Background: High blood pressure is strongly associated with an increased risk of developing cardiovascular disease, particularly stroke. ALA-fatty acids have previously been associated with decreased blood pressure. Flaxseed oil is very rich in these fatty acids and has also been highlighted as an affordable and sustainable source.

Objective: To investigate whether ALA-fatty acids from flaxseed oil may affect blood pressure in people with high risk for cardiovascular disease.

Search strategy: Two searches in PubMed and Scopus were performed. The sample was specified by using specific keywords.

Selection criteria: The criteria for inclusion of studies required that flaxseed oil was compared with a control and that blood pressure was measured as an endpoint. The limitations for the sample were set to human studies, randomised controlled trials written in English and adult participants.

Data collection and analysis: The sample was defined using predetermined inclusion and exclusion criteria. The quality of the studies was examined using the SBU review template for randomized trials. The various studies were graded according to GRADE for a final judgement on the quality of evidence.

Main results: The results are based on four randomized controlled trials. One of the studies showed a reduction in blood pressure of 5 mm Hg or 3-6% (medians) over a 12 week period. The three other studies showed no significant difference in blood pressure.

Conclusions: Flaxseed oil seems to affect blood pressure in individuals at risk for cardiovascular disease, but the scientific evidence for this conclusion is limited (moderate evidence). More research is needed.