

## Search Plan and Results

### Question

[What is the relationship between the intake of cooked dry beans and peas and body weight? \(DGAC 2010\)](#)

[What is the relationship between the intake of cooked dry beans and peas and cardiovascular outcomes? \(DGAC 2010\)](#)

[What is the relationship between the intake of cooked dry beans and peas and type 2 diabetes? \(DGAC 2010\)](#)

### Date Searched

08/19/09

### Inclusion Criteria

- January 2000 to August 2009
- Cooked dry beans and peas provided in a whole food form and analyses addressed whole food (e.g., rather than protein)
- Human subjects
- English language
- International
- *Sample size*: Minimum of 10 subjects per study arm; preference for larger sizes, if available
- *Dropout rate*: Less than 20%; preference for smaller dropout rates
- *Ages*: Children two to 18 years; Adults: 19 years and older
- *Populations*: Healthy and those with elevated chronic disease risk.

### Exclusion Criteria

- Studies that considered cooked dry beans and peas as part of a larger dietary pattern
- Cooked dry beans and peas in forms not commonly consumed
- Studies examining postprandial, short-term response
- Medical treatment/therapy
- Diseased subjects (already diagnosed with disease related to study purpose)
- Hospitalized patients
- Study population not from a developed country as defined by the Human Development Index (<http://hdr.undp.org/en/statistics>)
- Animal studies
- In vitro studies
- Articles not peer reviewed (websites, magazine articles, Federal reports, etc.)

## Search Terms: Search Vocabulary

(Fabaceae[majr] OR dried beans\* OR peas OR legumes) AND ("Diabetes Mellitus, Type 2"[majr] OR "metabolic syndrome X"[majr] OR "overweight"[majr] OR "hypertension"[majr] OR "dyslipidemias"[majr] OR "cardiovascular diseases"[majr] OR "heart diseases"[majr] OR "chronic disease"[majr] OR obesity[majr] OR "Body Weights and Measures"[majr] OR "body weight"[majr] OR "body composition"[majr] OR "Gastrointestinal Transit"[majr] OR "energy intake"[majr] OR "blood pressure"[majr] OR Laxation OR laxatives[mh]) AND "english and humans"[Filter]

## Electronic Databases

PubMed

**Total hits from all electronic database searches: 772**

**Total articles identified to review from electronic databases: 60**

Articles Identified Via Handsearch or Other Means

### Hand search (Two articles):

Pittaway JK, Ahuja KD, Cehun M, Chronopoulos A, Robertson IK, Nestel PJ, Ball MJ. [Dietary supplementation with chickpeas for at least five weeks results in small but significant reductions in serum total and low-density lipoprotein cholesterol in adult women and men.](#) *Ann Nutr Metab.* 2006; 50 (6): 512-518. Epub 2006 Dec 21. PMID: 17191025. (Hand search)

Nagata C. [Ecological study of the association between soy product intake and mortality from cancer and heart disease in Japan.](#) *Int J Epidemiol.* 2000 Oct; 29 (5): 832-836. PMID: 11034965. (Hand search)

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Summary of Articles Identified to Review

**Number of Primary Articles Identified: 14**

**Number of Review Articles Identified: 3**

**Total Number of Articles Identified: 17**

**Number of Articles Reviewed but Excluded: 45**

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## List of Articles Included for Evidence Analysis

### **What is the relationship between the intake of cooked dry beans and peas and body weight?**

#### **Beans and Peas (Not Including Soy)**

##### ***Systematic Reviews/Meta-analyses:***

Anderson JW, Major AW. [Pulses and lipaemia, short- and long-term effect: Potential in the prevention of cardiovascular disease.](#) *Br J Nutr.* 2002 Dec; 88 Suppl 3: S263-S271. PMID: 12498626.

Williams PG, Grafenauer SJ, O'Shea JE. [Cereal grains, legumes and weight management: A comprehensive review of the scientific evidence.](#) *Nutr Rev.* 2008 Apr; 66 (4): 171-182. Review. PMID: 18366531.

##### ***Primary Citations:***

CrujeirasAB, Parra D, Abete I, Martínez JA. [A hypocaloric diet enriched in legumes specifically mitigates lipid peroxidation in obese subjects.](#) *Free Radic Res.* 2007 Apr; 41 (4): 498-506. PMID: 17454132.

Pittaway JK, Ahuja KD, Cehun M, Chronopoulos A, Robertson IK, Nestel PJ, Ball MJ. [Dietary supplementation with chickpeas for at least five weeks results in small but significant reductions in serum total and low-density lipoprotein cholesterols in adult women and men.](#) *Ann Nutr Metab.* 2006; 50 (6): 512-518. Epub 2006 Dec 21. PMID: 17191025. (Hand search)

Pittaway JK, Robertson IK, Ball MJ. [Chickpeas may influence fatty acid and fiber intake in an ad libitum diet, leading to small improvements in serum lipid profile and glycemic control.](#) *J Am Diet Assoc.* 2008 Jun; 108 (6): 1, 009-1, 013. PMID: 18502235.

Pittaway JK, Ahuja KD, Robertson IK, Ball MJ. [Effects of a controlled diet supplemented with chickpeas on serum lipids, glucose tolerance, satiety and bowel function.](#) *J Am Coll Nutr.* 2007 Aug; 26 (4): 334-340. PMID: 17906185.

Papanikolaou Y, Fulgoni VL 3rd. [Bean consumption is associated with greater nutrient intake, reduced systolic blood pressure, lower body weight and a smaller waist circumference in adults: Results from the National Health and Nutrition Examination Survey 1999-2002.](#) *J Am Coll Nutr.* 2008 Oct; 27 (5): 569-576. PMID: 18845707.

#### **Soy Foods**

##### ***Systematic Reviews/Meta-analyses:***

Cope MB, Erdman JW Jr, Allison DB. [The potential role of soy foods in weight and adiposity reduction: An evidence-based review.](#) *Obes Rev.* 2008 May; 9 (3): 219-235. Review. PMID: 18419671.

##### ***Primary Citations:***

Maskarinec G, Aylward AG, Erber E, Takata Y, Kolonel LN. [Soy intake is related to a lower body mass index in adult women.](#) *Eur J Nutr.* 2008 Apr; 47 (3): 138-144. Epub 2008 Apr 22. PMID: 18427855; PMCID: PMC2674433.

## **What is the relationship between the intake of cooked dry beans and peas and cardiovascular outcomes?**

### **Beans and Peas (Not Including Soy)**

#### ***Systematic Reviews/Meta-analyses:***

Anderson JW, Major AW. [Pulses and lipaemia, short- and long-term effect: Potential in the prevention of cardiovascular disease.](#) *Br J Nutr.* 2002 Dec; 88 Suppl 3: S, 263-S, 271. PMID: 12498626.

#### ***Primary Citations:***

CrujeirasAB, Parra D, Abete I, Martínez JA. [A hypocaloric diet enriched in legumes specifically mitigates lipid peroxidation in obese subjects.](#) *Free Radic Res.* 2007 Apr; 41 (4): 498-506. PMID: 17454132.

Bazzano LA, He J, Ogden LG, Loria C, Vupputuri S, Myers L, Whelton PK. [Legume consumption and risk of coronary heart disease in US men and women: NHANES I Epidemiologic Follow-up Study.](#) *Arch Intern Med.* 2001 Nov 26; 161 (21): 2, 573-2, 578. PMID: 11718588.

Finley JW, Burrell JB, Reeves PG. [Pinto bean consumption changes SCFA profiles in fecal fermentations, bacterial populations of the lower bowel and lipid profiles in blood of humans.](#) *J Nutr.* 2007 Nov; 137 (11): 2, 391-2, 398. PMID: 17951475.

Kabagambe EK, Baylin A, Ruiz-Narvarez E, Siles X, Campos H. [Decreased consumption of dried mature beans is positively associated with urbanization and nonfatal acute myocardial infarction.](#) *J Nutr.* 2005 Jul; 135 (7): 1, 770-1, 775. PMID: 15987863.

Papanikolaou Y, Fulgoni VL 3rd. [Bean consumption is associated with greater nutrient intake, reduced systolic blood pressure, lower body weight and a smaller waist circumference in adults: Results from the National Health and Nutrition Examination Survey 1999-2002.](#) *J Am Coll Nutr.* 2008 Oct; 27 (5): 569-576. PMID: 18845707.

Pittaway JK, Ahuja KD, Cehun M, Chronopoulos A, Robertson IK, Nestel PJ, Ball MJ. [Dietary supplementation with chickpeas for at least five weeks results in small but significant reductions in serum total and low-density lipoprotein cholesterol in adult women and men.](#) *Ann Nutr Metab.* 2006; 50 (6): 512-518. Epub 2006 Dec 21. PMID: 17191025. (Hand search)

Pittaway JK, Robertson IK, Ball MJ. [Chickpeas may influence fatty acid and fiber intake in an ad libitum diet, leading to small improvements in serum lipid profile and glycemic control.](#) *J Am Diet Assoc.* 2008 Jun; 108 (6): 1, 009-1, 013. PMID: 18502235.

Pittaway JK, Ahuja KD, Robertson IK, Ball MJ. [Effects of a controlled diet supplemented with chickpeas on serum lipids, glucose tolerance, satiety and bowel function.](#) *J Am Coll Nutr.* 2007 Aug; 26 (4): 334-340. PMID: 17906185.

Steffen LM, Kroenke CH, Yu X, Pereira MA, Slattery ML, Van Horn L, Gross MD, Jacobs DR Jr. [Associations of plant food, dairy product, and meat intakes with 15-year incidence of](#)

[Elevated blood pressure in young black and white adults: The Coronary Artery Risk Development in Young Adults \(CARDIA\) Study.](#) *Am J Clin Nutr.* 2005 Dec; 82 (6): 1, 169-1, 177; quiz 1, 363-1, 364. PMID: 16332648.

## Soy Foods

### Primary Citations:

Kokubo Y, Iso H, Ishihara J, Okada K, Inoue M, Tsugane S; JPHC Study Group. [Association of dietary intake of soy, beans and isoflavones with risk of cerebral and myocardial infarctions in Japanese populations: The Japan Public Health Center-based \(JPHC\) study cohort I.](#) *Circulation.* 2007 Nov 27; 116 (22): 2, 553-2, 562. Epub 2007 Nov 19. PMID: 18025534.

Nagata C. [Ecological study of the association between soy product intake and mortality from cancer and heart disease in Japan.](#) *Int J Epidemiol.* 2000 Oct; 29 (5): 832-836. PMID: 11034965. (Hand search)

Welty FK, Lee KS, Lew NS, Zhou JR. [Effect of soy nuts on blood pressure and lipid levels in hypertensive, pre-hypertensive and normotensive postmenopausal women.](#) *Arch Intern Med.* 2007 May 28; 167 (10): 1, 060-1, 067. PMID: 17533209. (Hand search)

### What is the relationship between the intake of cooked dry beans and peas and type 2 diabetes?

### Primary Citations:

Villegas R, Gao YT, Yang G, Li HL, Elasy TA, Zheng W, Shu XO. [Legume and soy food intake and the incidence of type 2 diabetes in the Shanghai Women's Health Study.](#) *Am J Clin Nutr.* 2008 Jan; 87 (1): 162-167. PMID: 18175751; PMCID: PMC2361384.

### List of Excluded Articles with Reason

| Article  | Reason for Exclusion   |
|--|--|
| Alper CM, Mattes RD. <a href="#">Effects of chronic peanut consumption on energy balance and hedonics.</a> <i>Int J Obes Relat Metab Disord.</i> 2002 Aug; 26 (8): 1, 129-1, 137. PMID: 12119580.  | Does not answer question; does not examine relationship between beans and peas and health. |
| Anderson JW, Fuller J, Patterson K, Blair R, Tabor A. <a href="#">Soy compared to casein meal replacement shakes with energy-restricted diets for obese women: Randomized controlled trial.</a> <i>Metabolism.</i> 2007 Feb; 56 (2): 280-288. PMID: 17224344.                                      | Does not meet inclusion criteria for food form.  |
| Azadbakht L, Kimiagar M, Mehrabi Y, Esmailzadeh A, Hu FB, Willett WC. <a href="#">Soy consumption, markers of inflammation, and endothelial function: A cross-over study in postmenopausal women with the metabolic syndrome.</a> <i>Diabetes Care.</i> 2007 Apr; 30 (4): 967-973. PMID: 17392557. | Participants diagnosed with metabolic syndrome.  |

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| <p>Azadbakht L, Kimiagar M, Mehrabi Y, Esmailzadeh A, Padyab M, Hu FB, Willett WC. <a href="#">Soy inclusion in the diet improves features of the metabolic syndrome: A randomized crossover study in postmenopausal women.</a> <i>Am J Clin Nutr.</i> 2007 Mar; 85 (3): 735-741. PMID: 17344494.</p>                               | <p>Participants diagnosed with metabolic syndrome.</p>  |
| <p>Beiseigel JM, Hunt JR, Glahn RP, Welch RM, Menkir A, Maziya-Dixon BB. <a href="#">Iron bioavailability from maize and beans: A comparison of human measurements with Caco-2 cell and algorithm predictions.</a> <i>Am J Clin Nutr.</i> 2007 Aug; 86 (2): 388-396. PMID: 17684210.</p>  | <p>Does not answer question; does not examine relationship between beans and peas and health.</p> |
| <p>Bes-Rastrollo M, Wedick NM, Martinez-Gonzalez MA, Li TY, Sampson L, Hu FB. <a href="#">Prospective study of nut consumption, long-term weight change and obesity risk in women.</a> <i>Am J Clin Nutr.</i> 2009 Jun; 89 (6): 1, 913-1, 919. Epub 2009 Apr 29. PMID: 19403639; PMCID: PMC2683001.</p>                             | <p>Does not answer question; does not examine relationship between beans and peas and health.</p> |
| <p>Bourdon I, Olson B, Backus R, Richter BD, Davis PA, Schneeman BO. <a href="#">Beans, as a source of dietary fiber, increase cholecystokinin and apolipoprotein b48 response to test meals in men.</a> <i>J Nutr.</i> 2001 May; 131 (5): 1, 485-1, 490. PMID: 11340104.</p>   | <p>Examines postprandial response.</p>  |
| <p>Duranti M. <a href="#">Grain legume proteins and nutraceutical properties.</a> <i>Fitoterapia.</i> 2006 Feb; 77 (2): 67-82. Epub 2006 Jan 6. Review. PMID: 16406359.</p>   | <p>Study design is narrative review.</p>  |
| <p>Ejigui J, Savoie L, Marin J, Desrosiers T. <a href="#">Improvement of the nutritional quality of a traditional complementary porridge made of fermented yellow maize (Zea mays): Effect of maize-legume combinations and traditional processing methods.</a> <i>Food Nutr Bull.</i> 2007 Mar; 28 (1): 23-34. PMID: 17718009.</p> | <p>Does not answer question; does not examine relationship between beans and peas and health.</p> |
| <p>Griel AE, Eissenstat B, Juturu V, Hsieh G, Kris-Etherton PM. <a href="#">Improved diet quality with peanut consumption.</a> <i>J Am Coll Nutr.</i> 2004 Dec; 23 (6): 660-668. PMID: 15637214.</p>  | <p>Does not answer question; does not examine relationship between beans and peas and health.</p> |
| <p>Hovey AL, Jones GP, Devereux HM, Walker KZ. <a href="#">Whole cereal and legume seeds increase faecal short chain fatty acids compared to ground seeds.</a> <i>Asia Pac J Clin Nutr.</i> 2003; 12 (4): 477-482. PMID: 14672874.</p>  | <p>Sample size less than inclusion criteria.</p>  |
| <p>Jenkins DJ, Hu FB, Tapsell LC, Josse AR, Kendall CW. <a href="#">Possible benefit of nuts in type 2 diabetes.</a> <i>J Nutr.</i> 2008 Sep; 138 (9): 1, 752S-1, 756S. PMID: 18716181.</p>   | <p>Study design is narrative review.</p>  |
| <p>Jiang R, Manson JE, Stampfer MJ, Liu S, Willett WC, Hu FB. <a href="#">Nut and peanut butter consumption and risk of type 2 diabetes in women.</a> <i>JAMA.</i> 2002 Nov 27; 288 (20): 2, 554-2, 560. PMID: 12444862.</p>  | <p>Does not answer question; does not examine relationship between beans and peas and health.</p> |
| <p>Johnson SK, Chua V, Hall RS, Baxter AL. <a href="#">Lupin kernel fibre foods improve bowel function and beneficially modify some putative faecal risk factors for colon cancer in men.</a> <i>Br J Nutr.</i> 2006 Feb; 95 (2): 372-378. PMID: 16469156.</p>  | <p>Does not meet inclusion criteria for food form.</p>  |
| <p>Johnson SK, Thomas SJ, Hall RS. <a href="#">Palatability and glucose, insulin and satiety responses of chickpea flour and extruded chickpea flour bread eaten as part of a breakfast.</a> <i>Eur J Clin Nutr.</i> 2005 Feb; 59 (2): 169-176. PMID: 15483639.</p>   | <p>Does not meet inclusion criteria for food form.</p>  |

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| Kris-Etherton PM, Hu FB, Ros E, Sabaté J. <a href="#">The role of tree nuts and peanuts in the prevention of coronary heart disease: Multiple potential mechanisms.</a> <i>J Nutr.</i> 2008 Sep; 138 (9): 1, 746S-1, 751S. Review. PMID: 18716180.   | Study design is narrative review.  |
| Larkin TA, Astheimer LB, Price WE. <a href="#">Dietary combination of soy with a probiotic or prebiotic food significantly reduces total and LDL cholesterol in mildly hypercholesterolaemic subjects.</a> <i>Eur J Clin Nutr.</i> 2009 Feb; 63 (2): 238-245. Epub 2007 Oct 17. PMID: 17940545.      | Participants were hypercholesterolemic.  |
| Lee YP, Puddey IB, Hodgson JM. <a href="#">Protein, fibre and blood pressure: Potential benefit of legumes.</a> <i>Clin Exp Pharmacol Physiol.</i> 2008 Apr; 35 (4): 473-476. Review. PMID: 18307744.  | Study design is narrative review.  |
| Li TY, Brennan AM, Wedick NM, Mantzoros C, Rifai N, Hu FB. <a href="#">Regular consumption of nuts is associated with a lower risk of cardiovascular disease in women with type 2 diabetes.</a> <i>J Nutr.</i> 2009 Jul; 139 (7): 1, 333-1, 338. Epub 2009 May 6. PMID: 19420347; PMCID: PMC2696988. | Participants diagnosed with type 2 diabetes.   |
| Lichtenstein AH, Matthan NR. <a href="#">The effect of soybean-based foods on plasma lipid and lipoprotein concentrations.</a> <i>Am J Clin Nutr.</i> 2007 Oct; 86 (4): 1, 253; author reply 1, 253-1, 254. PMID: 17921413.  | Publication is letter to the editor.   |
| Lokko P, Lartey A, Armar-Klemesu M, Mattes RD. <a href="#">Regular peanut consumption improves plasma lipid levels in healthy Ghanaians.</a> <i>Int J Food Sci Nutr.</i> 2007 May; 58 (3): 190-200. PMID: 17514537.  | Does not answer question; does not examine relationship between beans and peas and health. |

| Article  | Reason for Exclusion  |
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| Masini E, Bani D, Marzocca C, Mateescu MA, Mannaioni PF, Federico R, Mondovi B. <a href="#">Pea seedling histaminase as a novel therapeutic approach to anaphylactic and inflammatory disorders. A plant histaminase in allergic asthma and ischemic shock.</a> <i>ScientificWorldJournal.</i> 2007 Jun 12; 7: 888-902. Review. PMID: 17619775.  | Does not include selected outcome in analyses.  |
| Mattes RD, Kris-Etherton PM, Foster GD. <a href="#">Impact of peanuts and tree nuts on body weight and healthy weight loss in adults.</a> <i>J Nutr.</i> 2008 Sep; 138 (9): 1, 741S-1, 745S. PMID: 18716179.   | Study design is narrative review.   |
| Nasca MM, Zhou JR, Welty FK. <a href="#">Effect of soy nuts on adhesion molecules and markers of inflammation in hypertensive and normotensive postmenopausal women.</a> <i>Am J Cardiol.</i> 2008 Jul 1; 102 (1): 84-86. Epub 2008 Apr 16. PMID: 18572041.  | Does not include selected outcome in analyses.  |
| Noel SE, Newby PK, Ordovas JM, Tucker KL. <a href="#">A traditional rice and beans pattern is associated with metabolic syndrome in Puerto Rican older adults.</a> <i>J Nutr.</i> 2009 Jul; 139 (7): 1, 360-1, 367. Epub 2009 May 20. PMID: 19458029; PMCID: PMC2696989.   | Examines the relationship between dietary patterns, not specifically beans and peas, and health outcomes. |
| Nöthlings U, Schulze MB, Weikert C, Boeing H, van der Schouw YT, Bamia C, Benetou V, Lagiou P, Krogh V, Beulens JW, Peeters PH, Halkjaer J, Tjønneland A, Tumino R, Panico S, Masala G, Clavel-Chapelon F, de Lauzon B, Boutron-Ruault MC, Vercambre MN, Kaaks R, Linseisen J, Overvad K, Arriola L, Ardanaz E, Gonzalez CA, Tormo MJ, Bingham S, Khaw KT, Key TJ, Vineis P, Riboli E, Ferrari P, Boffetta P, Bueno-de-Mesquita HB, van der A DL, Berglund G, Wirfält E, | Participants diagnosed with diabetes .  |

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| Hallmans G, Johansson I, Lund E, Trichopoulo A. <a href="#">Intake of vegetables, legumes fruit, and risk for all-cause, cardiovascular and cancer mortality in a European diabetic population.</a> <i>J Nutr.</i> 2008 Apr; 138 (4): 775-781. PMID: 18356334.   |   |
| Okamoto K, Horisawa R. <a href="#">Soy products and risk of an aneurysmal rupture subarachnoid hemorrhage in Japan.</a> <i>Eur J Cardiovasc Prev Rehabil.</i> 2006 Apr; 13 (2): 284-287. PMID: 16575286.   | Does not include selected outcome in analyses.    |
| Oosthuizen W, Scholtz CS, Vorster HH, Jerling JC, Vermaak WJ. <a href="#">Extruded dry beans and serum lipoprotein and plasma haemostatic factors in hyperlipidaemic men.</a> <i>Eur J Clin Nutr.</i> 2000 May; 54 (5): 373-379. PMID: 10822283.   | Participants diagnosed with hyperlipidemia.       |
| Qin LQ, Xu JY, Wang PY, Hoshi K. <a href="#">Soyfood intake in the prevention of breast cancer risk in women: A meta-analysis of observational epidemiological studies.</a> <i>J Nutr Sci Vitaminol (Tokyo).</i> 2006 Dec; 52 (6): 428-436. PMID: 17330506.  | Does not include selected outcome in analyses.    |
| Ridges L, Sunderland R, Moerman K, Meyer B, Astheimer L, Howe P. <a href="#">Cholesterol lowering benefits of soy and linseed enriched foods.</a> <i>Asia Pac J Clin Nutr.</i> 2001; 10 (3): 204-211. PMID: 11708310.  | Participants were hypercholesterolemic.           |
| Rivas M, Garay RP, Escanero JF, Cia P Jr, Cia P, Alda JO. <a href="#">Soy milk lowers blood pressure in men and women with mild to moderate essential hypertension.</a> <i>J Nutr.</i> 2002 Jul; 132 (7): 1, 900-1, 902. PMID: 12097666.   | Participants diagnosed with hypertension.         |
| Salas-Salvadó J, Bulló M, Pérez-Heras A, Ros E. <a href="#">Dietary fibre, nuts and cardiovascular diseases.</a> <i>Br J Nutr.</i> 2006 Nov; 96 Suppl 2: S46-S51. Review. Erratum in: <i>Br J Nutr.</i> 2008 Feb; 99 (2): 447-448. PMID: 17125533.   | Study design is narrative review.                 |
| Schäfer G, Schenk U, Ritzel U, Ramadori G, Leonhardt U. <a href="#">Comparison of the effects of dried peas with those of potatoes in mixed meals on postprandial glucose and insulin concentrations in patients with type 2 diabetes.</a> <i>Am J Clin Nutr.</i> 2003 Jul; 78 (1): 99-103. PMID: 12816777.                    | Participants diagnosed with type 2 diabetes.      |
| Sirtori CR, Eberini I, Arnoldi A. <a href="#">Hypocholesterolaemic effects of soya proteins: Results of recent studies are predictable from the Anderson meta-analysis data.</a> <i>Br J Nutr.</i> 2007 May; 97 (5): 816-822. Review. PMID: 17408521.  | Does not meet inclusion criteria for food form.   |
| Taku K, Umegaki K, Sato Y, Taki Y, Endoh K, Watanabe S. <a href="#">Soy isoflavones lower serum total and LDL cholesterol in humans: A meta-analysis of 11 randomized controlled trials.</a> <i>Am J Clin Nutr.</i> 2007 Apr; 85 (4): 1, 148-1, 156. Erratum in: <i>Am J Clin Nutr.</i> 2007 Sep; 86 (3): 809. PMID: 17413118. | Does not meet inclusion criteria for food form.   |
| Thorp AA, Howe PR, Mori TA, Coates AM, Buckley JD, Hodgson J, Mansour J, Meyer BJ. <a href="#">Soy food consumption does not lower LDL cholesterol in either equol or nonequol producers.</a> <i>Am J Clin Nutr.</i> 2008 Aug; 88 (2): 298-304. PMID: 18689364.  | Does not meet inclusion criteria for food form.   |
| Van Horn L, Liu K, Gerber J, Garside D, Schiffer L, Gernhofer N, Greenland P. <a href="#">Oats and soy in lipid-lowering diets for women with hypercholesterolemia: Is there synergy?</a> <i>J Am Diet Assoc.</i> 2001 Nov; 101 (11): 1, 319-1, 325. PMID: 11716313.   | Participants diagnosed with hypercholesterolemia. |
| Williamson DA, Geiselman PJ, Lovejoy J, Greenway F, Volaufova J, Martin CK, Arnett C, Ortego L. <a href="#">Effects of consuming mycoprotein, tofu or chicken upon subsequent eating behavior, hunger and safety.</a> <i>Appetite.</i> 2006 Jan; 46 (1): 41-48. Epub 2005 Dec 20. PMID: 16364496.                              | Does not include selected outcome in analyses.    |

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| Winham DM, Hutchins AM, Johnston CS. <a href="#">Pinto bean consumption reduces biomarkers for heart disease risk.</a> <i>J Am Coll Nutr.</i> 2007 Jun; 26 (3): 243-249. PMID: 17634169.   | Dropout rate higher than inclusion criteria.  |
| Wylie-Rosett J, Segal-Isaacson CJ, Segal-Isaacson A. <a href="#">Carbohydrates and increases in obesity: Does the type of carbohydrate make a difference?</a> <i>Obes Res.</i> 2004 Nov; 12 Suppl 2: 124S-129S. Review. PMID: 15601960.                          | Study design is narrative review.   |
| Xu BJ, Yuan SH, Chang SK. <a href="#">Comparative studies on the antioxidant activities of nine common food legumes against copper-induced human low-density lipoprotein oxidation in vitro.</a> <i>J Food Sci.</i> 2007 Sep; 72 (7): S522-S527. PMID: 17995667. | Does not answer question; does not examine relationship between beans and peas and health . |
| Yan L, Spitznagel EL. <a href="#">Soy consumption and prostate cancer risk in men: A revisit of a meta-analysis.</a> <i>Am J Clin Nutr.</i> 2009 Apr; 89 (4): 1, 155-1, 163. Epub 2009 Feb 11. PMID: 19211820.   | Does not include selected outcome in analyses.  |
| Yang G, Shu XO, Jin F, Zhang X, Li HL, Li Q, Gao YT, Zheng W. <a href="#">Longitudinal study of soy food intake and blood pressure among middle-aged and elderly Chinese women.</a> <i>Am J Clin Nutr.</i> 2005 May; 81 (5): 1, 012-1, 017. PMID: 15883423.      | Does not meet inclusion criteria for food form.   |
| Yeh CC, You SL, Chen CJ, Sung FC. <a href="#">Peanut consumption and reduced risk of colorectal cancer in women: A prospective study in Taiwan.</a> <i>World J Gastroenterol.</i> 2006 Jan 14; 12 (2): 222-227. PMID: 16482621.                                  | Does not include selected outcome in analyses.  |
| Zhang X, Shu XO, Gao YT, Yang G, Li Q, Li H, Jin F, Zheng W. <a href="#">Soy food consumption is associated with lower risk of coronary heart disease in Chinese women.</a> <i>J Nutr.</i> 2003 Sep; 133 (9): 2, 874-2, 878. PMID: 12949380.                     | Soy protein included in analyses.   |