

Table S1 Summary of randomized control trials on ALA and cardiovascular risk factors compared with LA. Negative, no significant differences were found between ALA and LA groups; positive, ALA had different effects with LA.

References	Location	Subjects	Sample size (ALA/LA)	Intervention	Design	Dosage g/d (ALA/LA)	Duration	Results	
								negative	positive
[1, 2]	Australia	healthy young men	15/14	safflower oil linseed oil	parallel design providing food	10 ALA+12 LA / 1 ALA+21 LA	6 weeks	blood lipids, coagulation , fibrinolysis	
[3]	Netherlands	moderately hypercholesterolaemic subjects with two other CVD risk factors	114/168	margarine with ALA or LA	parallel design freeliving	6.3 ALA+26.3 LA/ 1.0 ALA+ 26.8 LA	2 years	SBP, DBP, TC, LDL-c Von Willebrand factor	HDL-c, TG fibrinogen
[4]	Netherlands	moderately hypercholesterolaemic subjects with two other CVD risk factors	51/52	margarine with ALA or LA	parallel design freeliving	5.9 ALA+23.9 LA/ 1.1ALA+ 25.4LA	2 years	IL-6, IL-10, sICAM-1, IMT	CRP
[5]	Canada	healthy men and women	22/22	capsule	parallel design freeliving	1.02 ALA+0.28 LA/ 0.39 ALA+1.14 LA	12 weeks	blood lipids, CRP, TNF- $\alpha$ , platelet aggregation	
[6-8]	Greece	dyslipidaemic men	59/28	flaxseed oil safflower oil	parallel design freeliving	8 ALA+2 LA / 11 LA	12 weeks	SBP, blood lipids, sICAM-1, sE-selectin, sVCAM-1	DBP, MAP, CRP, SAA, IL-6
[9]	Greece	dyslipidaemic men	18/17	flaxseed oil safflower oil	parallel design freeliving	8 ALA+2 LA / 11 LA	12 weeks	blood lipids, TNF- $\alpha$ , adiponectin	
[10]	Finland	healthy men and women	14/14	flaxseed oil hempseed oil	crossover design freeliving	13.3 ALA+3.3 LA / 5.5 ALA+ 13.5 LA	4 weeks	blood lipids, glucose, insulin, haemostatic factors	TC:HDL-c

[11]	America	hypercholesterolemic subjects	23/23	flaxseed oil walnut oil	crossover design providing diets	17 ALA+28 LA / 7 ALA+ 34 LA	6 weeks	blood lipids, CRP, ICAM-1,	VCAM-1, E-selectin
[12-14]	United Kingdom	moderately hyperlipidaemic men and women	30/30/29	spread with ALA or LA	parallel design freeliving	4.5 ALA+ 16.2 LA / 9.5 ALA+ 13.1 LA / 1.5 ALA + 22.9 LA	6 months	blood lipids, immune function, blood coagulation, fibrinolytic factors	
Present study	China	moderately hyperlipidaemic men and women	81/85	blend oil corn oil	parallel design freeliving	1.9 ALA+9.4 LA / 13.6 LA	1 year	blood lipids, glucose, insulin, CRP, IMT	

ALA, alpha-linolenic acid; LA, linoleic acid; sICAM-1, soluble intercellular adhesion molecule-1; sVCAM-1, soluble vascular cell adhesion molecule-1; CRP, C-reactive protein; IL-6, interleukins 6; IL-10, interleukins 6; TNF- $\alpha$ , tumor necrosis factor- $\alpha$ ; SAA, serum amyloid A; SBP, systolic blood pressure; DBP, diastolic blood pressure; MAP, mean arterial pressure; IMT, intima-media thickness.

1. Pang, D., et al., *Replacement of linoleic acid with alpha-linolenic acid does not alter blood lipids in normolipidaemic men*. Br J Nutr, 1998. **80**(2): p. 163-7.
2. Allman-Farinelli, M.A., et al., *Comparison of the effects of two low fat diets with different alpha-linolenic:linoleic acid ratios on coagulation and fibrinolysis*. Atherosclerosis, 1999. **142**(1): p. 159-68.
3. Bemelmans, W.J., et al., *Effect of an increased intake of alpha-linolenic acid and group nutritional education on cardiovascular risk factors: the Mediterranean Alpha-linolenic Enriched Groningen Dietary Intervention (MARGARIN) study*. Am J Clin Nutr, 2002. **75**(2): p. 221-7.
4. Bemelmans, W.J., et al., *Increased alpha-linolenic acid intake lowers C-reactive protein, but has no effect on markers of atherosclerosis*. Eur J Clin Nutr, 2004. **58**(7): p. 1083-9.
5. Kaul, N., et al., *A comparison of fish oil, flaxseed oil and hempseed oil supplementation on selected parameters of cardiovascular health in healthy volunteers*. J Am Coll Nutr, 2008. **27**(1): p. 51-8.
6. Rallidis, L.S., et al., *Dietary alpha-linolenic acid decreases C-reactive protein, serum amyloid A and interleukin-6 in dyslipidaemic patients*. Atherosclerosis, 2003. **167**(2): p. 237-42.
7. Rallidis, L.S., et al., *The effect of diet enriched with alpha-linolenic acid on soluble cellular adhesion molecules in dyslipidaemic patients*. Atherosclerosis, 2004. **174**(1):

p. 127-32.

8. Paschos, G.K., et al., *Dietary supplementation with flaxseed oil lowers blood pressure in dyslipidaemic patients*. Eur J Clin Nutr, 2007. **61**(10): p. 1201-6.
9. Paschos, G.K., et al., *Effects of flaxseed oil supplementation on plasma adiponectin levels in dyslipidemic men*. Eur J Nutr, 2007. **46**(6): p. 315-20.
10. Schwab, U.S., et al., *Effects of hempseed and flaxseed oils on the profile of serum lipids, serum total and lipoprotein lipid concentrations and haemostatic factors*. Eur J Nutr, 2006. **45**(8): p. 470-7.
11. Zhao, G., et al., *Dietary alpha-linolenic acid reduces inflammatory and lipid cardiovascular risk factors in hypercholesterolemic men and women*. J Nutr, 2004. **134**(11): p. 2991-7.
12. Finnegan, Y.E., et al., *Plant and marine derived (n-3) polyunsaturated fatty acids do not affect blood coagulation and fibrinolytic factors in moderately hyperlipidemic humans*. Journal of Nutrition, 2003. **133**(7): p. 2210-2213.
13. Kew, S., et al., *Lack of effect of foods enriched with plant- or marine-derived n-3 fatty acids on human immune function*. American Journal of Clinical Nutrition, 2003. **77**(5): p. 1287-1295.
14. Finnegan, Y.E., et al., *Plant- and marine-derived n-3 polyunsaturated fatty acids have differential effects on fasting and postprandial blood lipid concentrations and on the susceptibility of LDL to oxidative modification in moderately hyperlipidemic subjects*. American Journal of Clinical Nutrition, 2003. **77**(4): p. 783-795.