

Central Lancashire Online Knowledge (CLOK)

Title	Methods of assessment of zinc status in humans: an updated review and meta-analysis
Type	Article
URL	https://clock.uclan.ac.uk/51331/
DOI	https://doi.org/10.1093/nutrit/nuae072
Date	2025
Citation	Ceballos Rasgado, Marena, Brazier, Anna, Gupta, Swarnim, Moran, Victoria Louise, Pierella, Elisa, Fekete, Katalin and Lowe, Nicola M (2025) Methods of assessment of zinc status in humans: an updated review and meta-analysis. Nutrition Reviews, 83 (3). e778-e800. ISSN 0029-6643
Creators	Ceballos Rasgado, Marena, Brazier, Anna, Gupta, Swarnim, Moran, Victoria Louise, Pierella, Elisa, Fekete, Katalin and Lowe, Nicola M

It is advisable to refer to the publisher's version if you intend to cite from the work.
<https://doi.org/10.1093/nutrit/nuae072>

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Previous studies

Identification of new studies via databases and registers

Identification

Screening

Included

Studies included in previous version of review (n = 46¹)
Reports of studies included in previous version of review (n =46)

Records excluded:
Intervention where effect of Zn cannot be isolated (n= 1)

Records identified from Medline, Embase and Cochrane as of August 2022:
Registers (n =18,486²)

Records screened (n= 12,149³)

Reports sought for retrieval (n =372)

Reports assessed for eligibility (n =250)

New studies included in review (n = 50)
Reports of new included studies (n = 54)

Total studies included in review (n = 95)
Reports of total included studies (n =99)

Records removed *before screening*:
Duplicate records removed after automatic de-duplication (n=5,189)
Duplicate records removed after manual de-duplication (n= 1,148)

Records excluded manually during title and abstract screening (n =11,777)

Reports not retrieved: **122**
Clinical trial register (n=51); Conference abstract (n=38); Full text not found (n=14); duplicated article: (n=13); erratum (n=3); correspondence/comment (n=2); Persian language (n=1)

Reports excluded: **196**
Not healthy population (n=44); supplement type not stated (n=29); Do not report biomarker of Zn at baseline and after supplementation (n=37); duplicated study with duplicated results (n=15); intervention where effect of Zn cannot be isolated (n=14); no Zn supplement given (n=10); biofortification (n=6); other form of Zn (Zn lactate, chloride, oxide, aspartate and carnosine) (n=13); supplementation below two weeks (n=5); protocol with no results (n=4); not original study (n=13); self-reported Zn supplements (n=2); participants recently used mineral or vitamin supplements (n=2); case report (n=1); not a human study (n=1)