CARDIOVASCULAR DISEASE (CVD)
Plasma/Serum Lycopene and Disease Risk

CVD - main findings

- Data support a protective association between serum lycopene concentrations and markers of chronic disease, particularly heart disease. This relationship extends to death from CVD (1 PC study), but may not extend to death from stroke.
- The positive (risk) association requires attention.

Summary of studies and outcomes

- Number of studies = 36^
- Risk estimates = 47
  - (-) = 24
  - N = 22
  - (+) = 1

Table: Relationship between Plasma/serum Lycopene and CVD

Study Type	N= studies	NEGATIVE ASSOCIATION (protective)					NEUTRAL ASSOCIATION (no associated risk or benefit)					POSTIVE ASSOCIATION (risk factor)				
CVD		Sample size, n=					Sample size, n=					Sample size, n=				
		≤100	101-200	201-500	501-1000	≥1000	≤100	101-200	201-500	501-1000	≥1000	≤100	101-200	201-500	501-1000	≥1000
RCT	2						√ox			√BP						
Interv	3	√ √					√lip, ox									
PC	7	√ACE			√IMT	√*EF √*cvd			√AL	√IMT	√*infl √*Str √BP					
CC	9	√IMT	√*sm	√w	√AT MI		√CAD	√*EL √MI √MI	√m	√MI						
Cross Sec	16	√ox √infl,EF √ch √EF	√*EF √*IMT √infl √ox √infl,ox,EF √*EF,ox	√m IMT	√IMT √*D √IMT			√infl	√*infl √*infl √*ilp	√ch,ilp √*						√*ilp
Eco	0															

^ 1study with PC and CS analyses

√   Relationship between serum lycopene concentrations and chronic- / CVD
√* Indicates single study with multiple endpoints / risk estimates
√AT Indicates relationship is with adipose tissue lycopene.
√ACE √CAD, √MI Indicates acute coronary events, coronary artery disease, or myocardial infarction.
√w , √m, √ch Indicates relationship tested in women, men or children.
√lip, ox, infl Indicates risk estimate based on lipids, oxidative stress or inflammation, respectively.
√EF, IMT Indicates risk estimate based on endothelial function, intima medial thickness, respectively.
√cvd , √Str, √D Indicates risk estimate based on *death* from CVD, Stroke or death unspecified.