

Ha et al: Effect of dietary pulse intake on established therapeutic lipid targets for cardiovascular risk reduction: a systematic review and meta-analysis of randomized controlled trials. CMAJ 2014

Populations: healthy or unhealthy

Intervention: pulses (beans, chickpeas, lentils, peas)

Comparator: isocaloric usual diet

Outcomes: lipids – LDL, non-HDL cholesterol, apolipoproteins

Can we have FAITH in this review?

Find all studies? OK, 5 database plus manual search

Appraised? Cochrane risk or bias & Heyland (see Table 2)

Include only good studies? Exclude those with high risk of bias

Total up results? Figure 2 & 3

Heterogeneity considered? Yes – high!!!

Results: 0.17mmol reduction in LDL cholesterol overall, but VERY variable across studies.

This represents about a 6% reduction in risk, which seems small but worthwhile (if you like pulses!).

We need to clarify what “beans” are meant (string beans? Black beans? Etc)

Cholesterol: Quick Facts

Cholesterol is a weak risk predictor (many CVD events in "low cholesterol" folk), so multiple risk factors needed -> risk calculator

<http://bestsciencemedicine.com/chd/calc2.html>

Increases with age between 20 & 65.
Best measures are TC/HDL or non-HDL Chol

Cardiovascular Risk/Benefit Calculator

Please provide feedback and suggestions to james.mccormack@pubc.ca. For more detailed information and acronym definitions etc. see the [FAQ](#). For important calculator caveats click [here](#).

CVD CHD Heart Attacks Strokes ASCVD

Risk Time Period: 10 years

Age: 60 years

Gender: Male Female

Smoker: Yes No

Diabetes: Yes No

Systolic Blood Pressure: 120 mmHg

Total Cholesterol: 4.8 mmol/L

HDL Cholesterol: 1.3 mmol/L

Relative Benefit: 0%

Benefits often has nothing to do with the effect on the surrogate marker. At present, you can only select one intervention at a time.

Physical Activity: Mediterranean Diet vs Low fat

Vitamin/Omega-3 supplements: Yes No

BP meds (incl. atenolol/diuretics): Yes No

Statins: Fibrates Niacin

Ezetimibe: Metformin

Sulfonylureas: Insulins Glitazones

GLPs: DPP-4s Magtrodres

ASA:

Benefit Estimate Details:

Family History of Early CHD: Yes No

Adjust Overall Risk: 100%

Visual Summary: 87.5% No events, 7.9% Baseline events using baseline factors, 4.6% Additional events - "caused" by risk factors over baseline, 0.0% Benefits - will not have an event because of "treatment". NNT ∞ Number needed to treat.

Cholesterol lowering methods

Statins: 1-2mmol

Diet: 0.25 mmol

Statins reduce relative risk by about 21% per 1.0 mmol/L reduction, or about 1% per 1%.

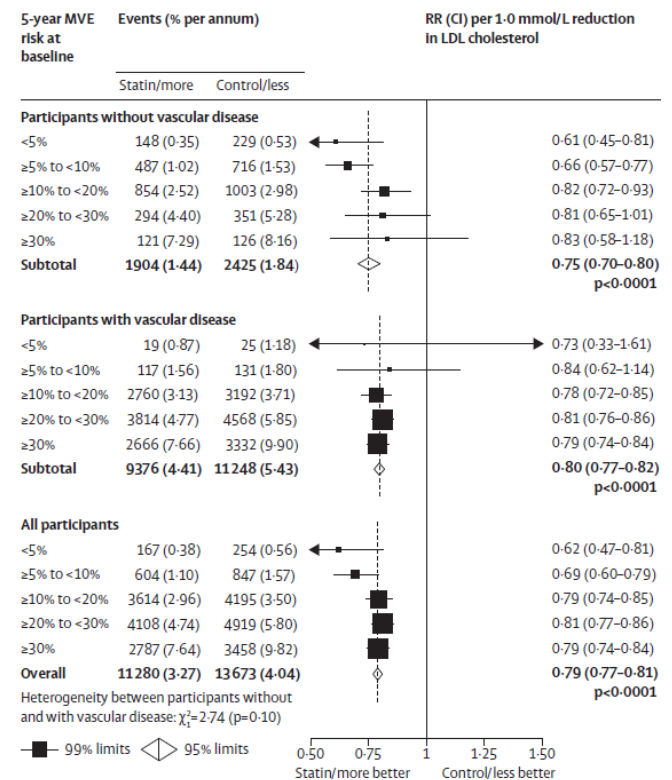
NNT varies by risk level

Low risk 500 person-years to avoid 1 event

High risk 50-100 person years to avoid 1 event

Consistent across many patient features ->

Reduction in both CHD and Stroke.



Mediterranean Diet lowers CVD risk (2 large trials: Lyon Heart Study & PREDIMED) but via other means than cholesterol.

www.racgp.org.au/your-practice/guidelines/handi/interventions/the-mediterranean-diet-for-reducing-cardiovascular-disease-risk/