

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	[intervention]	[comparison]	Relative (95% CI)	Absolute (95% CI)		
TT												
15	randomised trials	not serious	serious ^a	not serious	not serious	strong association dose response gradient	395	390	-	SMD 0.78 lower (1.15 lower to 0.42 lower)	⊕⊕⊕⊕ High	CRITICAL
M F-G scores												
8	randomised trials	not serious	not serious	not serious	serious ^b	dose response gradient	241	241	-	SMD 0.63 lower (0.98 lower to 0.28 lower)	⊕⊕⊕⊕ High	CRITICAL
FPG												
38	randomised trials	not serious	not serious	not serious	not serious	strong association dose response gradient	1000	992	-	SMD 0.31 lower (0.39 lower to 0.22 lower)	⊕⊕⊕⊕ High	CRITICAL
HOME-IR												
29	randomised trials	not serious	serious ^c	not serious	not serious	dose response gradient	788	780	-	MD 0.68 lower (0.87 lower to 0.5 lower)	⊕⊕⊕⊕ High	CRITICAL
TC												
33	randomised trials	not serious	serious ^d	not serious	not serious	dose response gradient	914	903	-	SMD 0.38 lower (0.56 lower to 0.2 lower)	⊕⊕⊕⊕ High	CRITICAL
TAC												
17	randomised trials	not serious	serious ^d	not serious	not serious	dose response gradient	477	474	-	SMD 0.59 higher (0.31 higher to 0.87 higher)	⊕⊕⊕⊕ High	CRITICAL
MDA												
18	randomised trials	not serious	serious ^d	not serious	not serious	dose response gradient	505	502	-	SMD 0.28 lower (0.69 lower to 0.14 higher)	⊕⊕⊕⊕ High	CRITICAL
Weight												
13	randomised trials	not serious	serious ^{a,c}	not serious	serious ^b	dose response gradient	344	343	-	MD 0.73 lower (1.35 lower to 0.11 lower)	⊕⊕⊕○ Moderate	CRITICAL

CI: confidence interval; MD: mean difference; SMD: standardised mean difference

Explanations

- a. It is possible that there is heterogeneity in androgens themselves
- b. Too few included studies
- c. There is certain heterogeneity among different detection methods
- d. High heterogeneity due to variability in antioxidants and PCOS patients
- e. Patient weight inconsistencies lead to high heterogeneity

Table S1.GRADE assessment to evaluate the evidence