper and Smith 2013). Although potatoes do not rival the vitamin C content of citrus fruits and peppers, they do contribute significantly to daily vitamin C requirements. In fact, data indicates potatoes rank 5th in terms of dietary sources of vitamin C for Americans (Cotton et al. 2004; O'neil et al. 2012).

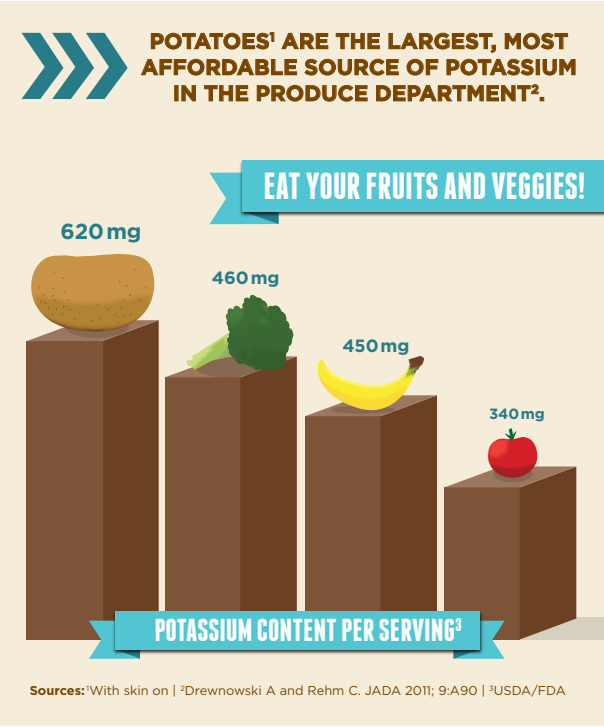
## Potassium

It is estimated that less than 3% of Americans are meeting the current adequate intake (AI) for potassium (4700 mg/d) (USDA-Dietary Guidelines 2010). Potatoes provide one of the most concentrated and affordable sources of potassium (Table 2)—significantly more than those foods commonly associated with being high in potassium, such as bananas, oranges, mushrooms, etc. (Drewnowski et al. 2013).

Table 2: Potassium Content of Selected "High" Potassium Foods\*

| Food Source            | Potassium (mg) |
|------------------------|----------------|
| Potato (1, 5.3 oz)     | 620            |
| Broccoli (1 med stalk) | 460            |
| Banana (1 med)         | 450            |
| Sweet Potato (1 med)   | 440            |
| Tomato (1 med)         | 340            |
| Mushrooms (5 med)      | 300            |
| Orange (1 med)         | 250            |
| Cantaloupe (1/4 med)   | 240            |
| Grapefruit (1/2 med)   | 160            |

\*www.fda.gov/food/labelingnutrition



Research suggests diets rich in potassium and low in sodium reduce the risk of hypertension and stroke (Adroque and Madias 2014; Seth et al. 2014; Zhang et al. 2013; Yang et al. 2011, FDA, Food & Nutrition Board 2004). In a scientific statement promoting dietary approaches to prevent and treat hypertension, the American Heart Association (AHA) reported that evidence from animal experiments, observational studies and more than 30 human clinical trials show a significant association between high potassium intakes and reduced blood pressure. Although data from individual trials have been inconsistent, three meta-analyses of these trials have documented a significant inverse relationship between potassium intake and blood pressure in non-hypertensive and hypertensive individuals (Appel et al. 2006). Another recent study examined the association between potassium intake and stroke in a cohort of 90,137 post-menopausal women and found high potassium intake is associated with a lower risk of all stroke and ischemic stroke, as well as all-cause mortality in older women, particularly those who are not hypertensive (Seth et al. 2014). In fact, the evidence is so strong regarding the protective effects of potassium on blood pressure that the US Food and Drug





Administration (FDA) has approved the following health claim: “Diets containing foods that are good sources of potassium and low in sodium may reduce the risk of high blood pressure and stroke” (FDA Food Labeling Guide, Appendix C: Health Claims).

Given their high potassium content, potatoes may contribute to a heart healthy diet. Nowson et al. (2004) examined the effect on blood pressure of two different self-selected diets: (1) a low-sodium, high-potassium diet rich in fruit and vegetables (LNAHK) and (2) a high-calcium diet rich in low-fat dairy foods (HC) with a (3) moderate-sodium, high-potassium, high-calcium diet high in fruits, vegetables and low-fat dairy foods (OD) for four weeks. In order to achieve a higher potassium intake, the subjects on the LNAHK diet and OD diets were given a list of potassium rich foods and instructed to eat a potato a day. The results indicated both the LNAHK and OD produced decreases in blood pressure (compared to the HC diet); however the decrease was greatest in the LNAHK diet. With the speculation that the blood pressure lowering effects of the LNAHK and OD diets were due to an increase in dietary potassium as a direct result of including a daily potato dish, Nowson and colleagues re-examined the data. The results confirmed there was an inverse relationship between potato consumption and blood pressure. Specifically, it was demonstrated a 100-g/d higher intake of potatoes (an average potato is approx. 150 grams) was associated with a 2.6 mm Hg lower diastolic blood pressure (Nowson et al. 2008). Recently, Vinson and colleagues (Vinson et al. 2012) examined the effects of potato consumption on blood pressure in 18 overweight, hypertensive adult subjects for four weeks in a randomized cross-over design. Subjects consumed six to eight (-138 g) small microwaved purple potatoes or an alternative starch-rich food twice daily. The results indicated consuming purple potatoes significantly reduced both systolic and diastolic blood pressure.

The health benefits of potassium go beyond cardiovascular health. Research indicates that diets high in potassium-rich fruits and vegetables may help maintain lean body mass and bone mineral density as we age (Dawson-Hughes et al. 2008; Tucker et al. 1999).

Vitamin B6

Potatoes are a good source of vitamin B6, a water-soluble vitamin often low in the diets of certain groups of women (DRIs 1997). Vitamin B6 plays important roles in carbohydrate and protein metabolism. It helps the body make nonessential amino acids needed to make various body proteins. It is also a cofactor for several enzymes involved in energy metabolism, and it is required for the synthesis of hemoglobin—an essential component of red blood cells (DRIs 1997).

Fiber

Dietary fiber is a complex carbohydrate found in vegetables, fruits and whole grains that cannot be digested by human digestive enzymes and, thus, is not absorbed into the bloodstream. Despite the fact it is not digested or absorbed, dietary fiber has been shown to have numerous health benefits, including improving blood lipid levels, regulating blood glucose, and increasing satiety, which may help with weight loss (Lattimer and Haub 2010; Food and Nutrition Board 2002). One medium potato with the skin provides two grams of dietary fiber or eight percent of the daily value.

Most Americans get only about half of the recommended amount (i.e., adequate intake (AI)) of dietary fiber and, thus, could benefit from consuming more fiber-rich foods. A recently published study examining the association between white potato consumption and dietary fiber intake indicated that when controlling for possible confounding variables (e.g., age, race, ethnicity, education, income, body mass index and energy consumed), white potatoes were positively associated with higher dietary fiber intakes among both adults and children (Storey and Anderson 2013). Specifically, potatoes provided more than 6% of dietary fiber to adults and almost 7% to children, while providing only 3% of total energy, suggesting potatoes have favorable fiber-to-calorie ratio.

Magnesium

Magnesium is the fourth most abundant mineral found in the body and serves as a co-enzyme for over 300 metabolic reactions that are important for such functions as protein synthesis, energy production, nerve



transmission, blood pressure regulation and muscle contraction. It has been estimated as many as 60% of Americans do not meet the current RDA for magnesium (Nielson 2010). Low levels of magnesium have been associated with a number of chronic diseases including migraine headaches, Alzheimer’s disease, cerebrovascular accident (stroke), hypertension, cardiovascular disease, and type 2 diabetes mellitus (Volpe 2013). A medium (5.3 oz) potato with the skin provides 48 mg of magnesium and recent research indicates potatoes contribute 5% of the total magnesium intake in the diets of Americans (Freedman and Keast 2012).

Resistant Starch

Resistant starch is the starch that is ‘resistant’ to enzymatic digestion in the small intestine. Resistant starch is found naturally in foods such as legumes, bananas (especially under-ripe, slightly green bananas), potatoes, and some unprocessed whole grains. Natural resistant starch is insoluble, fermented in the large intestine and a prebiotic fiber (i.e., it may stimulate the growth of beneficial bacteria in the colon). Other types of resistant starch may be soluble or insoluble, and may or may not have prebiotic properties (Higgins 2004).

The physiological effects and potential health benefits of resistant starch have been studied in animals and humans for over 30 years (Brit et al. 2013; Murphy et al. 2008). Resistant starch appears to exert beneficial effects within the colon as well as body wide. Health benefits in the colon include enhanced laxation, extensive fermentation and the production of important short chain fatty acids and increased synthesis of a variety of “good” bacteria (Higgins and Brown 2013; Murphy et al. 2008; Cummings et al. 1996; Nofrarias et al. 2007) all of which are believed to protect the colon from harmful microorganisms and even cancer (Hylla et al. 1998). Systemic effects include improvements in glucose tolerance and insulin sensitivity, reductions in blood lipid levels, increases in satiety and potential uses in weight management (Higgins 2004; Bodinham et al. 2010).

In fact, the potential health benefits are so promising that the Joint Food and Agricultural Organization of the United Nations/World Health Organization Expert Consultation on Human Nutrition concluded resistant starch is “...one of the major developments in our understanding of the importance of carbohydrates for health in the past twenty years” (FAO 1998).

The amount of resistant starch found in potatoes is highly dependent upon processing and preparation methods. For example, cooking and then cooling potatoes leads to nearly a two-fold increase in resistant starch—Table 3 (Englyst et al. 1992; Murphy et al. 2008; Raatz et al. 2013). Even processed potatoes (e.g., potato flakes) appear to retain a significant amount of resistant starch with the potential to confer health benefits.

Table 3: Resistant Starch Content of Various Foods\*

| Food                     | RS (g/100g food) |
|--------------------------|------------------|
| Puffed Wheat             | 6.2              |
| White Beans (cooked)     | 4.2              |
| Banana (raw)             | 4.0              |
| Potato Chips             | 3.5              |
| Lentils (cooked)         | 3.4              |
| Corn Flakes              | 3.2              |
| Potato (cooked & cooled) | 3.2              |
| Rye Bread                | 3.2              |
| Potato (fried)           | 2.8              |
| Chickpeas (cooked)       | 2.6              |
| Peas                     | 1.9              |
| Potato (boiled)          | 1.3              |
| Wheat Bread              | 1.2              |
| Potato (baked)           | 1.0              |

\* Adapted from Murphy 2008



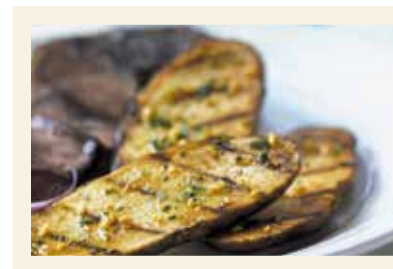
## Gluten-Free

According to the National Foundation for Celiac Awareness, an estimated 1 in 133 Americans, or about 1% of the population, has celiac disease and would benefit from reducing or eliminating foods containing gluten. However, eliminating foods with gluten can predispose individuals to nutrient deficiencies. Shepherd and Gibson (2013) examined dietary intakes from 55 men and women who had been following a gluten-free diet for two years and found inadequate intakes of fiber

and several micronutrients, including thiamin, folate, magnesium, calcium and iron. Potatoes provide a number of those nutrients and they are gluten-free. To make it easier for those who suffer from celiac disease and/or gluten sensitivity, Potatoes USA created a gluten-free recipe collection on their website [PotatoGoodness.com](http://PotatoGoodness.com), which includes more than 80 gluten-free recipes from several ethnic cuisines, many of which can be prepared in 30 minutes or less.



## Tips and Tricks for Substituting Potatoes for Gluten Products



**Pizza:** Potatoes make a surprising and healthy substitution for pizza crust and bread. Top grilled or roasted potato planks with your favorite pizza toppings.



**Nachos:** Potatoes as a base for nachos instead of tortilla chips make a great substitute whether you're choosing to eat gluten-free or not. You can also save time by using frozen potato wedges in this recipe. It's a convenient and healthier alternative.



**Croutons:** Dice a potato into 1/2 inch squares, toss with 1 tablespoon olive oil and your favorite seasonings. Place on a cookie sheet and bake at 450 degrees for 10-15 minutes. Let cool and toss in your salad. No time to dice? Try frozen diced potatoes instead.



**Gravies, soups and stews:** The starch in potatoes is a natural thickening agent. Try using instant mashed potatoes or even pureed leftover mashed potatoes for hearty gravies, soups and stews (mix in the potatoes a little at a time so as not to over-thicken).



**Bruschetta:** Instead of the traditional crostini or sliced sourdough bread, slice potatoes 1/4-inch thick, toss in olive oil and bake at 425 degrees for 25 minutes. When the slices are finished cooking, top with your favorite tomato bruschetta and enjoy!



**Pasta:** Try using naturally gluten-free potatoes instead of pasta. Thin "noodles" of potatoes can be used to recreate your favorite pasta dish or thin slices of potatoes can be used in place of noodles in your family-favorite lasagna recipe.





Antioxidants

In addition to vitamins and minerals, potatoes also contain an assortment of phytochemicals with antioxidant potential, including carotenoids and anthocyanins (Brown et al. 2001, 2004). Anthocyanins are found in the greatest quantities in purple and red potatoes while carotenoids are found largely in yellow and red potatoes (Brown et al. 2004). In addition to these colored flavonoids, potatoes with skins contain a variety of colorless phytochemicals with antioxidant potential, most notably vitamin C (Barnes 2013).

| CAROTENOIDS  | ANTHOCYANINS  |
|--|---|
| Comprise a large group of compounds produced by plants   | Are a class of plant pigments that can be classified chemically as both flavonoids and phenolics  |
| Impart yellow-to-red hues to various plants, including fruits, tubers and roots  | Are widely distributed among flowers, fruits, and vegetables and contribute to every color but green (Hou 2003)   |
| Play a function in plants as accessory pigments, photosynthesis and protect against photosensitization in plants and animals. In humans, carotenoids are thought to have a variety of function including antioxidant activity, immunoenhancement and perhaps protection against some forms of cancer (DRIs 2000) | Play several major roles in plants, including attracting insects for pollination, acting as a UV screen to protect the plant's DNA from sunlight damage, and acting as feeding deterrents |

Wu and colleagues (2004a) examined total antioxidant capacity (TAC) in more than 100 different foods, including fruits, vegetables, nuts, dried fruits, spices, cereals, and other foods. In addition, the researchers measured the total phenolic content of these foods to evaluate their contribution to total antioxidant capacity. Of the 42 vegetables tested, beans (including small red, kidney and pinto) and artichokes ranked highest in total antioxidant capacity, while russet potatoes ranked fifth, coming in ahead of vegetables more commonly known for their antioxidant potential, such as broccoli, cabbage, and tomatoes.

A number of scientists have developed specific research programs to examine the antioxidant content of different varieties of potatoes with the ultimate goal of developing new potato varieties that maximize antioxidant potential. Dr. Cecil Stushnoff and his team at Colorado State University have examined nearly 100 different selections and varieties of potatoes for antioxidant content and free radical scavenging capacity and have found pigmented potatoes contain a variety of substances with antioxidant potential (Stushnoff et al. 2007). Potato cultivars with particularly high phenolic contents include:

- **Purple Majesty (Purple-skinned variety)**
- **Mountain Rose (Red-skinned variety)**
- **Rio Grande (Russet variety)**

Researchers are also focusing on breeding species of potatoes that have improved antioxidant capacity and have successfully developed potato tubers with increased levels of flavonoids and carotinoids (Lukaszewicz et al. 2004; Brown 2004; Navarre 2007).

The potential role of potato antioxidants in immune function and disease prevention has also been studied. For example, Reddivari et al. (2007) examined the effects of a purple potato anthocyanin fraction on prostate cancer cell proliferation and apoptosis (i.e., cancer cell death) in vitro. The results indicated cancer cell proliferation was decreased by the anthocyanin fraction, and apoptosis was increased. Current studies are focusing on identifying the individual components of the anthocyanin fraction responsible for the induction of apoptosis in prostate cancer cells and on developing potato cultivars that over-express these bioactive compounds.

The effects of pigmented potato consumption on biomarkers of oxidative stress, inflammation and immune response were studied in a sample of healthy adult males who received daily doses (150 grams) of either white, yellow or purple-fleshed potatoes daily (Kaspar 2011).

The results indicated consuming pigmented potatoes can reduce inflammation and DNA damage as well as modulate immune cell phenotype in healthy adult males.

Similarly, Dr. Chuck Brown and researchers from the USDA Agricultural Research Center have developed a specialty potato breeding program to enhance the nutritional content of potatoes, with multiple institutions in the Washington, Oregon, and Idaho tri-state area. Dr. Brown's team is especially interested in the carotenoid content of yellow potatoes. According to their research, yellow and dark yellow fleshed potatoes may contain as much as 400 micrograms of carotenoids per 100 grams of fresh weight. While this amount does not rival that found in foods such as carrots and pumpkins (which contain, on average, 11,700 micrograms per 100 grams fresh weight), it can contribute significantly to total daily carotenoid intake (Holden et al. 1999).

Dr. Creighton Miller and researchers from Texas A&M University have investigated the phenolic content of colored potato varieties. They examined nearly 400 breeds and species to identify specific compounds that should be chosen for selection. This team is particularly interested in anthocyanins and their potential route for a dietary antioxidant uptake by humans.

Dr. Roy Navarre and researchers from Washington State University use a technique known as “metabolic profiling.” They examine genetic variations in potatoes and then use this information to maximize their nutritional potential. In his lab, metabolic profiling is being used to screen potatoes for genotypes with elevated amounts of vitamins and phytonutrients. Substantial differences in phytonutrients among different genotypes were observed for some phenolic compounds, including flavonol, differing in concentration by well more than tenfold. More modest differences were found in folate, with about a threefold difference between high and low folate genotypes. Comparisons have also been made between wild species and cultivars, and marked differences were found in a variety of compounds, including glycoalkaloid composition (Navarre et al. 2007).

Does cooking potatoes impact antioxidant content?

What is the impact of cooking and other forms of processing on the phenolic content and antioxidant activity of potato varieties? There is no clear-cut answer as the current data is conflicting. Results from Dr. Brown's lab indicate boiling increases the extractable total carotenoids and the accompanying antioxidant values (Brown 2007). On the other hand, data from Dr. Miller's lab indicates boiling is the only cooking method that severely negatively impacts antioxidant content. Microwaving and baking appear to cause minimal destruction/reduction in antioxidant content. Dr. Miller hypothesizes the boiling causes a loss of the water-soluble antioxidants in the water. Wu and colleagues (2004b) found cooking had a variable effect on the hydrophilic antioxidant capacity of the four different vegetables tested (russet potato, broccoli, carrots and tomato). Specifically, potatoes and tomatoes had significant increases in antioxidant content after cooking, while carrots had a significant decrease, and broccoli was unchanged.



**Potato Nutrition: More than skin deep**

A common misconception is that all of the potato's nutrients are found in the skin. While the skin does contain approximately half of the total dietary fiber, the majority (> 50 percent) of the nutrients are found within the potato itself. As is true for most vegetables, cooking does impact the bioavailability of certain nutrients, particularly water-soluble vitamins and minerals, and nutrient loss is greatest when cooking involves water (boiling) and/or extended periods of time (baking). To maintain the most nutrition in a cooked potato, steaming and microwaving are best.



# PEEL BACK THE TRUTH: ADDRESSING THE MYTHS AND MISCONCEPTIONS ABOUT POTATOES

## Glycemic Index

There is a lot of confusion regarding the glycemic index (GI); not the least of which is the definition. The GI is defined as “the incremental area under the blood glucose response curve of 50 grams available carbohydrate portion of a test food relative to 50 grams of a reference food (e.g., glucose or white bread)” (Jenkins et al. 1981). Potatoes have been unfairly criticized for their ranking on the GI. In fact, there are a number of complexities in the measure and methodological weaknesses inherent in the determination of GI, which severely limits the simple classification of a given food as high, medium or low on the GI, as well as the application of the GI for the purpose of food selection (Franz 2006). First and foremost, it must be emphasized the GI is not an inherent property of a food but, rather, the metabolic response of an individual to a food (Pi-Sunyer 2002). Simply put, an individual’s response to a food—not the food itself—determines the GI. The GI of a carbohydrate-rich food can vary greatly depending on a number of factors, including:

**Variety:** Different varieties of a given carbohydrate-rich food (e.g., short-grain vs. long-grain rice, linguini pasta vs. rotini pasta, red potatoes vs. russet potatoes) can produce significantly different GIs. According to the most recently published international table of GI values (Atkinson et al. 2008), the GIs for potato varieties range from a low of 56 for a boiled Pontiac potato from Australia to a high of 111 for a baked U.S. Russet Burbank.

**Origin:** Ironically, even for presumably the same variety, the GI value can vary widely depending on where it was grown. For example, russet potatoes grown in Australia have a GI ranging from 87-101, placing them in the high category, whereas russets grown in Canada have GIs ranging from 56-77, placing them in the more moderate category (Foster-Powell et al. 2009; Fernandes 2005).

**Processing:** Grinding, rolling, pressing, mashing, and even thoroughly chewing a starch-rich carbohydrate will disrupt the amylase and/or amylopectin molecules,

making them more available for hydrolysis and thereby increasing the GI (Collier & O’Dea 1982, Pi-Sunyer 2002, Wolever et al. 2001). For example, Wolever and colleagues showed the GI of a one-inch cube of potato could increase by almost 25 percent simply by mashing the cube. Chemically modifying a carbohydrate-rich food can also affect its GI. Decreasing the pH of a starch (e.g., by adding acid) can lower the GI; thus, adding vinegar to potatoes (such as when making potato salad) will lower the GI of the potatoes. Similarly, acetylation or the addition of beta-cyclodextrin has been shown to decrease the GI of potato starch (Raben et al. 1997).

**Preparation:** Cooking has been shown to exert a differential effect on GI of a carbohydrate-rich food, particularly one high in starch. For example, a recent study by Fernandes et al. (2005) examined the effect of cooking on the GI of potatoes prepared in a variety of different ways including mashed, baked, reheated, boiled, boiled and cooled, and fried. The results indicated the



GI values of potatoes varied significantly depending on both the variety and cooking method used, ranging from intermediate (boiled red potatoes consumed cold: 56) to moderately high (roasted white potatoes: 73; baked russet potatoes: 72). Similarly, Kinnear et al. (2011) investigated the effects of cooking and cooling on the GI of four novel potato varieties and found significant variability in the effects. Specifically, cooking and cooling reduced the GI of two potato varieties by 40-50%, while it produced only a 8-10% reduction in the other two varieties.

**Between-Subject Variability:** Research clearly shows individuals can vary significantly in their glycemic responses to the same food (Wolever 2003). Nonetheless, in laboratory studies, this source of variation is reduced to the point where it is no longer statistically significant by expressing an individual’s glycemic response to the food of interest relative to that of a reference food (e.g. white bread or glucose). For example, Wolever and colleagues (1991) examined the glycemic responses (AUC) and GI (i.e., the AUC of the test food expressed relative to white bread) of three different foods (white bread, rice and spaghetti) in 12 subjects with diabetes. The average coefficient of variation (a representation of the variability in responses between subjects) for the AUC (for the same food) was 45 percent, whereas for the GI it was only 10 percent. While mathematically correcting for differences in glycemic responses makes for a nice, consistent GI, it is artificial and masks a very important and practical consideration—individuals differ significantly in their blood glucose responses to the same food.

**Within-Subject Variability:** Not only do blood glucose responses to similar foods differ between individuals, they can vary significantly in the same person on different occasions. In fact, the within-subject variation can sometimes be greater than the between-subject variation. Wolever et al. (1985) showed for repeated tests of 50 grams of carbohydrate from glucose or bread, the coefficient of variation of AUC was approximately 15 percent in subjects with Type 2 Diabetes, 23-25 percent in nondiabetic subjects, and 30 percent in subjects with Type 1 Diabetes. Similarly, Vega-Lopez et al. (2006) examined the inter-individual variability and intra-individual reproducibility of GI values for commercial

white bread among 23 healthy adults (aged 20-70 years) and found the inter-individual coefficient of variation (CV) was 17.8 percent, while the intra-individual CV was 42.8 percent. In a study recently published in the *British Journal of Nutrition*, Williams (2008) examined the reliability of the GI among four different foods (white bread, glucose, chickpeas and mashed potatoes) using the intra-class coefficient (ICC), a measure having values between zero and one, with values closer to one indicating a better reliability and values closer to zero indicating poor reliability. The ICC for white bread, glucose, and chickpeas were 0.50, 0.49, and 0.28, respectively, while the ICC for mashed potatoes was significantly lower at 0.02, indicating a very poor repeatability. It bears noting these studies were all done in a laboratory under highly controlled conditions (i.e., using 50 grams of a single food at the same time of day, etc.). The variation would likely be much greater under less controlled or more “real life” conditions.

**Time of Day:** The time of day during which glycemic response is measured may impact not only the absolute glycemic response (i.e., the AUC) but also the relative glycemic response (i.e., the GI) (Gannon et al. 1998; Wolever 1996). For example, Wolever and Bolognesi (1996) compared the glycemic responses to two different breakfast cereals under two conditions: after a 12-hour fast and at midday, four hours after consuming a standard breakfast. The AUCs at midday were significantly less than those after the 12-hour fast, despite the fact the subjects consumed the exact same foods. More specifically, the mean AUC response to the high-fiber cereal was 50 percent lower than that of the low-fiber cereal after the 12-hour fast, while this difference shrank to just 10 percent at midday.

For the GI to be considered a useful dietary planning tool, it must have a predictable effect on blood glucose; it must not only be valid but reliable. As the research described above documents, for many foods, including potatoes, this is clearly not the case.



## Satiety and Weight Management

Given that more than two-thirds of adults and 17% of America's youth are overweight or obese (Ogden 2014), it is not surprising weight management is top-of-mind among consumers and health professionals, alike. One of the most highly researched factors believed to impact weight management is satiety. Satiety is generally defined as the physiological and psychological experience of “fullness” that comes after eating and/or drinking. A number of factors have been shown to influence the experience of satiety, including gastric distention, elevations in blood glucose, and alterations in circulating hormones (e.g., increased insulin and cholecystokinin and decreased glucagon). The GI of a food has also been hypothesized to influence satiety, despite a paucity of valid research to support the connection. Due to potatoes' supposed high GI, they have been accused of not being satiating and, thus, have been pegged as fattening. However, available research does not support this contention.

A frequently cited study by Holt and colleagues (1995) examined the satiating effects of 38 commonly eaten foods grouped into six different categories (fruits, bakery products, cereals, snack foods, protein-rich foods, and carbohydrate-rich foods). Subjects consumed 240 kcal (1,000 kJ) portions of each food item, and their feelings of hunger/satiety were assessed every 15 minutes for a total of 120 minutes using an equilateral seven-point rating scale that ranged from “extremely hungry” to “extremely full.” The subjects were then allowed to eat ad libitum from a standard range of foods and drinks. A Satiety Index (SI) score was calculated for each food by dividing the area under the satiety response curve (AUC) for the given food by the group mean satiety AUC for white bread and multiplying by 100. The results indicated there were significant differences in satiety scores not only between but also within food groups. The food that scored highest on the satiety index was, in fact, boiled potatoes, with a score seven times greater than croissants, which had the lowest SI score. The authors also found no significant relationships between satiety, plasma glucose, or glycemic responses among the 38 test foods. However, a negative correlation was found between insulin responses and ad libitum food intake at 120 minutes, which suggests test foods producing a higher insulin response were associated with less food intake and thus, indirectly, greater satiety.

The Holt et al. (1995) study has been criticized for not controlling for macronutrient and water content of the test foods (i.e., not selecting foods with similar amounts of protein, fat, fiber and water content). It has been argued

these factors may have overshadowed the effect of the GI on satiety. In an attempt to address this methodological shortcoming, Dr. Allan Geliebter and colleagues (2013) investigated the satiety of common carbohydrate-rich side dishes with varying GIs. Twelve subjects consumed five test meals with similar calorie and macronutrient contents (baked potato, mashed potato, pasta, brown rice, white bread) in randomized order followed by an ad libitum lunch meal two hours later. Appetite ratings were taken prior to the test meal and at 0, 15, 30, 60, 90, and 120 minutes. Subjects reported a lower desire to eat following the potato meals compared with the pasta meal. Similarly, at 120 minutes, the subjects reported being able to eat less food following the potato meal compared with the brown rice meal. Nonetheless, despite differences in some of the appetite ratings, total energy intake at the subsequent lunch meal did not differ between the test meals and was not correlated with fullness. Subjective experience of fullness was not significantly correlated to GI.

From an obesity perspective, it is important to determine if differences in short-term satiety as a result of different GIs actually have an impact on body weight regulation. Unfortunately, much of the currently existing research examining the impact of GI on weight loss is hampered by methodological shortcomings, including small sample sizes, inadequate controls, and insufficient durations. Nonetheless, after a critical examination of the available data, the 2010 Dietary Guidelines Advisory Committee concluded, “Strong and consistent evidence shows that glycemic index and/or glycemic load are not associated



with body weight and do not lead to greater weight loss or better weight maintenance” (USDA/HHS Dietary Guidelines for Americans 2010).

Indeed, a number of recent studies have failed to find a weight loss advantage from low GI diets. (Aston et al. 2008; Das et al. 2007; Randolph et al. 2014). For example, Aston and colleagues (2008) examined the effect of diets differing in GI on satiety and weight loss in overweight women (n=19) over a 12-week period. Lower or higher GI versions of key carbohydrate-rich foods (breads, breakfast cereals, rice and pasta/potatoes) were provided to subjects to be incorporated into habitual diets in ad libitum quantities. The results indicated no differences in energy intake, body weight, or body composition between treatments. On laboratory investigation days, there were no differences in subjective ratings of hunger or fullness, or in energy intake at the snack or lunch meal.

The effects of calorie-restricted diets (30 percent calorie reduction) differing in glycemic load (GL) on body weight and body fat losses was examined by Das et al. (2007). Subjects included overweight but otherwise healthy men and women (n=34) who were part of a larger, multicenter trial known as “CALERIE” (Comprehensive Assessment of the Long-term Effects of Restricting Intake of Energy), designed to examine the effects of calorie restriction on human health and aging.

The 12-week study was conducted in three phases. Phase 1 consisted of a seven-week baseline period during which subjects were instructed to maintain a stable weight and continue eating their usual diet so as to assess baseline energy requirements (using a technique known as “doubly labeled water,” which is considered the “gold standard” in assessing free-living energy expenditure). Following Phase 1, subjects were randomly assigned to either a high- or low-GL calorie-restricted diet for 24 weeks.

All food was provided to the subjects at 70 percent of individual baseline weight-maintenance energy requirements (i.e., a 30 percent calorie reduction). The third and final phase of the study consisted of a 24-week calorie-restricted period, during which subjects were instructed to follow the dietary patterns they had in

Phase 2 but were no longer provided with the foods (i.e., “self-selected food” period). The results indicated both groups reduced their energy intake during the calorie-restriction periods, although neither achieved the 30 percent reduction prescribed, and adherence decreased with time. Both groups lost weight (approximately 8 percent of initial body weight), and there was no significant difference in weight loss between the groups. In addition, there were no significant differences between the low-GL and high-GL diet groups in terms of body fat percentage, hunger, satiety, or satisfaction with the amount and type of foods provided.

Due to their supposed high GI, potatoes have been unjustly singled out as a food to avoid when attempting to manage body weight. However, existing research does not support this contention. Randolph and colleagues recently studied the effects of potato consumption on weight loss in free-living adults (Randolph et al. 2014). In a 12-week, 3-arm, randomized control trial, 86 overweight men and women were randomly assigned to one of three dietary interventions: (1) low GI, calorie reduced diet (500 kcal/d); (2) high GI, calorie reduced diet (500 kcal/d); (3) control group (counseled to follow basic dietary guidance including the Dietary Guidelines for Americans and the Food Guide Pyramid). All three groups were instructed to consume five-to-seven servings of potatoes per week and were provided with a variety of recipes for potato dishes. Modest weight loss was observed in all three groups (~2% of initial body weight) with no significant difference in weight loss between the groups.

**The results of these studies clearly show what nutrition professionals have always known:**

**when it comes to weight loss it is calories that count—i.e., if you consume more calories than you expend you will gain weight. Conversely, if you consume fewer calories than you expend, you will lose weight.**



## Diabetes

Largely because of their supposed high glycemic index, potatoes have been implicated in the development of type 2 diabetes and are often one of the first foods to be eliminated from the diabetic diet. Compounding the issue, existing research examining the role of GI in the genesis and/or management of type 2 diabetes is controversial, rendering definitive conclusions of the subject difficult. Indeed, there are equally as many studies showing a beneficial role of GI for type 2 diabetes as those showing no benefit (van Woudenberg 2011; Marsh et al. 2011; Mosdøl et al. 2007).

Moreover, many of the studies implicating GI, and more specifically potatoes, in the development of type 2 diabetes have been epidemiological in nature (demonstrating only an association and not causation), have not differentiated between potato products (i.e., processed potatoes with added fats and calories vs. fresh potatoes) and/or have not adequately controlled for potential confounding dietary and other lifestyle factors (e.g., fat intake, fruit and vegetable intake, red meat intake, fiber intake, physical activity, socioeconomic status, etc.) (Halton et al. 2006; Drewnowski 2011).

Indeed, when these confounding factors are controlled, any relationship between potatoes and type 2 diabetes seems to disappear. In a recent study, Drewnowski (2011) used data from two cycles of NHANES (2003-4 and 2005-6) to evaluate the association between potato consumption frequency and incidence of type 2 diabetes. Statistical adjustment was made for potential confounding factors including race/ethnicity, education, diet quality, and physical activity. The results indicated, after adjusting for potential confounding demographic and lifestyle factors, there was no observed association between the frequency of baked potato consumption and the prevalence of type 2 diabetes among adults.

A study recently published in the *Journal of the American Medical Association (JAMA)* sought to determine the effects of glycemic index on risk factors for diabetes as well as cardiovascular disease (Sacks et al. 2014). In this randomized crossover-controlled feeding trial, 163 overweight adults were given four complete diets

that contained all of their meals, snacks, and calorie-containing beverages, each for five weeks. The diets varied in glycemic index (high vs. low) and carbohydrate content (high vs. low). Each diet was based on a healthful DASH-type diet. The results indicated there were no benefits of the low glycemic index diets in terms of improvements in insulin sensitivity, blood lipid levels, or systolic blood pressure, leading the authors to conclude that, in the context of an overall DASH-type diet, using glycemic index to select specific foods may not improve cardiovascular risk factors or insulin resistance.

The Academy for Nutrition and Dietetics does not endorse the elimination of any food or food groups, but rather supports a “total diet approach” where “all foods can fit if consumed in moderation with the appropriate portions sizes” (Freeland-Graves et al. 2007). Likewise, the American Diabetes Association conducted an extensive review of scientific studies and concluded that, for people with type 2 diabetes monitoring carbohydrate intake, whether by carbohydrate counting or experience-based estimation, remains a key strategy in achieving glycemic control (American Diabetes Association 2008).

Determining how much carbohydrate one needs each day depends on many things, including how active an individual is and what, if any, medicines are being taken.

A good place to start is to aim for about 45-60 grams of carbohydrate at a meal (American Diabetes Association). One may need more or less carbohydrate at meals depending on how type 2 diabetes is being managed. Once how much carbohydrate has been determined to eat at a meal, choose the food and the portion size to match. And don't shy away from potatoes; they can make a significant contribution to your daily vitamin and mineral requirements. A 5.3 oz potato, eaten with the skin, delivers 45 percent of the Daily Value for vitamin C, 2 grams of fiber and more potassium than a banana (620 mg vs. 450 mg). The following potato servings provide about 15 grams of carbohydrate:

- **Potato, boiled, 1/2 cup or 1/2 medium (3 oz.)**
- **Potato, baked with skin, 1/4 large (3 oz.)**
- **Potato, mashed, 1/2 cup**

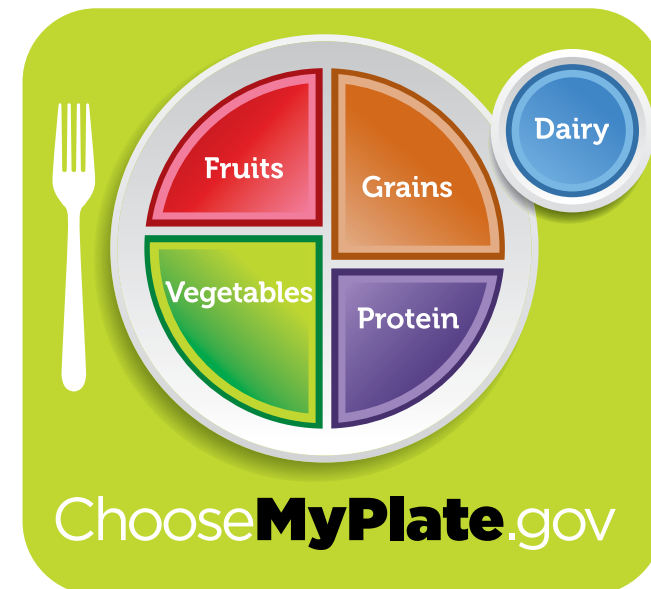
## Potatoes in the American Diet

Potatoes have long held the prominent position of one of America's favorite vegetable side dishes (Synnovate/Potatoes Attitudes and Usage 2014) and for good reason. Not only are potatoes delicious and versatile, they are the perfect complement to many other vegetables and can serve as a conduit for increasing total vegetable consumption. Indeed, research shows when people consume potatoes as part of a meal they frequently include another vegetable with them, thereby increasing total vegetable servings at the meal (Drewnowski and Rehm 2011).

Increasing vegetable intake is a public health message and key nutrition recommendation espoused by medical associations and government organizations alike. Vegetables figure prominently in the 2010 Dietary Guidelines for Americans as well on the current pictorial representation of the Dietary Guidelines, MyPlate. This icon provides a visual representation of the food groups that should make up a meal (i.e., a plate) and places a strong emphasis on fruits and vegetables by filling half the plate with these two important food groups. Research indicates putting potatoes on the plate can improve the overall

diet quality of both adults and children. Using dietary intake data from the NHANES database, Dr. Adam Drewnowski and colleagues (Drewnowski et al. 2011; Drewnowski and Rehm 2011) from the University of Washington examined the nutrient intakes and diet quality of adults and children classified by the frequency of potato consumption. The results indicated those who consumed baked, boiled and roasted potatoes had higher intakes of potassium and vitamin C and consumed more total vegetables in a day compared to those who did not consume potatoes.

Potatoes are also one of the best nutritional values in the produce department, providing significantly better nutritional value per dollar than most other raw vegetables (Drewnowski et al. 2013). In a study published recently in the journal PLoS One, Drewnowski and Rehm (2013) showed that compared to 46 other commonly consumed vegetables, potatoes and beans were the least expensive sources of not only potassium but fiber, too. Specifically, potassium-rich white potatoes were almost half the cost of most other vegetables, making it more affordable to meet key dietary guidelines for good health.





Potato Goodness Comes in All Forms

French fried potatoes and other processed forms of potatoes are frequently (and unjustly) singled out as dietary “villains” for being high in calories and fat and low in nutrient content. However, like all forms of potatoes, processed potatoes deliver meaningful amounts of key nutrients such as potassium, vitamin C and fiber. In fact, frying, because it reduces water, increases the concentration of many of the important vitamins and minerals in potatoes. Gram-for-gram, French fries provide more potassium than most other vegetables. Moreover, improvements in coatings, cooking methods and cooking oils are enhancing the nutritional profile of processed potato products. For example, all leading manufacturers and most restaurant operators now cook French fries in trans fat-free vegetable oils which contain beneficial mono- and polyunsaturated fats.

Storey and Anderson (2013) examined the intake and nutrient contribution of total vegetables, white potatoes and French fries in Americans aged 2 and older, based on national dietary intake survey data from NHANES 2009-2010. Mean total energy intake for the US population (≥2 y old) was 2080 kcal/d, with white potatoes and French-fried potatoes providing 4 percent and 2 percent of total energy, respectively. Individuals

who consumed white potatoes had significantly higher total vegetable and potassium intakes than did non-consumers. In addition, the proportion of potassium and dietary fiber contributed by white potatoes was higher than the proportion they contributed to total energy.

- **On average, Americans get about 1.5% of their calories a day from French fries. Given Americans consume an average of 2,080 calories per day; this represents about 31 calories per day.**
- **Even among the highest consumers (men and women in the 90th percentile), French fries provided 134 and 118 calories/day, respectively, which is equivalent to less than half of a small (71 gram) serving at a fast food restaurant.**

Among white potato consumers aged 14-18 years, white potatoes provided 23 percent of dietary fiber and 20 percent of potassium but only 11 percent of total energy in the diet. The nutrient-dense white potato may be an effective way to increase total vegetable consumption and potassium and dietary fiber intake.



Table 4: Nutrient Content of Processed Potato Products\*

|   | Energy<br>(kcal) | Total Fat<br>(g)<br>(sat fat (g))<br>(trans fat (g)) | Total CHO<br>(g)<br>(fiber (g)) | Potassium<br>(mg) | Magnesium<br>(mg) | Vitamin C<br>(mg) | Vitamin B6<br>(mg) |
|---|------------------|--|---------------------------------|-------------------|-------------------|-------------------|--------------------|
| French Fries<br>(Oven-baked)<br>1 serving<br>(74 g) | 127              | 4.0<br>(1.0)<br>(0)                                  | 21<br>(1.9)                     | 334               | 19                | 10                | 0.14               |
| French Fries<br>(Fried)<br>1 serving (71 g)         | 222              | 10<br>(1.7)<br>(0)                                   | 29<br>(2.7)                     | 411               | 25                | 3.3               | 0.26               |
| Dehydrated Flakes 1<br>cup (60 g)                   | 212              | 0.25<br>(0.17)<br>(0)                                | 49<br>(4.0)                     | 659               | 40                | 49                | 0.40               |
| Frozen Potato Wedges<br>(100 g)                     | 123              | 2.2<br>(0.5)<br>(0)                                  | 26<br>(2.0)                     | 394               | 19                | 11.2              | 0.35               |
| Chips (1 oz)  | 153              | 10<br>(2.4)<br>(0)                                   | 15.5<br>(0.8)                   | 178               | 11                | 0.3               | 0.14               |

\* USDA standard reference 27



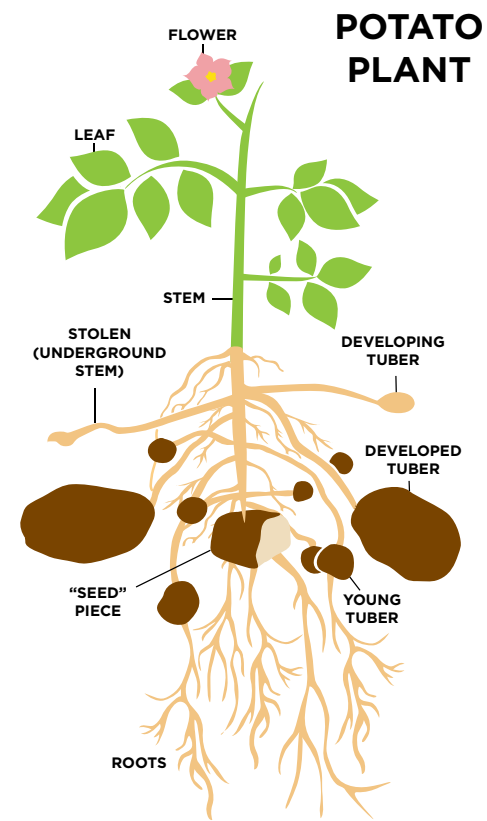




# HISTORY OF THE POTATO

The cultivation of potatoes is believed to date back 10,000 years around Lake Titicaca (in modern-day Peru and Bolivia), when the first inhabitants of this region began selecting edible forms of wild potato species. However, the earliest farming of the modern potato (*Solanum tuberosum*) began in about 1400 BC with the emergence of agricultural communities in this and other areas of South America. The hardiness of potatoes rendered them the ideal crop for the mountainous regions of Peru, where fluctuating temperatures, poor soil conditions, and thin air made it nearly impossible to harvest wheat or corn. Potatoes made their way to Europe in the early 1500s. Spanish conquistadors invaded South America in search of gold and silver and began carrying the potatoes back to their homeland aboard their ships. The Spanish sailors appreciated the “tartuffos” (as they were called) for the protection they offered from scurvy (later found to be due to their significant vitamin C content).

Today, roots and tubers are the third largest carbohydrate food source, representing nearly half of all root crops consumed (FAO/WHO report 1998). Potatoes are grown in all 50 states of the U.S. and in about 125 countries throughout the world, and they continue to be valued for their durability and the fact that they are nutrient rich. Potatoes have long held the prominent position of being America’s favorite side dish (vs. rice and pasta). They are also the second most frequently consumed dinner item, behind only poultry. (Synnovate/ Potatoes Attitude and Usage 2014). In October 1995, the potato became the first vegetable to be grown in space. That collaborative project between the National Aeronautics and Space Administration (NASA) and the University of Wisconsin, Madison was conducted with the goal of feeding astronauts on long space voyages and, perhaps, eventually feeding future colonies in space.



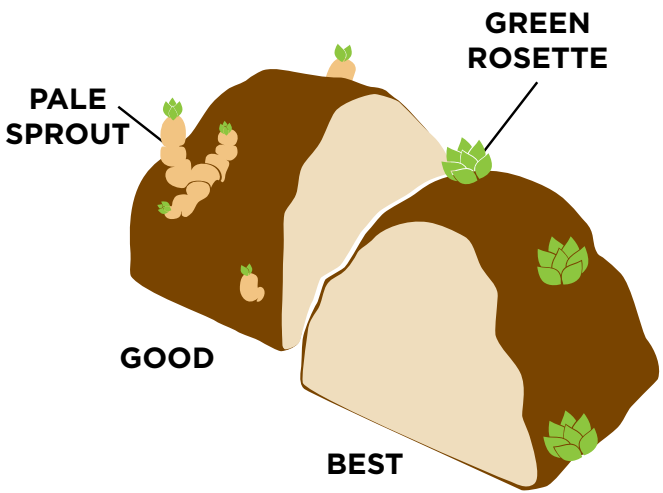
# HOW TO BUY AND STORE POTATOES

## How to Select the Best Potatoes

Look for clean, smooth, firm-textured potatoes with no cuts, bruises or discoloration.

## Store Properly to Keep Potatoes Fresh

- Store potatoes in a well-ventilated place, optimally at a temperature between 45°F and 55°F.
- Colder temperatures (as in a refrigerator) cause a potato’s starch to convert to sugar, resulting in a sweet taste and discoloration when cooked. If you do refrigerate, letting the potato warm gradually to room temperature before cooking can reduce the discoloration.
- Avoid areas that reach high temperatures (beneath the sink or beside large appliances) or receive too much sunlight (on the counter top near a window).
- Perforated plastic bags and paper bags offer the best environment for extending shelf-life.
- Keep potatoes out of the light.
- Don’t wash potatoes (or any produce, for that matter) before storing. Dampness promotes early spoilage.



## “SEED” PIECES

## “Green” Potatoes or Sprouting Potatoes

- Green on the skin of a potato is the build-up of a chemical called Solanine. It is a natural reaction to the potato being exposed to too much light. Solanine produces a bitter taste and if eaten in large quantity can cause illness.
- If there is slight greening, cut away the green portions of the potato skin before cooking and eating.
  - Sprouts are a sign that the potato is trying to grow. Storing potatoes in a cool, dry, dark location that is well ventilated will reduce sprouting.
  - Cut the sprouts away before cooking or eating the potato.



# FRESH POTATO TYPES

There are hundreds of potato varieties planted around the world today.  
The seven main potato types consumers most often see at the store today are:



**Russets**  
Russets are the most widely used potato type in the United States, characterized by a brown, netted skin and white flesh. One favored use for russets is baking. The delicious result has a light and fluffy center, surrounded by a tasty, robust and crispy roasted skin. The delicate potato flavor and grainy texture of a baked russet makes it the ideal partner for a variety of toppings, as flavor infusion is so natural to this type. Russets also create light and fluffy mashed potatoes and traditional crispy, pan-fried potatoes.

**Whites**  
This all-purpose potato type has a white flesh and white (sometimes light tan) skin. Mashing is one favored use. These slightly dense and creamy potatoes have a subtly sweet flavor. Their delicate, thin skins add just the right amount of texture to a mashed potato dish without the need for peeling. Also, try grilling whites to bring out a more full-bodied flavor, or use them in soups and stews as they become tender, yet hold their shape well.



**Reds**  
This variety, once only available in late summer and early fall, is widely known for its rosy red skin and white flesh. One of its favored uses is in soups and stews. Its moist, waxy flesh stays firm throughout the cooking process and the vibrant red skin adds an appealing color to enhance the presentation of any dish. The slightly sweet and always-tender texture also absorbs the hearty flavors of the stock. In addition to savory soups and stews, reds are frequently used to make tender, yet firm potato salad or creamy mashed potatoes.



**Yellows**  
This type, well-known throughout Europe and fast gaining popularity in the U.S., boasts golden skin and golden flesh. One favored use is grilling. Its crispy skin enhances the dense and buttery texture of the flesh. Grilling brings out this quality best, dazzling the palate with its slightly sweet, caramelized flavor. That naturally smooth and buttery texture also lends itself well to lighter versions of baked or roasted potatoes.



**Petites**  
Petites are small, even “bite-sized” potatoes and share the same characteristics—color, flavor and texture—as their full-sized cousins. Petites can be found in red, white, yellow, brown and purple. Don’t let their size fool you, because their flavors are actually more concentrated and they cook more quickly, which makes **potato salads** a favored use for these types. Petites also make colorful, delicious and fun **roasted potatoes**.



**Purples/Blues**  
Relative newcomers to the produce department, purple potatoes have a deep purple skin with flesh that ranges from purple to lavender to almost white. The rich, vibrant color and luscious taste make tossed salads a favored use for this type. The moist, firm flesh retains its shape while adding rich colors to any salad. Because of their mild, yet distinctly nutty flavor, purple potatoes naturally complement green salad flavors. Purple potatoes are also sensational roasted—or try combining purples with fingerlings or reds to instantly create a colorful side dish bursting with flavor!



**Fingerlings**  
This category of potatoes encompasses a wide variety of small, slender “finger-sized” potatoes, typically ranging from 2 to 4 inches in length. These varieties come in a wide range of skin and flesh colors—red, orange, purple, yellow and white—and most possess a firm, waxy texture. Pan-frying, one favored use, enhances their robust flavor and showcases their wonderful nutty or buttery tastes. Roasting creates a similarly delightful flavor sensation. Even consider fingerlings as a change-of-pace foundation for a truly unique potato salad.

# COOKING WITH POTATOES

## Preparing to Cook

To preserve the abundance of nutrients in your potato, cook it in its skin.

- Gently scrub potatoes with a vegetable brush under cool running water. The maximum nutrients are preserved when potatoes are cooked and eaten with the skin on.
- If peeling, use a vegetable peeler or sharp paring knife and keep the peeling very thin, since many of the nutrients are found close to the skin.
- Chop or handle potatoes on a clean cutting board and be sure to use proper safety techniques with all ingredients in a given potato dish to avoid cross contamination with other foods.
- Sometimes potatoes that are cut and uncooked take on a pinkish or brownish discoloration. It's due to the carbohydrate in the food reacting with oxygen in the air. Potatoes that become discolored are safe to eat and do not need to be thrown out. The color usually disappears with cooking.
- Preserve the color of cut potatoes by storing them in cold water with a little added lemon juice or a little vinegar. Limit water soaking to two hours to retain water-soluble vitamins.

## Leftovers

- Refrigerate any leftovers within two hours of serving to prevent food-borne illnesses. Any meal leftovers should be consumed within a few days.
- Potatoes USA does not recommend freezing cooked potatoes at home as they become watery upon reheating. The potato is 80 percent water; and when frozen, this water separates from the starch and nutrients.

## Beyond the Produce Aisle

Potatoes in all forms have a nutritious profile. Look in these sections of the grocery story to get potatoes on the table quicker.

**Frozen:** Take a trip down the frozen aisle of any grocery story and you'll find many different frozen potato options, from wedges, shreds, hash browns and tots to slices, dices, crinkle cut and waffle fries. These products are instantly quick frozen to lock in the taste and nutrients of fresh potatoes, and maintain a longer shelf life. Baking frozen potatoes is a great time-saving option for breakfast, lunch, dinner or a snack.

**Dehydrated/Instant:** Contrary to popular belief, dehydrated/instant potatoes found in boxes in the center aisle of the grocery store are REAL potatoes. Whole potatoes are actually put through an advanced process to create premium dehydrated/instant potato products. Thanks to the careful processing techniques used, dehydrated/instant potato products retain most of their nutrition. Dehydrated/instant potatoes provide significant amounts of potassium and some B vitamins, as well as smaller amounts of other vitamins and minerals including iron.

**French Fries:** French fried potatoes are made from fresh white potatoes. Like potatoes cooked by other methods, French fried potatoes provide important shortfall nutrients and are now prepared with healthier oils. Innovations in food science and technology are driving continuous improvement to ensure this nutritious and popular vegetable continues to align with dietary guidance. When eaten in moderation, French fries can be part of a healthy, well-balanced diet. Visit [apre.org](http://apre.org) for French fry research and resources and to download the complete French fry toolkit.

## How to Bake a Potato

It's the most common potato search term on the internet! How do you bake a potato? Let us count the ways!

*Basic cooking instructions for baked potatoes to serve four:*

With a fork, pierce skin of four medium (5 to 6-ounce) potatoes in several places. Bake in preheated 400-degree oven 40 to 50 minutes, or until tender when tested with fork. The skin will be crispy and the pulp dry and fluffy.

*Microwave cooking instructions for baked potatoes to serve four:*

If you need to get dinner on the table in minutes, try baking potatoes in the microwave. Cut a wedge (1/8-inch wide and 1/2-inch deep) out of four medium (5 to 6-ounce) potatoes. This is done so the steam can fully escape from the potato, resulting in a dry and fluffy pulp. Place potatoes in a microwave-safe dish. Microwave on HIGH, uncovered, for 10 to 12 minutes depending on strength of microwave. Use oven mitts to remove dish from microwave.

**Nutrition Tip:** Whether it's part of a larger meal or the culinary centerpiece, everyone loves a potato. Of course, what you top your potato with determines how healthy it is for you. So, try substituting traditional toppings with some delicious alternatives. Consider sprucing up your spuds with:

- Broccoli spears and low-fat Cheddar
- Salsa, nonfat yogurt and cilantro
- Vegetarian chili
- Wasabi paste
- Marinara sauce and parmesan cheese
- Healthy buttery spread and sea salt
- Bacon bits
- Grilled veggies

Don't be afraid to use the microwave for speeding up all your potato recipes.

## How to Make Perfect Mashed Potatoes

It's the great potato debate and everyone seems to have a personal favorite: how to make perfect mashed potatoes. With skins or without? Russets, Yukon Golds, reds, or whites? Why not try them all?

*Basic cooking instructions for mashed potatoes to serve four:*

Leave skin on or peel three medium (5 to 6-ounce) potatoes. Cut into 1-inch chunks. Place potato pieces in medium pot and pour over enough water (or reduced-sodium broth) to cover. Set pan over high heat and bring to a boil. Boil 10 minutes, or until tender. Drain, then shake potatoes over low heat for 1 minute to dry. Mash with potato masher or fork.

*Microwave cooking instructions for mashed potatoes to serve four:*

Place four medium (5 to 6-ounce) whole potatoes (do not poke) into microwave-safe dish. Cover dish. (If covering dish with plastic wrap, poke small hole in plastic.) Microwave on HIGH for 10 to 12 minutes depending on strength of microwave. Use oven mitts to remove dish from microwave; carefully remove cover and mash well.

**Quick tip:** Mashed potatoes can be prepared in the microwave. Not only does it save time and the extra mess, potatoes preserve the most moisture with this technique.

To keep the potatoes healthy, use a healthy spread, fat-free plain yogurt or low-fat milk. Try stirring in fresh spinach, salsa, low-fat sour cream and low-fat Cheddar or sautéed onions, carrots and zucchini for additional flavor.





## How to Bake Fries

Retain all the healthy goodness of the potato's nutritious profile while creating a family favorite by baking potato wedges in the oven with vegetable oil and Italian herb seasoning. Serve with a fresh salsa for healthy dipping.

### *Basic cooking instructions for baked fries to serve four:*

Heat oven to 450 degrees. Slice 3 medium potatoes (5 to 6 ounces each) lengthwise 3/4-inch thick, then cut each slice into 3/4-inch long sticks. Place in large bowl. Drizzle with 1 tablespoon canola or other vegetable oil and sprinkle with 1 teaspoon dried Italian herb seasoning and 1/4 teaspoon salt (or to taste); toss to coat evenly. Arrange potato pieces in a single layer on nonstick baking sheet or baking sheet coated with vegetable cooking spray. Bake 20 to 25 minutes until potatoes are golden brown, turning once after 15 minutes. Serve immediately.

**Flavor tip:** Mash together rosemary, salt and pepper in a small bowl with the back of a spoon; sprinkle over cooked potatoes and toss well to coat. Healthy and delicious fries are quick, easy and full of flavor!



## How to Grill with Potatoes

Grill, barbecue, cookout—no matter what you call it, nothing beats outdoor cooking, and not just during the warm summer months. Potatoes are the second most popular vegetable to grill, according to the Hearth, Patio and Barbecue Association. They are the perfect accompaniment to all meats, and no matter what the spice, they are the ideal canvas for a variety of flavor. By using a microwave to par-cook your potatoes, actual cook time is reduced dramatically.

Add grilled potatoes before mixing in your salad for a unique twist on a summer-time staple (see Grilled Pesto Potato Salad recipe on page 39). For a patio party, grill up potato wedges and with a flavorful dip (see Flame-Licked Fingerlings with Spud Rub Dip on page 38). Encourage kids to play with their food by serving up kebobs—everyone's favorite (see Grilled Potato Kebobs with Lemon-Herb Drizzle on page 39).



## Potato Salad Possibilities

We'll always cherish Grandma's classic potato salad. But the following 20 twists on the traditional will ignite inspiration for a new potato side dish!

- Asian Potato Salad
- Warm Honey Mustard Potato Salad with Green Beans
- Potato'zanella
- Roasted Fingerling Potato Salad with Lemon & Thyme
- Mediterranean Sun Kissed Savory Salad
- Smoked Salmon Potato Salad with a Creamy Dill Dressing
- Roasted Red Potatoes with Pesto
- Potato and Edamame Salad
- Warm Dijon-Roasted Asparagus and Potato Salad
- Potato Salad Skewers
- Thai Potato Salad
- Roasted Potato Salad with Corn, Red Bell Peppers and Pancetta
- German Potato Salad with Honey Mustard Vinaigrette
- Steak and Purple Potato Salad
- Potato Caesar Salad
- Salt-Crusted Potato Salad
- Potato Salad with Quick Preserved Lemon, Coriander and Arugula
- Warm Potato and Acorn Squash Salad



Purple Potato Salad with Beets and Arugula



Rainbow Roasted Potato Salad

Above recipes available at  
[PotatoGoodness.com/recipes](http://PotatoGoodness.com/recipes)



# RESTAURANT CHEFS LOVE POTATOES

Year after year, potatoes remain one of the best-selling side dishes in food service. They're familiar and satisfying, easy to eat and easy to love. Even the simplest side of creamy mashed or crispy roasted potatoes has the power to upstage any entrée paired with it, enhancing presentations and adding appetite appeal. Now that chefs can tap into the many intriguing shapes, colors and flavors of today's potato types, healthy innovation is easier than ever. No wonder so many chefs, from casual to fine dining, are reinventing potatoes in exciting new ways!



Potatoes USA is continually working with leading chefs and operators to develop healthy new potato menu items. At our annual innovation sessions at the Culinary Institute of America, it happens over and over again: Chefs are amazed at how many truly innovative things they can do with potatoes once they start thinking about it.

It's all a question of looking beyond the familiar—beyond baked, fried, mashed and hash browns. Suddenly, you realize a potato makes a delicious, healthful “canvas” for creating the types of menu items everyone looks for today: flavorful, globally-inspired, colorful and creative.

**Here's a hearty salad with Mediterranean roots. Instead of traditional croutons, it combines the fresh crunch of frisée with roasted fingerling potatoes and other root vegetables.**



## Healthy Options on Menus

Consumers' growing concerns with health and nutrition is increasingly reflected when they dine out. According to the National Restaurant Association's research, more than seven out of 10 consumers say they are likely to visit a restaurant that offers healthy options, and eight out of 10 agree there are more healthy choices now compared with two years ago. This focus on nutrition has spurred restaurant operators across all segments to add items identified as health/nutritious to their menus.



**Slice and stuff a potato with flavorful ingredients, like lemons, prosciutto and garlic, then roast. Pair it with a boldly flavored dipping sauce.**

## Nutrition Makes a Difference

| Consumers take notice of healthful menu options               | All Adults | Men | Women |
|---|------------|-----|-------|
| More healthy options available compared to two years ago      | 81%        | 79% | 84%   |
| More likely to visit a restaurant that offers healthy options | 72%        | 67% | 76%   |

## Healthier Potato Menu Tips

Keep a light touch. On their own, potatoes are lean and healthful. It's the add-ins that can sometimes tip the scales. Health-conscious chefs are replacing the butter in traditional mashed potatoes with a little olive oil, yogurt, broth or extra-flavorful, fat-free ingredients such as wasabi, chile paste or salsa. More restaurants are offering “smashed” potatoes in their jackets, since many nutrients lie just below the skin, and converting to oven-baked “skinny fries” with cooking oil spray and a sprinkling of coarse salt. Some potato suppliers offer pre-cut fries with a coating intended to help the potato absorb less oil during frying.

## Chef's secret to fat-free richness.

In creamed soups and sauces, the rich texture and flavor usually associated with butter and cream can be achieved by substituting potatoes for some or all of the fat.

## Light & healthy toppings.

Yogurt-based sauces, roasted vegetables, sun-dried tomatoes, olive tapenade, signature barbeque sauces and fresh herbs are healthy topping for baked potatoes, fries and chips.

## Savvy sides & salads.

More chefs are mixing potatoes with other vegetables, like kale and cauliflower, to add value and excitement to side dishes. They're also preparing classic pasta salad with potatoes to offer a gluten-free alternative.

**For our “Get Creative” e-newsletter, more menu ideas and recipes, visit [PotatoGoodness.com/foodservice](http://PotatoGoodness.com/foodservice)**



POTATO  
STORY IDEAS



## POTATO STORY IDEAS



**January:** This year, resolve to skip the fad diets and focus on real nutrition. Discover the healthy potato and the nutrition packed inside. With just 110 calories and no fat in a medium-size potato, spuds are a nutritious and flavorful way to start the New Year.

Please your guests' palettes with a Potato Bruschetta for your New Year's Eve gathering. Potatoes USA's recipe for Potato Bruschetta will amaze guests when they learn these delicious bites are not only naturally nutritious, but gluten-free, too!



**February:** It's no coincidence February is Potato Lovers' Month *and* American Heart Month. Did you know potassium can reduce your risk for heart disease? What many Americans don't realize is potatoes are a good source of potassium. Consuming more potassium can help reduce the risk of high blood pressure. So show your heart a little love by incorporating potatoes into your diet.

Amaze football fans and foodies alike by serving traditional snacks with a healthy twist. Potatoes USA's recipes for Totchos, a twist on nachos using frozen tater tots in place of tortilla chips, will leave your party guests happy even if their team doesn't win the big game! Guests won't miss the chips and they'll be getting an extra dose of nutrients like potassium and vitamin C with the quick and easy substitution.



**March:** Perhaps the potato is America's Favorite Vegetable because so many Americans claim Irish blood. According to History.com, there are 34.7 million U.S. residents who claim Irish ancestry—more than seven times the population of Ireland itself! Irish or not, everyone loves potatoes, so consider serving Potatoes USA's healthy twist on a traditional Corn Beef and Cabbage Warm Potato Salad on St. Patrick's Day.

Peel back the truth during National Nutrition Month and discover a seriously healthy vegetable—one medium-size potato has just 110 calories, is fat-free, provides 45 percent of your daily value of vitamin C and, when eaten with the skin, has more potassium than a banana!



**April:** Whether you're attending an Easter Brunch gathering or hosting your own, our Potato and Egg Bake recipe is a sure-fire hit everyone will love. Packed with vegetables, it's easy to make ahead of time. Consider doubling the recipe because we can guarantee guests will be looking for seconds!

Potatoes USA's makeover series of classic potato recipes, including mashed and baked, as well as fries, casseroles, soups and salads, will have families tricked into believing that mom slaved in the kitchen for hours to make something so delicious. Contrary to popular belief, potatoes can be quick and healthy, providing a side dish or main course in under 20 minutes.



**May:** Grill, barbecue, cookout—no matter what you call it, nothing beats outdoor cooking in the warm summer months. The potato is not only a family favorite, but is also the second most popular vegetable to cook on the outdoor grill, according to the Hearth, Patio and Barbecue Association. This summer, treat BBQ party attendees with the Potatoes USA's Flame-Licked Fingerlings.

Cinco de Mayo is a great excuse to celebrate with papas (Spanish for “potatoes”)! Potatoes have long since been a staple in Latino cooking, so spruce up your fiesta spread with Potato Nachos or potato-skin inspired Fiesta Potato Tacos.



**June:** Potatoes USA's boasts a wide range of potato salad recipes with everything from Spicy Roasted Potato Salad to a Caesar Potato Salad that incorporate fingerling potatoes. Each of these recipes is as healthy as it is convenient and delicious.

June is National Fruit and Vegetables Month, and the potato just so happens to be America's Favorite Vegetable Side Dish. Celebrate with a different potato dish every day of the month—or at least once a week! With potato recipes that are perfect for breakfast, lunch and dinner, Potatoes USA's has plenty of vegetarian recipes ideal for increasing your family's veggie consumption—and kids won't turn up their noses at these spuds!





**July:** There's no need to heat up your kitchen during the dog-days of summer. Next time you're invited to a summer potluck, try Cookout Potatoes, a delicious grill-top "au gratin" sure to be a hit served alongside any meat. The bacon and bell pepper add great color and texture, but the minimal prep, and "to go" container might be the best part.

Potatoes come in red, white and blue. Call it serendipity or, perhaps, patriotic planters, but put these tubers together into a vibrantly-colored Red, White and Blue Kebabs and you're guaranteed to add festivity to Fourth of July gatherings.



**August:** Summer savings tip: Healthy eating and budget cutting can go hand-in-hand. Contrary to popular belief, you don't have to sacrifice nutrition when eating on a budget. Pound for pound, potatoes are one of the best values in the produce department. Averaging 25 cents per serving, you can't afford NOT to include potatoes in your diet.

Back-to-school season is in full swing, which means families everywhere are back to juggling carpools, soccer practice, dance lessons and packed lunches, among many other activities. It's easy to get a quick and healthy dinner on the table with these kid-approved Mashie-Topped Meatloaf Cupcakes.



**September:** Cool weather = comfort food cravings. But those cravings don't have to mean extra calories. Potatoes are the ultimate comfort food and there are many ways to keep them naturally nutritious and delicious. Try Potatoes USA's Potato Tomato Soup for a recipe that warms the body and the soul.

Chicken and potatoes are the new perfect pairing. Celebrate National Chicken Month with this budget-friendly dynamic duo. Try Potato USA's Mediterranean Lemon Chicken and Potato Packets on the grill or in the oven.



**October:** Celebrate potato harvest morning, noon or night with Potatoes USA's Vegetaters. Served with a simple egg white omelet, the potatoes are accompanied by broccoli florets and red and green peppers for an added dose of vitamin C. One serving of this dish provides a whopping 92 percent of the recommended daily value for vitamin C!

There's nothing scary about potato nutrition! Potatoes are a great canvas for a Halloween night dinner to get the little gremlins out the door satiated and satisfied. Potatoes USA's Boo! Pumpkin and Potato Stew is the perfect one-pot wonder to kick off a spooktacular evening.



**November:** Give thanks to America's favorite vegetable! Not only does this gracious tuber complete the quintessential Thanksgiving plate, it's also loaded with potassium, an essential mineral that's lacking in many American diets. From Browned Butter with Butternut Squash Mashed Potatoes to White Chocolate Mashed Potatoes, Potatoes USA is the #1 resource for all of your Thanksgiving potato needs and inspiration.

Cook once, eat twice. Leftovers are common during the holidays but you don't have to eat the same meal over and over. Serve a Tex Mex Shepherd's Pie using leftover turkey and mashed potatoes—so good it's great to serve to lingering company, too!



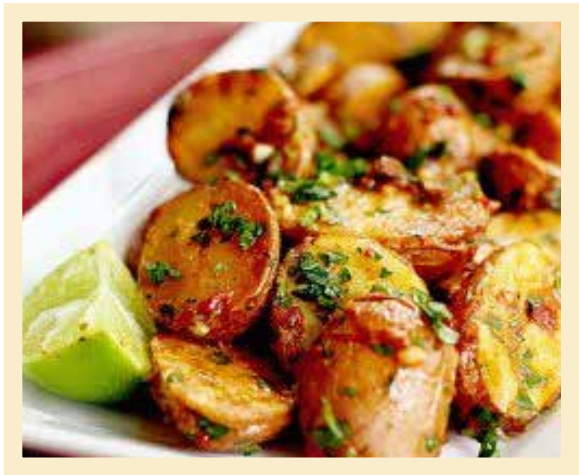
**December:** 'Tis the season for indulging, but save breaking the bank and busting the waistline for special holiday parties and celebrations on the weekends. The perfect weeknight meal is Pennywise Potato Turkey Wraps—they're good for the wallet and the waistline. Bonus: the recipe represents all sections of the food pyramid!

Potatoes fit any holiday occasion. Need a festive appetizer that's gorgeous, delicious and healthy to boot? Red Potato and Cucumber Bites are a party show-stopper. For Hanukkah menu planning, try Lightened-Up Latkes for a healthy twist on a holiday classic.





## Chipotle and Lime Roasted Potatoes



Makes 6 servings

- 1 1/2 to 2 pounds small new potatoes
- 1 tablespoon + 2 teaspoons extra virgin olive oil
- 1/2 teaspoon kosher salt
- 1 chipotle pepper from a can of chipotle peppers in adobo sauce\*
- 2 teaspoons adobo sauce
- 1 garlic clove, minced
- 1 tablespoon lime zest
- 1 tablespoon fresh lime juice
- 2 tablespoons fresh chopped cilantro

\* Chipotle peppers in adobo sauce can be found canned in most major grocery stores

Preheat oven to 400°F. With a knife, slice the potatoes in half. Place the halved potatoes on a baking sheet. Drizzle 1 tablespoon of olive oil over the potatoes. Add salt and toss with your hands until the potatoes are thoroughly coated with oil and salt. Place in the oven for 30 to 35 minutes, stirring once, until golden and can be easily pierced with a fork. While the potatoes are cooking: Mince the chipotle pepper. Place in a large bowl. Add the adobo sauce to the bowl. Add the garlic to the bowl as well. Next, add the lime zest, lime juice, and the remaining 2 teaspoons of olive oil. Whisk everything together until combined. Once the potatoes are done and still hot, pour them into the chipotle lime dressing. Add cilantro and gently stir to combine, making sure every potato is covered. Plate and serve.

Nutrients per serving: Calories: 156 Fat: 4g Sodium: 228mg Vitamin C: 32% Carbohydrates: 27g Fiber: 3g Protein: 3g Potassium: 735mg

## Flame-Licked Fingerling Potatoes with Spud Rub

Makes 4 servings

### Spud Rub:

- 1 tablespoon onion powder
- 2 teaspoons lemon pepper
- 1 1/2 teaspoons paprika
- 1 1/2 teaspoons smoked paprika
- 1/2 teaspoon sea salt
- 1/2 teaspoon ground cumin

### Potatoes:

- 1 pound fingerling potato mix
- 2 teaspoons olive oil
- 1 tablespoon Spud Rub

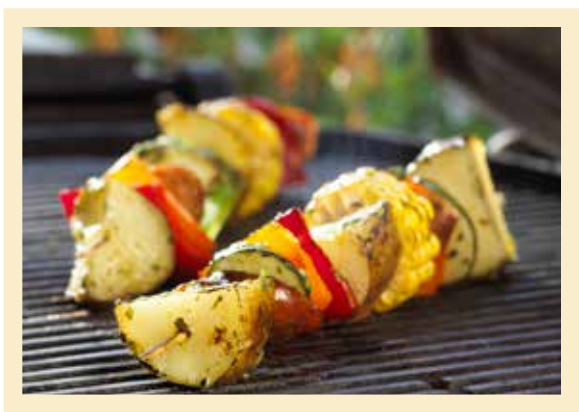
For the rub, combine all ingredients in a glass jar, close the lid, and shake to blend. Store at room temperature. Prepare a medium-hot fire in your grill. Place the potatoes in a bowl, drizzle with the olive oil, and sprinkle with Spud Rub. Toss to coat. Place the potatoes on the grill rack or in grill basket directly over the heat and close the grill lid. After 3 to 4 minutes, open the lid and toss the potatoes or turn the basket. Close the lid again and repeat the process for 12 to 15 minutes or until potatoes are tender when pierced with a fork. Makes 4 side dish servings.

**Serving tip:** Serve the grilled fingerlings on a platter alongside a bowl of Spud Rub Dip. To make Spud Rub Dip, combine 1/2 cup prepared buttermilk or ranch-style dressing and 1 teaspoon Spud Rub in small bowl. Stir to blend. Refrigerate until ready to serve.

Nutrients per serving: Calories: 110 Fat: 2g Sodium: 19mg Vitamin C: 22% Carbohydrates: 20g Fiber: 2g Protein: 2g Potassium: 618mg



## Grilled Kebobs with Lemon-Herb Drizzle



Makes 4 servings

### Lemon-Herb Drizzle:

- 1/4 cup extra virgin olive oil
- 3 cloves garlic, minced
- 2 tablespoons chopped fresh herbs (such as basil, rosemary, marjoram and sage)
- 1/2 teaspoon sea salt, or to taste
- Juice of 1 fresh lemon
- Freshly ground pepper to taste

### Potato Kebobs:

- 1 pound russet potatoes, scrubbed
- 1 (12-oz.) package precooked chicken sausage, sliced 1/4-inch thick on the diagonal
- 2 ears fresh corn, cut into 1-inch pieces
- 1 zucchini, sliced 1/4-inch thick on the diagonal

Heat olive oil in a small saucepan until very hot; remove from heat and stir in garlic. Let cool, then stir in herbs, salt, lemon juice and pepper; set aside. Place potatoes in a medium-size microwave-safe bowl and cover with a lid or plastic wrap. Note: If using plastic wrap, make sure plastic wrap is not touching any ingredients and poke one small hole in cover to vent. Microwave on high for 10 to 12 minutes or until potatoes are tender (cooking time may vary depending on microwave). Use oven mitts to carefully remove from microwave. When cool enough to handle, cut into large chunks. Thread potatoes, sausage and vegetables onto skewers. Grill over medium-high heat for about 10 minutes, turning frequently and brushing with a little of the herb mixture during the last few minutes of cooking. Remove from grill and place on a platter; drizzle with remaining herb mixture.

Nutritional analysis per serving: Calories: 340 Fat: 18g Cholesterol: 55mg Sodium: 680mg Vitamin C: 2% Fiber: 4g Protein: 15g Potassium: 682mg

## Grilled Pesto Potato Salad

Makes 8 servings

- 3 pounds medium-size red potatoes
- Olive oil cooking spray
- 1/3 cup white or golden balsamic vinegar
- 1/4 cup extra virgin olive oil
- 1/2 teaspoon sea salt
- 3 cloves garlic, minced
- Freshly ground pepper to taste
- 1/3 cup shredded Parmesan cheese
- 1/4 cup finely minced fresh basil
- 1/4 cup toasted pine nuts (optional)

Place potatoes in a large microwave-safe bowl; cover with lid or plastic wrap. Note: If using plastic wrap, make sure plastic wrap is not touching any ingredients and poke one small hole in cover to vent. Microwave on high for 10 to 12 minutes or until potatoes are tender (cooking time may vary depending on microwave). Use oven mitts to carefully remove from microwave. When cool enough to handle, cut potatoes in half or quarters and spray liberally with olive oil spray. Grill over high heat for 5 to 7 minutes, turning occasionally, until grill lines are apparent. Remove from grill and let cool. Cut into bite-size pieces and place in a large bowl. Whisk together vinegar, oil, salt and garlic; pour over potatoes and toss lightly to coat. Season with pepper, then cover and refrigerate until ready to serve. Just before serving, toss with Parmesan cheese and basil, then sprinkle with pine nuts.

Nutritional analysis per serving: Calories: 210, Fat: 8g, Saturated Fat: 1.5g, Trans Fat: 0g, Cholesterol: 5mg, Sodium: 230mg, Potassium: 784mg, Carbohydrates: 29g, Fiber: 3g, Sugar: 2g, Protein: 5g, Vitamin A: 2%, Vitamin C: 60%, Calcium: 8%, Iron: 8%





## Quick and Healthy Baked Pizza Potatoes



Makes 4 servings

- **4 (5-to 6-oz.) Russet potatoes, scrubbed**
- **1/4 cup nonfat plain yogurt**
- **4 teaspoons healthy buttery spread**
- **1/2 teaspoon garlic or seasoned salt**
- **Snipped fresh chives or green onion tops (optional)**
- **16 slices turkey pepperoni**
- **1/4 cup warm pasta sauce**
- **1/4 cup Italian blend shredded cheese**
- **1 tablespoon minced green pepper**
- **1 tablespoon sliced green onion**

Cut a wedge out of each potato about 1/8-inch wide and 1-inch deep and place in a microwave-safe dish. Microwave on HIGH, uncovered, for 10 to 12 minutes depending on strength of microwave. Use oven mitts to remove dish from microwave. Carefully make a slit in the top of each potato and fluff with a fork. Stir 1 tablespoon yogurt, 1 teaspoon buttery spread and 1/8 teaspoon salt into each potato; sprinkle with chives if desired. Place 16 slices turkey pepperoni on a plate and microwave on HIGH for 45 to 60 seconds to crisp. Top each seasoned potato with pasta sauce, cheese, green pepper and green onion. Microwave on HIGH for 2 minutes to melt cheese, then, top with coarsely crumbled pepperoni slices

*Nutritional analysis per serving: Calories: 290 Fat: 4g Cholesterol: 20mg Sodium: 590mg Vitamin C: 0.7% Fiber: 3g Protein: 15g Potassium: 708mg*

## Rainbow Potato Pancakes

Makes 4 servings

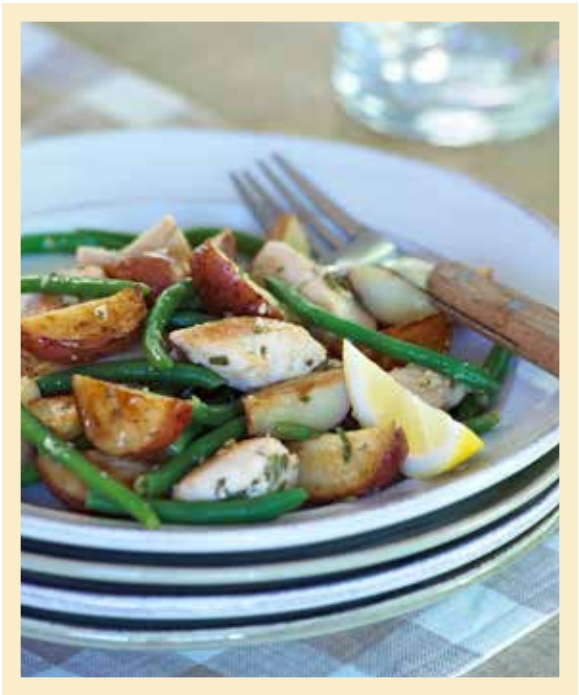
- **2/3 pound (2 medium) unpeeled potatoes, shredded**
- **1 medium (6-inch) carrot, peeled and shredded**
- **1 medium (5 to 6-inch) zucchini, shredded**
- **1/3 cup finely diced red bell pepper**
- **1/3 cup sliced green onions with tops**
- **1 large egg, lightly beaten**
- **2 tablespoons unseasoned dry bread crumbs**
- **3/4 teaspoon salt**
- **1/8 teaspoon pepper**
- **2 tablespoons canola oil, divided**
- **Reduced-fat sour cream (optional)**

Enclose the three shredded vegetables in a clean kitchen towel; wring over sink to remove as much moisture as possible. Place vegetables in large bowl and immediately mix in bell pepper, onions, egg, bread crumbs, salt, and pepper to blend thoroughly. In large nonstick skillet, heat 2 teaspoons of the oil over medium-high heat. With 1/4-cup measure, portion mixture into skillet to make four pancakes, pressing down to flatten each mound to about 1/3 inch, and spacing apart. Fry until well browned on bottom sides, about 4 minutes. Flip and brown reverse sides. Remove with spatula and drain on paper towels. Repeat with remaining oil and potato mixture. Serve hot with sour cream, if desired.

*Nutritional analysis per serving: Calories: 159 Fat: 8g Cholesterol: 53mg Sodium: 489mg Fiber: 3g Protein: 5g Potassium: 545mg*



## Tuscan Potato Skillet



Makes 4 servings

- **1 pound petite red potatoes**
- **1/2 teaspoon salt**
- **1/4 teaspoon pepper**
- **1 pound chicken tenderloins**
- **2 tablespoons extra virgin olive oil, divided**
- **1 tablespoon chopped fresh rosemary**
- **4 cloves garlic, minced**
- **1 (12-oz.) bag frozen green beans, thawed**
- **1 lemon, zested and juiced**

Cut each potato into 4 wedges. Place in a large microwave-safe bowl and season with salt and pepper. Microwave on HIGH for 4 minutes. Stir and microwave for 4 minutes more. While potatoes are cooking, cut each chicken tenderloin into 4 equal pieces. Heat 1 tablespoon oil in a large skillet over medium-high heat. Add chicken and cook for 5 minutes or until nicely browned, stirring frequently. Add remaining oil and potatoes; cook and stir for 5 minutes more to brown potatoes and fully cook chicken. Stir in rosemary, garlic, green beans, lemon zest and juice. Cook for a few minutes more to heat through. Season to taste with salt and pepper

*Nutritional analysis per serving: Calories: 240 Fat: 7g Cholesterol: 50mg Sodium: 690mg Vitamin C: 50% Carbohydrates: 22g Fiber: 3g Protein: 22g Potassium: 137mg*

## Spring Potato Salad

Makes 10 servings

- **2 pounds small red potatoes**
- **3 tablespoons extra virgin olive oil, divided**
- **1/4 cup lemon juice**
- **1/4 cup mint, finely chopped**
- **2 tablespoons minced shallots**
- **2 teaspoons Dijon mustard**
- **Salt and pepper to taste**
- **6 cups baby arugula**
- **1 cup frozen and thawed or cooked fresh baby peas**

Cook potatoes in large pot of boiling salted water for 10 to 15 minutes or until tender. Drain and let cool. Cut potatoes in half and transfer to large bowl. Add 2 tablespoons oil and toss to coat. Grill potatoes for 3 to 5 minutes or until lightly grill marked. Whisk together remaining oil, lemon juice, mint, shallots and Dijon in a small bowl. Season with salt and pepper. Toss potatoes, arugula, peas and dressing together. Makes 10 servings.

*Nutritional analysis per serving: Calories: 157, Fat: 4.5g, Sat Fat: 1g, Cholesterol: 0mg, Sodium: 80mg, Carbohydrates: 18g, Fiber: 3g, Protein: 3g, Vitamin A: 10%, Vitamin C: 48%, Calcium: 4%, Iron: 7%, Potassium: 425mg*





## Thai Lettuce Cups with Red Curry Potatoes



Makes 6 servings

- 1 tablespoon olive oil
- 1 teaspoon Thai red curry paste
- 18 frozen Tater Tots
- 1/3 cup fresh lime juice
- 1/2 cup packed golden brown sugar
- 2 tablespoons fish sauce (nam pla) or soy sauce
- 6 butter lettuce leaves
- 1 large carrot, peeled, grated
- 12 cilantro sprigs
- 2 green onions, thinly sliced
- 3 tablespoons fresh mint leaves

Preheat oven to 450°F. Stir water and curry paste to blend in large bowl. Add tater tots and toss to coat. Spread tater tots out on heavy large rimmed baking sheet. Roast until golden, about 20 minutes. | Meanwhile: Stir lime juice, sugar and nam pla to blend in small bowl for sauce. | Arrange lettuce leaves on platter. Top with carrots, cilantro, green onions and mint, dividing evenly. Arrange three tater tots atop each cup. Serve, passing sauce separately.

**Variations:** For a vegetarian dish, use soy sauce in place of the fish sauce.

*Nutritional analysis per serving: Calories: 164.4 Fat: 5.4g Sodium: 569.9mg Vitamin C: 14.5% Carbohydrates: 28.7g Fiber: 1.6g Protein: 1.5g Potassium: 230.7mg*

## Potato Kale and Pecorino Frittata

Makes 8 servings

- 2 tablespoons olive oil
- 10 ounces (2 medium) white potatoes, cubed
- Salt and pepper
- 1 clove garlic, minced
- 1 small bunch kale, chopped (about 2 cups)
- 1 teaspoon Dijon mustard
- 10 large eggs, beaten
- 1/2 cup shredded pecorino

Preheat oven to 400°F. | Heat 1 tablespoon of the oil over medium heat in a 10-inch ovenproof and nonstick skillet. Add the potatoes, season with a pinch of salt and pepper, and sauté until golden brown and tender, about 10 minutes. Remove potatoes and set aside until needed. | Add the remaining 1 tablespoon oil to the skillet and add the garlic and kale and season with a pinch of salt and pepper. Sauté until kale is wilted, about 5 minutes. Add potatoes and mustard; stir to combine. Stir in beaten eggs and cheese. Place the skillet in the oven. Bake for 20 minutes or until the eggs are cooked through and a toothpick inserted in the center comes out clean | Once the frittata is finished, run a knife around the edge of the skillet and gently slide the frittata onto a carving board or serving plate. Garnish with additional pecorino cheese if desired. Slice and serve.

*Nutrients per serving: Calories: 190 Fat: 11g Cholesterol: 240mg Sodium: 287mg Vitamin C: 41% Carbohydrates: 10g Fiber: 1g Protein: 12g Potassium: 370mg*



## Lightened-Up Loaded Baked Potato Soup

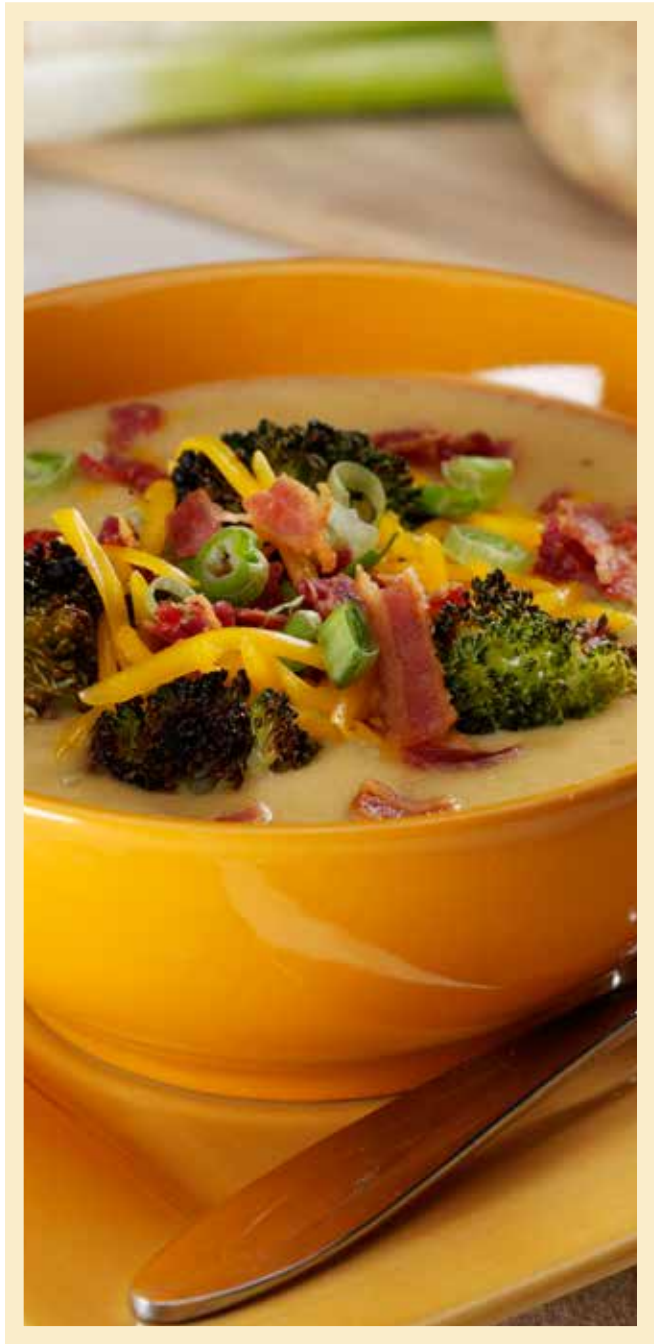
Makes 10 servings

- 6 medium white potatoes, diced
- 8 ounces (or 2 1/2 cups) frozen cauliflower
- 1 head broccoli, chopped into bite-sized pieces
- 1 leek, washed and chopped thinly
- 2 teaspoons olive oil, divided
- 1/2 teaspoon crushed red pepper
- 1 1/2 teaspoon chopped garlic, divided
- 2 cups low-sodium vegetable broth
- 2 cups 2% milk
- 3/4 teaspoon kosher salt
- 5 ounces reduced-fat sharp cheddar cheese, for topping
- 5 slices center-cut bacon, microwaved and crumbled for topping
- Chives, chopped for topping

Preheat oven to 425°F. | Fill large pot with potatoes and salted water. Bring to a boil over high heat and cook until potatoes are fork tender, about 15 minutes. When potatoes have finished cooking, drain water and set potatoes aside in bowl or colander. | While potatoes are cooking, line rimmed baking sheet with parchment paper. To prepare broccoli, remove bottom part of stem, and slice into bite-sized florets leaving an inch of the stem intact. Place broccoli on prepared baking sheet, lightly drizzle with 1 teaspoon olive oil and sprinkle with pinch of salt and 1/2 teaspoon garlic. Roast in oven for 20 minutes until crispy. | Heat 1 teaspoon olive oil over medium heat. Sauté leeks, crushed red pepper, and garlic until leeks soften, about 1-2 minutes. Add cauliflower and vegetable stock, increase heat to medium-high and cook until cauliflower is soft. Remove pot from heat, and add potatoes, milk, and 1/2 teaspoon salt. | Using an immersion blender, (or transfer soup to regular blender), puree soup until smooth and creamy. | To serve, ladle one cup of soup into a bowl and top with cheese, bacon, chives, and roasted broccoli. Enjoy! Makes 10 servings.

**Note:** Boil or microwave broccoli for the topping if you don't want to fire up your oven for roasted broccoli.

*Nutrients per serving: Calories: 159 Fat: 4g Cholesterol: 10mg Sodium: 530mg Vitamin C: 39% Carbohydrates: 22g Fiber: 2g Protein: 9g Potassium: 513mg*







# Pesto Parmesan Potato Stackers

Makes 6 servings

- 6–8 Yukon Gold potatoes (about 2 inches in diameter)
- 1/2 cup shredded parmesan
- 3 tablespoons pesto
- 1/4 teaspoon pepper
- 1/2 teaspoon sea salt

Preheat oven to 400°F and spray muffin tin with nonstick cooking spray. Peel the potatoes (optional) and thinly slice them by hand, with a mandolin or food processor fitted with slicer blade, discarding rounded ends. Place in mixing bowl, add shredded parmesan and pesto, and mix well with a spoon, separating potato slices so that all are evenly coated with mixture. Add salt and pepper to taste. Stack slices beginning with smaller potato pieces at the bottom in the prepared muffin tin until they reach the top of the muffin tin. Scrape bowl to remove all remaining cheese mixture and spoon over potatoes. Bake for 25 minutes or until potatoes are tender when pierced with a sharp knife. Makes 12 side dishes or appetizers.

*Nutrients per serving: Calories: 93 Fat: 3g Cholesterol: 4mg Sodium: 185mg Vitamin C: 8% Carbohydrates: 14g Fiber: 1g Protein: 3g Potassium: 320mg*

## Garlic and Olive Oil Variation

- 6–8 Yukon Gold potatoes (about 2 inches in diameter)
- 2 tablespoons extra virgin olive oil
- 3 cloves (2 teaspoons) of garlic minced
- 1/4 teaspoon pepper
- 1/2 teaspoon sea salt

Preheat oven to 400°F and spray muffin tin with nonstick cooking spray. Peel the potatoes (optional) and thinly slice them by hand, with a mandolin or food processor fitted with slicer blade, discarding rounded ends. In a small sauce pan heat olive oil and garlic on medium heat until garlic is fragrant (approximately 2 minutes). Remove from heat. In a mixing bowl, combine sliced potatoes, garlic olive oil, pepper and sea salt. Stack slices beginning with smaller potato pieces at the bottom in the prepared muffin tin until they reach the top of the muffin tin. Bake for 25 minutes or until potatoes are tender when pierced with a sharp knife. Makes 12 side dishes or appetizers.

*Nutrients per serving: Calories: 81, Fat: 2g, Saturated Fat: 0g, Trans Fat: 0g, Cholesterol: 0mg, Sodium: 101mg, Potassium: 319mg, Carbohydrates: 14g, Fiber: 1g, Sugar: 0.5g, Protein: 2g, Vitamin A: 0%, Vitamin C: 8%, Calcium: 1%, Iron: 4%*

## Italian Potato Stackers Variation

- 6–8 Yukon Gold potatoes (about 2 inches in diameter)
- 1/2 cup shredded part-skim mozzarella cheese
- 1/2 cup prepared marinara sauce
- 1/4 teaspoon pepper
- 1/2 teaspoon sea salt

Preheat oven to 400°F and spray muffin tin with nonstick cooking spray. Peel the potatoes (optional) and thinly slice them by hand, with a mandolin or food processor fitted with slicer blade, discarding rounded ends. Place in mixing bowl, add remaining ingredients, and mix well with a spoon, separating potato slices so that all are evenly coated with mixture. Stack slices beginning with smaller potato pieces at the bottom in the prepared muffin tin until they reach the top of the muffin tin. Scrape bowl to remove all remaining cheese mixture and spoon over potatoes. Bake for 25 minutes or until potatoes are tender when pierced with a sharp knife. Makes 12 side dish or appetizers.

*Nutrients per serving: Calories: 78, Fat: 1g, Saturated Fat: 0.5g, Trans Fat: 0g, Cholesterol: 3mg, Sodium: 174mg, Potassium: 354mg, Carbohydrates: 15g, Fiber: 1g, Sugar: 1g, Protein: 3g, Vitamin A: 2%, Vitamin C: 8%, Calcium: 5%, Iron: 1%*



# Roasted Potato Fries with Avocado Aioli

Makes 6 servings

## For the Roasted Potato Fries:

- 1 1/2 pounds fingerling potatoes, scrubbed and cut in half lengthwise
- 2 tablespoons olive oil
- 3/4 teaspoon paprika
- 1/2 teaspoon salt
- 1/2 teaspoon garlic powder
- 1/4 teaspoon freshly cracked black pepper

## For the Avocado Aioli:

- 2 ripe avocados
- 1/4 cup sour cream
- 2 tablespoons chopped basil
- 1 tablespoons minced garlic
- 2 tablespoons fresh lemon juice
- 1/2 teaspoon red pepper flakes
- Salt and freshly ground pepper to taste



## To make the Roasted Potato Fries:

Preheat an oven to 425 degrees F. On a large baking sheet, combine the fingerling potatoes, olive oil, paprika, salt, garlic powder and pepper. Toss to combine until the potatoes are evenly coated with the spice mixture and olive oil. | Transfer the baking sheet into the oven and roast for 25-30 minutes until the potatoes crispy on the outside and tender on the inside.

## To make the Avocado Aioli:

Cut the avocados in half lengthwise. Remove the pit from the avocado and discard. Remove the avocado from the skin and place the avocado flesh onto a cutting board. Cut the avocado into 1-inch pieces and transfer the avocado to a blender. | Add the sour cream, basil, garlic, lemon juice, red pepper flakes and a pinch of salt and pepper into the blender and process until smooth. | Taste and adjust salt and lemon juice if needed. If the mixture is too thick, add a teaspoon of water and blend until smooth. | Serve with warm Roasted Potato Fries.

*Nutritionals per serving (aioli only): Calories 98, Fat: 9 g, Cholesterol: 5 mg, Sodium: 202 mg, Carbohydrates: 5 g, Fiber: 3 g, Potassium: 257 mg, Protein: 1 g, Vitamin C: 11%*

*Nutritionals per serving (fries only): Calories: 134 Fat: 5g Sodium: 202mg Vitamin C: 38% Carbohydrates: 20g Fiber: 2g Protein: 2g Potassium: 11mg*



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