

Pulses, the Heartbeat of Sustainable Foods

Turn to pulses—beans, peas, and lentils—for optimal health and eco impact.

Look for pulses to take center stage this year, largely due to the United Nations' (UN) declaration that 2016 is the International Year of Pulses.

What are pulses? They are dry, edible seeds from plants in the legume family, consisting of 12 crops that include dried peas, beans, lentils, and chickpeas. Though pulses' popularity is growing, they've been around from as early as 800 BC; the term is derived from the Latin word, "puls," which means "thick soup."

Nutrition benefits. Pulses are nutrition powerhouses, providing a rich source of fiber, phytochemicals, and many vitamins and minerals, such as potassium, iron, magnesium, folate, zinc, and B vitamins, which may play a role in the prevention and treatment of some chronic diseases, such as heart disease and diabetes, according to Sara Haas, RDN, spokesperson for the Academy of Nutrition and Dietetics. A meta-analysis of 41 trials, published in *Diabetologia*, found that an average intake of one cup of cooked pulses per day significantly decreased fasting blood glucose and insulin levels. In addition, pulses serve as a gluten-free, vegetarian source of protein.

Economical and environmental benefits. Pulse crops are economical, costing

about 10 cents per serving—significantly less than quinoa and animal protein. These plant proteins are also more sustainable than animal proteins. Pulses have a low carbon footprint because they require very little nitrogen fertilizer, actually enriching the soil and allowing farmers to use less nitrogen fertilizer on future crops. In addition, pulses require significantly less fossil fuels and water (one-tenth the amount) for cultivation compared to other proteins.

In the kitchen. There is much more to pulses than lentil soup or beans and rice. You can make small substitutions in your

diet to incorporate pulses. Pea protein powder makes a great plant-based ingredient in smoothies or protein shakes. Roasted chickpeas (see recipe) are a great snack, and chickpea flour can be incorporated into baked goods by substituting it for half of the wheat flour. Lentils can be added to salads or included in burgers to cut the meat content. Beans are versatile; black beans can be used in brownies and a white bean puree can stand in place of half the butter in baking recipes. Get cooking with pulses with our Pulse Cooking Basics guide. [EN](#)

—Esther Ellis, MS, RD, LDN



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Pulse Cooking Basics			
Common Pulses	Description	STAR NUTRIENTS* (PER ½ CUP COOKED)	COOKING INSTRUCTIONS
Black Bean	Used in Latin American, Caribbean and Southwest cuisine, these small, oval, black-colored beans are soft in texture and earthy in flavor.	<ul style="list-style-type: none"> Fiber (30% DV) Folate (32% DV) Iron (10% DV) Magnesium (15% DV) Phosphorus (12% DV) Protein (15% DV) Thiamin (14% DV) 	Cover with water and soak for eight hours. Drain and rinse, combine 2 c of water per cup of beans, bring water to a boil and simmer for one hour to yield 2½ c cooked.
Black Eyed Peas	Also called cowpeas, they have a creamy texture with white flesh and a small black eye.	<ul style="list-style-type: none"> Copper (12% DV) Fiber (13% DV) Folate (31% DV) Iron (15% DV) Manganese (20% DV) Phosphorus (12% DV) Protein (14% DV) Zinc (12% DV) 	Cover with water and soak for eight hours. Drain and rinse, combine 2 c of water per cup of beans; bring water to a boil and simmer for one hour to yield 2½ c cooked.
Garbanzo Bean (Chickpea)	The main ingredient in hummus, this golden-colored pulse has a nutty taste and creamy texture.	<ul style="list-style-type: none"> Copper (15% DV) Fiber (25% DV) Folate (36% DV) Iron (13% DV) Magnesium (10% DV) Manganese (42% DV) Phosphorus (14% DV) Protein (15% DV) 	Cover with water and soak for eight hours. Drain and rinse, combine 2 c water per cup of beans, bring to a boil and simmer for 1½-2 hours to yield 2½ c cooked.
Lentils	Small seeds that grow inside of pods; come in many colors, such as red, green and black.	<ul style="list-style-type: none"> Copper (13% DV) Fiber (32% DV) Folate (45% DV) Iron (19% DV) Manganese (25% DV) Phosphorus (18% DV) Potassium (11% DV) Protein (13% DV) Thiamin (11% DV) 	Rinse with water before cooking, do not soak. Combine 2½ c water per cup, bring to a boil and simmer for 15-20 minutes to yield 2½ c cooked.
Red Bean	Varieties include dark red kidney, light red kidney, small red and pink beans.	<ul style="list-style-type: none"> Copper (13% DV) Fiber (33% DV) Folate (17% DV) Iron (15% DV) Magnesium (11% DV) Manganese (14% DV) Phosphorus (12% DV) Potassium (11% DV) Protein (16% DV) 	Cover with water and soak for eight hours. Drain and rinse, combine 2 c water per cup of beans, bring to a boil and simmer for 1-2 hours to yield 2½ c cooked.
Split Peas	A dried pea that has been split for cooking purposes.	<ul style="list-style-type: none"> Fiber (33% DV) Folate (16% DV) Manganese (20% DV) Potassium (10% DV) Protein (17% DV) Thiamin (13% DV) 	Rinse with water before cooking, do not soak. Combine 2 c water per cup of peas, bring to a boil and simmer for 20-30 minutes to yield 2½ c cooked.

Note: DV=Daily Value, based on 2,000 calories per day; c=cup, nutritional information from USDA. *Star Nutrients include those that contain at least 10% DV. Adapted from PulsePledge.com

Roasted Chickpea Snacks

2 15-oz cans chickpeas, rinsed and drained

3 Tbsp canola oil


- Preheat oven to 400°F.
- Dry excess moisture from chickpeas using paper towels; combine with oil and black pepper in medium bowl. Spread onto a parchment paper-lined baking sheet.
- Roast for 30 minutes, stir, and roast for another 20 minutes, stirring every 5 minutes. Cool before storing in an airtight container.

Makes 12 servings

Nutrition Information Per Serving: 117 calories, 7 grams (g) fat, 96 milligrams sodium, 12 g carbohydrate, 2 g dietary fiber, 3 g protein

Recipe courtesy of PulsePledge.com

Freshly ground black pepper to taste



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