

The 2005 Dietary Guidelines for Americans, developed by the USDA, recommend eating three cups of legumes per week, including beans, peas, lentils and chickpeas.

Research has shown that diets including beans and other pulses in your diet may reduce risk of heart disease and certain cancers.

Pulses are a great fit for a healthy eating pattern as recommended by the USDA's food pyramid (My Pyramid) and Canada's Food Guide to Healthy Eating.



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## Peas, Beans, Lentils & Weight Management

- Pulses (beans, peas, lentils and chickpeas) are high in fibre, complex carbohydrates and protein, are low in fat and have a low caloric density. These nutritional characteristics make pulses an important part of a weight-loss or weight maintenance diet.
- Overweight individuals are at a greater risk of health problems - most notably the metabolic syndrome which is characterized by abdominal obesity, high blood triacylglycerols, low blood HDL cholesterol, elevated blood pressure, insulin resistance or glucose intolerance, and inflammation.<sup>1</sup> Individuals who are obese or have the metabolic syndrome are at risk for developing chronic diseases such as cardiovascular disease and type 2 diabetes.<sup>1</sup>
- Emerging research suggests that when consumed regularly, pulses may help with weight loss and weight regulation. Short term studies (mostly single-meal studies) indicate a reduction in glycemic response and subsequent hunger, and increased satiety after eating pulses compared to other foods.<sup>2,3</sup> Some observational studies have shown an inverse relationship between Body Mass Index (BMI) or risk for overweight and obesity and pulse-based dietary patterns.<sup>4,5</sup> Although preliminary evidence suggests that consuming pulses helps with weight management, more long-term human experimental studies are necessary to confirm this.
- The nutritional composition of pulses is appropriate for weight management as pulses have a low energy or caloric density, are low in fat and are high in protein, fibre and resistant starch. Pulses, as a source of fibre and resistant starch, may delay gastric emptying and result in an earlier sense of fullness during a meal.<sup>6</sup> The gastric and intestinal bulking effects of fibre can also result in greater satiety and thus reduced energy consumption.<sup>7</sup> Fibre and resistant starch can also delay absorption of nutrients such as glucose, and possibly fat<sup>8</sup> thereby increasing insulin sensitivity and decreasing postprandial glycemia<sup>9</sup> and altering the secretion of gut hormones.<sup>11</sup>

- Pulses also have a low glycemic index, meaning they release glucose slowly into the bloodstream and therefore impart energy over a long period of time. Research suggests that regular consumption of a diet containing foods with a low glycemic index results in reduced hunger, increased satiety and weight loss.<sup>3,10,11</sup> The protein in pulses may also play a role in weight management, as emerging research has demonstrated the effects of protein on weight-loss and weight control<sup>12-14</sup> however further research is needed to investigate this.

### REFERENCES:

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## WEIGHT SMART WAYS WITH PULSES

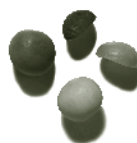
- Make low fat, high fibre, high protein bean dips or hummus from chickpeas by pureeing cooked pulses in a food processor or blender. Serve with raw vegetables, crackers or whole-wheat pita bread.
- Spread bean dips or hummus on whole grain bread and top with grated carrots, cucumber, peppers, spinach, sprouts or other veggies for a nutritious and great tasting sandwich.
- Include chickpeas, beans or lentils in salads or pasta sauces to add protein and fibre without adding fat.



CHICKPEAS



BEANS



PEAS



LENTILS