

Nutrients

The optimal strategy of vitamin D for sarcopenia: A network meta-analysis of randomized controlled trials

(Supplementary File)

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Supplementary

Supplementary Text 1. Search strategy

Supplementary Table S1. Risk of bias

Supplementary Text 2. Inconsistency test of changes in hand grip

Supplementary Figure S1. Network plot of gait speed

Supplementary Figure S2. Network forest plot of muscle mass

Supplementary Figure S3. Funnel plot of relative skeletal muscle index

Supplementary Figure S4. Funnel plot of body fat mass

Supplementary Text 1

Search strategy (Primary search strategy)

Primary search strategy

- #1. sarcopenia
- #2. sarcopenic
- #3. #1 OR #2
- #4. vitamin D
- #5. vitamin D3
- #6. ergocalciferol derivative
- #7. dihydrotachysterol
- #8. 25 hydroxyvitamin D
- #9. colecalciferol derivative
- #10. #4 OR #5 OR #6 OR #7 OR #8 OR #9
- #11. #3 AND #10

Search details in Cochrane Database and Cochrane CENTRAL

(sarcopenia OR sarcopenic) in All Text AND (vitamin D OR vitamin D3 OR ergocalciferol derivative OR dihydrotachysterol OR 25 hydroxyvitamin D OR colecalciferol derivative) in All Text - (Word variations have been searched)

Search details in Embase

('sarcopenia'/exp OR sarcopenia OR 'sarcopenia' OR sarcopenic:ti,ab) AND ('vitamin d'/exp OR 'vitamin d' OR '24,25 dihydroxyvitamin d'/exp OR '24,25 dihydroxyvitamin d' OR '25 hydroxyvitamin d'/exp OR '25 hydroxyvitamin d' OR 'vitamin d, 25 hydroxy' OR 'colecalciferol derivative'/exp OR 'cholecalciferol derivative' OR 'colecalciferol derivative' OR 'vitamin d3 derivative' OR 'dihydrotachysterol'/exp OR '10, 19 dihydroercalcinol' OR '9, 10 seco 5, 7, 22 ergostatrien 3beta ol' OR '9, 10 secoergosta 5, 7, 22 trien 3beta ol' OR 'a.t.10' OR 'antitanil' OR 'antitetanin' OR 'antitetanine' OR 'at 10' OR 'at-10' OR 'at10' OR 'atecen' OR 'calcamin' OR 'calcamine' OR 'calcinosefaktor' OR 'dht intensol' OR 'dichistrolum' OR 'dichysterol' OR 'dichystrol' OR 'dihydral' OR 'dihydrotachysterin' OR 'dihydrotachysterine' OR 'dihydrotachysterol' OR 'dihydrotachysterol 2' OR 'dihydrotachysterol 3' OR 'dikystrol' OR 'dygratyl' OR 'hytakerol' OR 'manipal' OR 'parterol' OR 'tachidon' OR 'tachysterol, dihydro' OR 'tachystin' OR 'tachystine' OR 'tachystol' OR 'tetilan' OR 'ergocalciferol derivative'/exp OR 'calciferol derivative' OR 'ergocalciferol derivative' OR 'vitamin d2 derivative' OR 'vitamin d3')

Supplementary Text 1

Search strategy (Primary search strategy)

Search details in PubMed

("sarcopenia"[MeSH Terms] OR "sarcopenia"[All Fields] OR "sarcopenic"[All Fields]) AND ("vitamin d"[MeSH Terms] OR "vitamin d"[All Fields] OR "ergocalciferols"[MeSH Terms] OR "ergocalciferols"[All Fields] OR ("cholecalciferol"[MeSH Terms] OR "cholecalciferol"[All Fields] OR ("vitamin"[All Fields] AND "d3"[All Fields]) OR "vitamin d3"[All Fields]) OR (("ergocalciferols"[MeSH Terms] OR "ergocalciferols"[All Fields] OR "ergocalciferol"[All Fields]) AND ("analogs and derivatives"[MeSH Subheading] OR ("analogs"[All Fields] AND "derivatives"[All Fields]) OR "analogs and derivatives"[All Fields] OR "derivatives"[All Fields] OR "derivable"[All Fields] OR "derivant"[All Fields] OR "derivants"[All Fields] OR "derivate"[All Fields] OR "derivated"[All Fields] OR "derivates"[All Fields] OR "derivation"[All Fields] OR "derivations"[All Fields] OR "derivative"[All Fields] OR "derive"[All Fields] OR "derived"[All Fields] OR "derives"[All Fields] OR "deriving"[All Fields])) OR ("dihydrotachysterol"[MeSH Terms] OR "dihydrotachysterol"[All Fields]) OR ("25 hydroxyvitamin d"[Supplementary Concept] OR "25 hydroxyvitamin d"[All Fields] OR "25 hydroxyvitamin d"[All Fields] OR "calcifediol"[MeSH Terms] OR "calcifediol"[All Fields]) OR (("cholecalciferol"[MeSH Terms] OR "cholecalciferol"[All Fields] OR "cholecalciferols"[All Fields] OR "colecalfiferol"[All Fields]) AND ("analogs and derivatives"[MeSH Subheading] OR ("analogs"[All Fields] AND "derivatives"[All Fields]) OR "analogs and derivatives"[All Fields] OR "derivatives"[All Fields] OR "derivable"[All Fields] OR "derivant"[All Fields] OR "derivants"[All Fields] OR "derivate"[All Fields] OR "derivated"[All Fields] OR "derivates"[All Fields] OR "derivation"[All Fields] OR "derivations"[All Fields] OR "derivative"[All Fields] OR "derive"[All Fields] OR "derived"[All Fields] OR "derives"[All Fields] OR "deriving"[All Fields]))))

Search details in Web of Science

TOPIC: (sarcopenia OR sarcopenic) AND TOPIC: (vitamin D OR vitamin D3 OR ergocalciferol derivative OR dihydrotachysterol OR 25 hydroxyvitamin D OR colecalfiferol derivative) Timespan: All years. Indexes: SCI-EXPANDED, SSCI, A&HCI, ESCI.

Supplementary Table S1

Risk of bias

Outcome / Trial	Bias 1	Bias 2	Bias 3	Bias 4	Bias 5	Overall
Hand grip						High
Björkman	Low	Low	High	Low	Low	High
Bo	Low	Low	Low	Low	Low	Low
Cramer	Low	Low	Some concerns	Low	Low	Some concerns
FrOST	Some concerns	Some concerns	Low	Low	Low	Some concerns
PROVIDE	Low	Low	Some concerns	Low	Low	Some concerns
Gait speed						Some concerns
Cramer	Low	Low	Some concerns	Low	Low	Some concerns
FrOST	Some concerns	Some concerns	Low	Low	Low	Some concerns
PROVIDE	Low	Low	Some concerns	Low	Low	Some concerns
Chair-stand						Some concerns
Bo	Low	Low	Low	Low	Low	Low
PROVIDE	Low	Low	Some concerns	Low	Low	Some concerns
Relative skeletal muscle index						Some concerns
Bo	Low	Low	Low	Low	Low	Low
FrOST	Some concerns	Some concerns	Low	Low	Low	Some concerns

Bias 1, randomization process; bias 2, intended interventions; bias 3, missing outcome data; bias 4, measurement of outcomes; bias 5, selection of the reported result

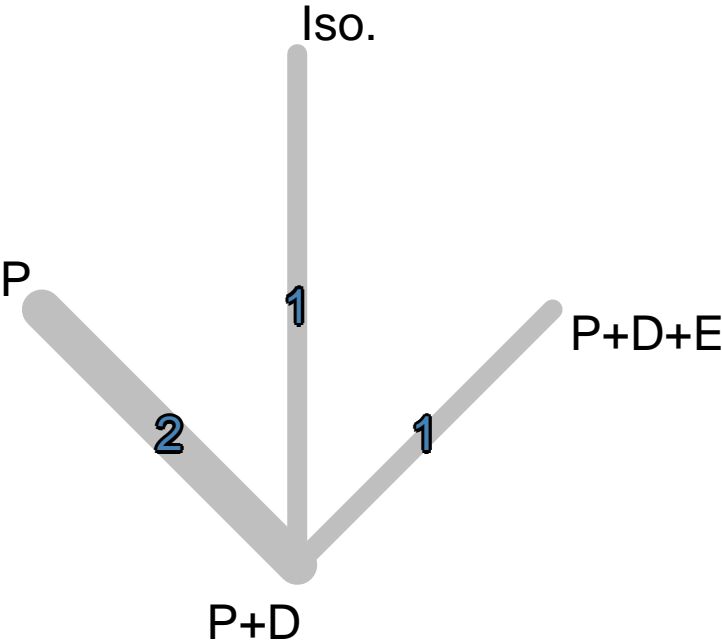
Supplementary Text 2

Inconsistency test of changes in hand grip

Q statistic to assess consistency under the assumption of a full design-by-treatment interaction random effects model

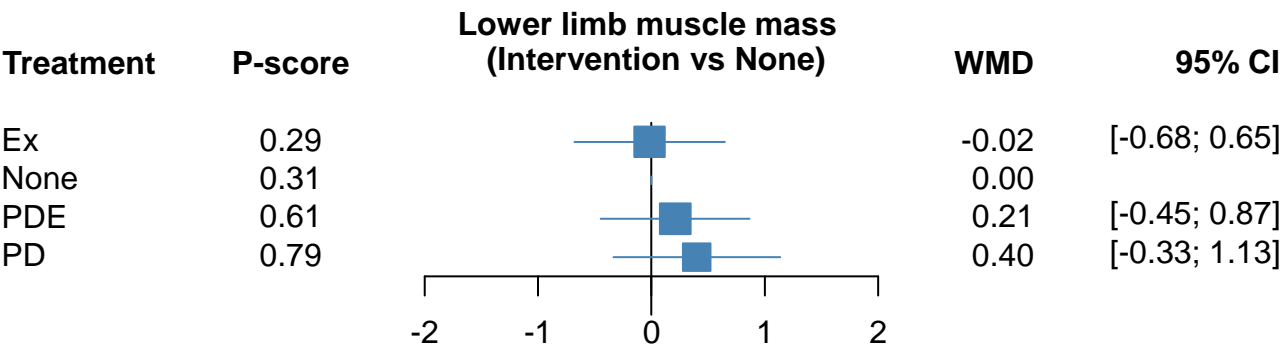
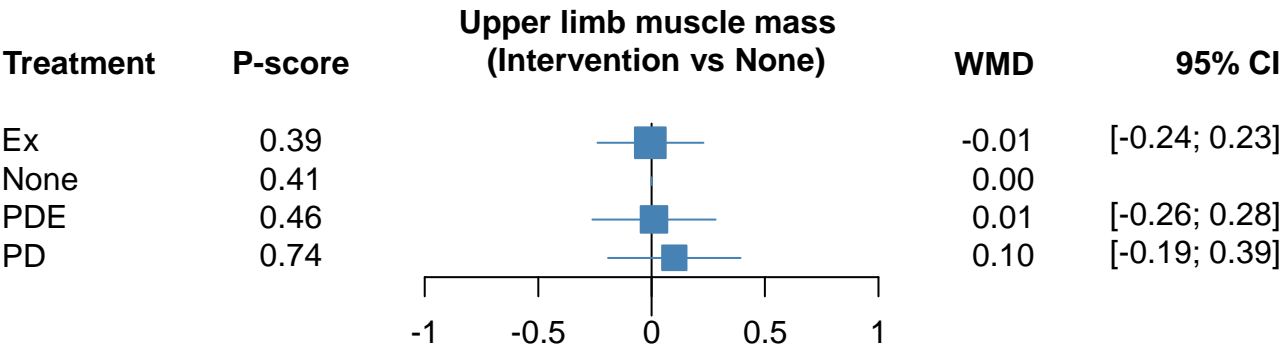
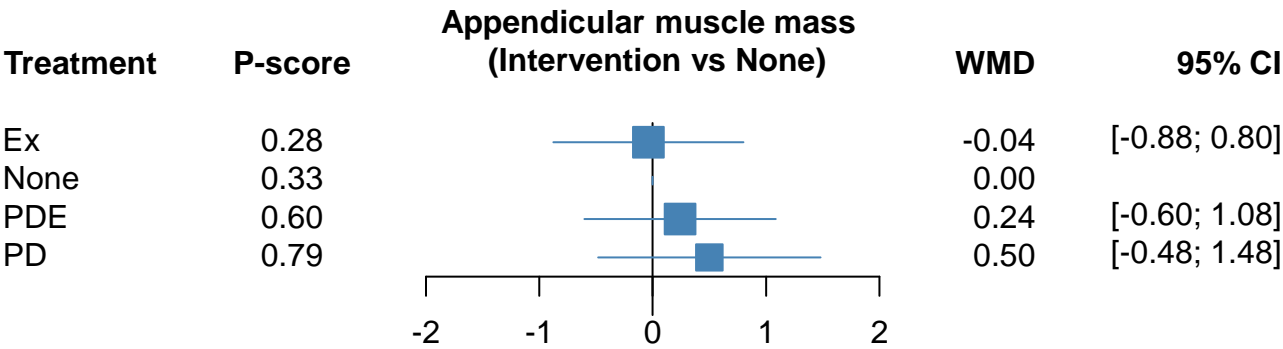
	Q	df	p-value	tau.within	tau2.within
Between designs	2.14	1	0.1439	1.0755	1.1567

Supplementary Figure S1
Network plot of gait speed



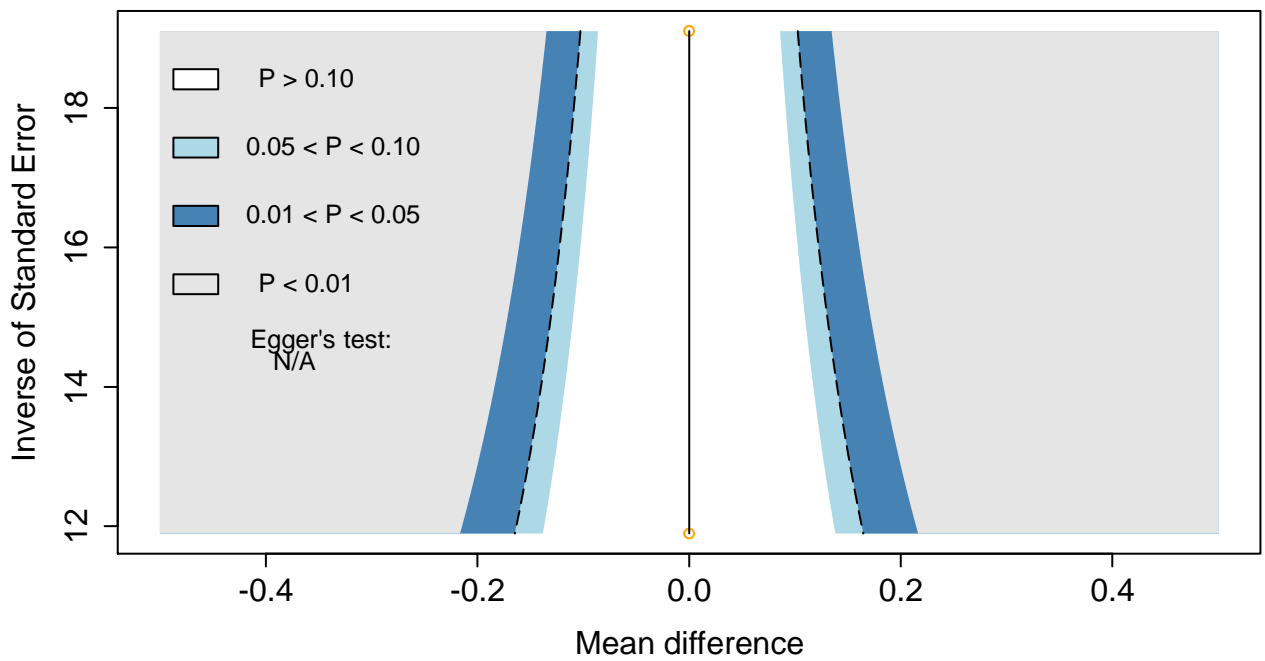
Supplementary Figure S2

Network forest plot of muscle mass



Supplementary Figure S3

Funnel plot of relative skeletal muscle index



Supplementary Figure S4

Funnel plot of body fat mass

