

**Saturated Fat Restriction for Cardiovascular Disease Prevention: Systematic Review  
and Meta-Analysis of Randomised Controlled Trials**

**Supplementary Materials**

## Supplementary Data S1. Literature Search Strategy for PubMed

#1 (("dyslipidemias"[MeSH Terms] OR "dyslipid\*"[Title/Abstract] OR "dyslipoproteinemia\*"[Title/Abstract] OR "hyperlipemia\*"[Title/Abstract] OR "hyperlipid\*"[Title/Abstract] OR "lipemia\*"[Title/Abstract] OR "lipidemia\*"[Title/Abstract] OR "cholesteremia"[Title/Abstract] OR "cholesterinemia"[Title/Abstract] OR "elevated cholesterol\*"[Title/Abstract] OR "high cholesterol level\*"[Title/Abstract] OR "hyper beta lipoproteinemia"[Title/Abstract] OR "hypercholesteremia\*"[Title/Abstract] OR "hypercholesterol\*"[Title/Abstract] OR "diabetes mellitus"[MeSH Terms] OR "diabet\*"[Title/Abstract] OR "obesity"[MeSH Terms] OR "adiposi\*"[Title/Abstract] OR "corpulenc\*"[Title/Abstract] OR "fatness"[Title/Abstract] OR "obesity"[Title/Abstract] OR "overweight"[Title/Abstract]) AND (((("fatty acids"[MeSH Terms] OR "aliphatic acid"[Title/Abstract:~0] OR "aliphatic acids"[Title/Abstract:~0] OR "fa"[Title/Abstract] OR "fatty acid"[Title/Abstract:~1] OR "fatty acids"[Title/Abstract:~1] OR "scfa"[Title/Abstract] OR "vfa"[Title/Abstract] OR "acid short chain fatty"[Title/Abstract] OR "animal fat\*"[Title/Abstract] OR "ba"[Title/Abstract] OR "butanoic acid\*"[Title/Abstract] OR "butyric acid\*"[Title/Abstract] OR "acetic acid\*"[Title/Abstract] OR "ethanoic acid\*"[Title/Abstract] OR "vinegar"[Title/Abstract] OR "triglycerides"[MeSH Terms] OR "tg"[Title/Abstract] OR "triacylglycerol\*"[Title/Abstract] OR "triglyceride\*"[Title/Abstract]) AND ("nutrition therapy"[MeSH Terms] OR "nutrition\*"[Title/Abstract] OR "diet therapy"[MeSH Terms] OR "diet\*"[Title/Abstract] OR "food\*"[Title/Abstract])) OR ("diet, vegetarian"[MeSH Terms] OR "plant based diet\*"[Title/Abstract] OR "plant based nutrition"[Title/Abstract] OR "vegetarian\*"[Title/Abstract] OR "vegan\*"[Title/Abstract] OR "macrobiotic diet\*"[Title/Abstract] OR "diet macrobiotic"[Title/Abstract] OR "fat control diet"[Title/Abstract] OR "dietary fats"[MeSH Terms] OR "dietary fat"[Title/Abstract:~0] OR "dietary fats"[Title/Abstract:~0] OR "dietary oil\*"[Title/Abstract])) AND ("mortality"[MeSH

Terms] OR "cause of death"[MeSH Terms] OR "mortalit\*"[Title/Abstract] OR  
 "death"[Title/Abstract] OR "fatalit\*"[Title/Abstract] OR "lethalit\*"[Title/Abstract] OR  
 "stroke"[MeSH Terms] OR "cerebral crisis"[Title/Abstract] OR "cerebral vascular  
 accident\*"[Title/Abstract] OR "cerebrovascular accident\*"[Title/Abstract] OR "brain  
 vascular accident\*"[Title/Abstract] OR "vascular accident brain"[Title/Abstract] OR  
 "stroke\*"[Title/Abstract] OR "apoplectic fit"[Title/Abstract] OR "apoplectic  
 ictus"[Title/Abstract] OR "apoplectic seizure"[Title/Abstract] OR "apoplectic  
 cerebral"[Title/Abstract] OR "apoplectic attack\*"[Title/Abstract] OR  
 "apoplexy"[Title/Abstract] OR "cva"[Title/Abstract] OR "cvas"[Title/Abstract] OR  
 "ais"[Title/Abstract] OR "anterior cerebral circulation infarction"[Title/Abstract:~0] OR  
 "brain infarct\*"[Title/Abstract] OR "infarct brain"[Title/Abstract] OR "infarcts  
 brain"[Title/Abstract] OR "infarction brain"[Title/Abstract] OR "infarcted  
 brain"[Title/Abstract] OR "brain venous infarction\*"[Title/Abstract] OR "ci"[Title/Abstract]  
 OR "cerebral infarct\*"[Title/Abstract] OR "watershed infarct\*"[Title/Abstract] OR  
 "risk"[MeSH Terms] OR "adverse effects"[MeSH Subheading])) OR (("cardiovascular  
 diseases"[MeSH Terms] OR "cardiovascular disease\*"[Title/Abstract] OR  
 "cvd"[Title/Abstract] OR "ami"[Title/Abstract] OR "cardiac infarction"[Title/Abstract] OR  
 "cardiovascular stroke\*"[Title/Abstract] OR "coronary infarction\*"[Title/Abstract] OR "heart  
 attack\*"[Title/Abstract] OR "mi"[Title/Abstract] OR "myocardial infarct\*"[Title/Abstract]  
 OR "omi"[Title/Abstract] OR "ihd"[Title/Abstract] OR "ischemic  
 cardiomyopathy"[Title/Abstract] OR "ischemic heart disease\*"[Title/Abstract] OR  
 "myocardial ischemia\*"[Title/Abstract] OR "heart disease ischemic"[Title/Abstract] OR  
 "ischemia myocardial"[Title/Abstract] OR "ap"[Title/Abstract] OR "angina  
 pectoris"[Title/Abstract] OR "angor pectoris"[Title/Abstract] OR  
 "stenocardia\*"[Title/Abstract] OR "cad"[Title/Abstract] OR "chd"[Title/Abstract] OR

"coronary artery disease\*"[Title/Abstract] OR "coronary disease\*"[Title/Abstract] OR  
 "coronary heart disease\*"[Title/Abstract] OR "coronary syndrome\*"[Title/Abstract] OR  
 "acs"[Title/Abstract] OR "hypertension"[Title/Abstract] OR "high blood  
 pressure\*"[Title/Abstract] OR "hypertonia\*"[Title/Abstract] OR "ht"[Title/Abstract] OR  
 "blood pressure high"[Title/Abstract] OR "blood clot\*"[Title/Abstract] OR "prethrombotic  
 state"[Title/Abstract] OR "thrombose\*"[Title/Abstract] OR "thrombosis"[Title/Abstract] OR  
 "thrombus"[Title/Abstract] OR "thromboembolism\*"[Title/Abstract] OR  
 "embolism\*"[Title/Abstract] OR "embolus"[Title/Abstract] OR "emboli"[Title/Abstract])  
 AND (((("fatty acids"[MeSH Terms] OR "aliphatic acid"[Title/Abstract:~0] OR "aliphatic  
 acids"[Title/Abstract:~0] OR "fa"[Title/Abstract] OR "fatty acid"[Title/Abstract:~1] OR  
 "fatty acids"[Title/Abstract:~1] OR "scfa"[Title/Abstract] OR "vfa"[Title/Abstract] OR "acid  
 short chain fatty"[Title/Abstract] OR "animal fat\*"[Title/Abstract] OR "ba"[Title/Abstract]  
 OR "butanoic acid\*"[Title/Abstract] OR "butyric acid\*"[Title/Abstract] OR "acetic  
 acid\*"[Title/Abstract] OR "ethanoic acid\*"[Title/Abstract] OR "vinegar"[Title/Abstract] OR  
 "triglycerides"[MeSH Terms] OR "tg"[Title/Abstract] OR "triacylglycerol\*"[Title/Abstract]  
 OR "triglyceride\*"[Title/Abstract]) AND ("nutrition therapy"[MeSH Terms] OR  
 "nutrition\*"[Title/Abstract] OR "diet therapy"[MeSH Terms] OR "diet\*"[Title/Abstract] OR  
 "food\*"[Title/Abstract])) OR ("diet, vegetarian"[MeSH Terms] OR "plant based  
 diet\*"[Title/Abstract] OR "plant based nutrition"[Title/Abstract] OR  
 "vegetarian\*"[Title/Abstract] OR "vegan\*"[Title/Abstract] OR "macrobiotic  
 diet\*"[Title/Abstract] OR "diet macrobiotic"[Title/Abstract] OR "fat control  
 diet"[Title/Abstract] OR "dietary fats"[MeSH Terms] OR "dietary fat"[Title/Abstract:~0] OR  
 "dietary fats"[Title/Abstract:~0] OR "dietary oil\*"[Title/Abstract]))))

#2 "Randomized Controlled Trial"[Publication Type] NOT ("animals"[MeSH Terms] NOT "humans"[MeSH Terms])

#3 #1 and #2

## **Supplementary Data S2.** Literature Search Strategy for Cochrane CENTRAL

#1 (MeSH descriptor: [Dyslipidemias] explode all trees) OR (dyslipid\*:ti,ab,kw OR "dyslipoproteinemia\*":ti,ab,kw OR "hyperlipemia\*":ti,ab,kw OR "hyperlipid\*":ti,ab,kw OR "lipemia\*":ti,ab,kw OR "lipidemia\*":ti,ab,kw OR "cholesteremia":ti,ab,kw OR "cholesterinemia":ti,ab,kw OR "elevated cholesterol\*":ti,ab,kw OR "high cholesterol level\*":ti,ab,kw OR "hyper beta lipoproteinemia":ti,ab,kw OR "hypercholesteremia\*":ti,ab,kw OR "hypercholesterol\*":ti,ab,kw) OR (MeSH descriptor: [Diabetes Mellitus] explode all trees) OR (diabet\*:ti,ab,kw) OR (MeSH descriptor: [Obesity] explode all trees) OR ("adiposi\*":ti,ab,kw OR "corpulenc\*":ti,ab,kw OR "fatness":ti,ab,kw OR "obesity":ti,ab,kw OR "overweight":ti,ab,kw)

#2 (MeSH descriptor: [Fatty Acids] explode all trees) OR ("aliphatic NEAR/0 acid":ti,ab,kw OR "aliphatic NEAR/0 acids":ti,ab,kw OR "fa":ti,ab,kw OR "fatty NEAR/1 acid":ti,ab,kw OR "fatty NEAR/1 acids":ti,ab,kw OR "scfa":ti,ab,kw OR "vfa":ti,ab,kw OR "acid short chain fatty":ti,ab,kw OR "animal fat\*":ti,ab,kw OR "ba":ti,ab,kw OR "butanoic acid\*":ti,ab,kw OR "butyric acid\*":ti,ab,kw OR "acetic acid\*":ti,ab,kw OR "ethanoic acid\*":ti,ab,kw OR "vinegar":ti,ab,kw) OR (MeSH descriptor: [Triglycerides] explode all trees) OR (tg:ti,ab,kw OR "triacylglycerol\*":ti,ab,kw OR "triglyceride\*":ti,ab,kw)

#3 ((MeSH descriptor: [Nutrition Therapy] explode all trees) OR ("nutrition\*":ti,ab,kw) OR (MeSH descriptor: [Diet Therapy] explode all trees) OR (diet\*:ti,ab,kw OR "food\*":ti,ab,kw)) OR ((MeSH descriptor: [Diet, Vegetarian] explode all trees) OR (plant based nutrition:ti,ab,kw OR "vegetarian\*":ti,ab,kw OR "vegan\*":ti,ab,kw OR "macrobiotic diet\*":ti,ab,kw OR "diet macrobiotic":ti,ab,kw OR "fat control diet":ti,ab,kw) OR (MeSH

descriptor: [Dietary Fats] explode all trees) OR (dietary NEAR/0 fat:ti,ab,kw OR "dietary NEAR/0 fats":ti,ab,kw OR "dietary oil\*":ti,ab,kw))

#4 (MeSH descriptor: [Mortality] explode all trees) OR (MeSH descriptor: [Cause of Death] explode all trees) OR (mortalit\*:ti,ab,kw OR "death":ti,ab,kw OR "fatalit\*":ti,ab,kw OR "lethalit\*":ti,ab,kw) OR (MeSH descriptor: [Stroke] explode all trees) OR (cerebral crisis:ti,ab,kw OR "cerebral vascular accident\*":ti,ab,kw OR "cerebrovascular accident\*":ti,ab,kw OR "brain vascular accident\*":ti,ab,kw OR "vascular accident brain":ti,ab,kw OR "stroke\*":ti,ab,kw OR "apoplectic fit":ti,ab,kw OR "apoplectic ictus":ti,ab,kw OR "apoplectic seizure":ti,ab,kw OR "apoplectic cerebral":ti,ab,kw OR "apoplectic attack\*":ti,ab,kw OR "apoplexy":ti,ab,kw OR "cva":ti,ab,kw OR "cvas":ti,ab,kw OR "ais":ti,ab,kw OR "anterior cerebral circulation infarction":ti,ab,kw OR "brain infarct\*":ti,ab,kw OR "infarct brain":ti,ab,kw OR "infarcts brain":ti,ab,kw OR "infarction brain":ti,ab,kw OR "infarcted brain":ti,ab,kw OR "brain venous infarction\*":ti,ab,kw OR "ci":ti,ab,kw OR "cerebral infarct\*":ti,ab,kw OR "watershed infarct\*":ti,ab,kw) OR (MeSH descriptor: [Risk] explode all trees) OR (MeSH descriptor: [] explode all trees and with qualifier(s): [adverse effects - AE])

#5 (MeSH descriptor: [Cardiovascular Diseases] explode all trees) OR ("cardiovascular disease\*":ti,ab,kw OR "cvd":ti,ab,kw OR "ami":ti,ab,kw OR "cardiac infarction":ti,ab,kw OR "cardiovascular stroke\*":ti,ab,kw OR "coronary infarction\*":ti,ab,kw OR "heart attack\*":ti,ab,kw OR "mi":ti,ab,kw OR "myocardial infarct\*":ti,ab,kw OR "omi":ti,ab,kw OR "ihd":ti,ab,kw OR "ischemic cardiomyopathy":ti,ab,kw OR "ischemic heart disease\*":ti,ab,kw OR "myocardial ischemia\*":ti,ab,kw OR "heart disease ischemic":ti,ab,kw OR "ischemia myocardial":ti,ab,kw OR "ap":ti,ab,kw OR "angina pectoris":ti,ab,kw OR

"angor pectoris":ti,ab,kw OR "stenocardia\*":ti,ab,kw OR "cad":ti,ab,kw OR "chd":ti,ab,kw  
OR "coronary artery disease\*":ti,ab,kw OR "coronary disease\*":ti,ab,kw OR "coronary heart  
disease\*":ti,ab,kw OR "coronary syndrome\*":ti,ab,kw OR "acs":ti,ab,kw OR  
"hypertension":ti,ab,kw OR "high blood pressure\*":ti,ab,kw OR  
"hypertonia\*":ti,ab,kw OR "ht":ti,ab,kw OR "blood pressure high":ti,ab,kw OR "blood  
clot\*":ti,ab,kw OR "prethrombotic state":ti,ab,kw OR "thrombose\*":ti,ab,kw OR  
"thrombosis":ti,ab,kw OR "thrombus":ti,ab,kw OR "thromboembolism\*":ti,ab,kw OR  
"embolism\*":ti,ab,kw OR  
"embolus":ti,ab,kw OR "emboli":ti,ab,kw)

#6 (MeSH descriptor: [Fatty Acids] explode all trees) OR (aliphatic NEAR/0 acid:ti,ab,kw  
OR "aliphatic NEAR/0 acids":ti,ab,kw OR "fa":ti,ab,kw OR "fatty NEAR/1 acid":ti,ab,kw  
OR "fatty NEAR/1 acids":ti,ab,kw OR "scfa":ti,ab,kw OR "vfa":ti,ab,kw OR "acid short  
chain fatty":ti,ab,kw OR "animal fat\*":ti,ab,kw OR "ba":ti,ab,kw OR "butanoic  
acid\*":ti,ab,kw OR "butyric acid\*":ti,ab,kw OR "acetic acid\*":ti,ab,kw OR "ethanoic  
acid\*":ti,ab,kw OR "vinegar":ti,ab,kw) OR (MeSH descriptor: [Triglycerides] explode all  
trees) OR (tg:ti,ab,kw OR "triacylglycerol\*":ti,ab,kw OR "triglyceride\*":ti,ab,kw)

#7 (MeSH descriptor: [Nutrition Therapy] explode all trees) OR (nutrition\*:ti,ab,kw) OR  
(MeSH descriptor: [Diet Therapy] explode all trees) OR ("diet\*":ti,ab,kw OR  
"food\*":ti,ab,kw)

#8 (MeSH descriptor: [Diet, Vegetarian] explode all trees) OR (plant based diet\*:ti,ab,kw OR  
"plant based nutrition":ti,ab,kw OR "vegetarian\*":ti,ab,kw OR "vegan\*":ti,ab,kw OR  
"macrobiotic diet\*":ti,ab,kw OR "diet macrobiotic":ti,ab,kw OR "fat control diet":ti,ab,kw)

OR (MeSH descriptor: [Dietary Fats] explode all trees) OR (dietary NEAR/0 fat:ti,ab,kw OR "dietary NEAR/0 fats":ti,ab,kw OR "dietary oil\*":ti,ab,kw)

#9 (Randomized Controlled Trial:pt)

#10 (MeSH descriptor: [Animal] explode all trees) NOT (MeSH descriptor: [Human] explode all trees)

#11 #1 AND #2 AND #3 AND #4 OR #5 AND #6 AND #7 OR #8 AND #9 NOT #10

### **Supplementary Data S3. Literature Search Strategy for ICHUSI**

After translation

#1 (Dyslipidemia/TH) or (Hypertension/TH) or (Diabetes/TH) or (Obesity/TH) or  
(Cardiovascular Disease/TH)

#2 (((Triglycerides/TH) or (Fatty Acid/TH) or (Saturated Fatty Acid/TA) or (Animal Fat/TA))  
and ((Nutrition/TH) or (Diet Therapy/TH))) or ((Vegetarian/TH) or (Dietary Fat/TH) or  
(Low-fat diet/TA))

#3 (RD=Randomized Controlled Trial)

#4 #1 and #2 and #3