

Bone & Joint Research



Supplementary Material

10.1302/2046-3758.127.BJR-2022-0420.R1

Table i. Search strategy.

Search term
1. selenium[mesh] or "selenious acid" [mesh] or selen*[tiab] or selepen[tiab] or organoselen*[tiab] or natriumselen*[tiab] or methylseleninic[tiab] or methylselenium[tiab] or selenomethionin*[tiab] or selenit*[tiab]
2. bone demineralization[mesh] or bone density[mesh] or bone demineralization[mesh] or osteopenia[mesh] or osteoporosis[mesh] or bone densitometry[mesh] or osteoporo*[tiab] or bone densit*[tiab] or bone loss[tiab] or osteomalacia[tiab] or osteodystrophy[tiab] or bone deminerali?ation[tiab] or osteopenia[tiab] or bone mass[tiab] or bone mineral content*[tiab] or bone defect*[tiab] or bone strength[tiab] or BMC[tiab] or "fracture"[mesh] or fracture* [tiab]
3. # 1 and # 2

Table ii. Quality assessment of included cross-sectional studies.

Cross-sectional studies	Selection				Comparability	Outcome		Total
	Representativeness of the sample	Sample size	Non-respondents	Ascertainment of exposure		Assessment of outcome	Statistical test	
Beukhof et al ¹ 2016	1	0	0	1	2	2	1	7
Grili et al ² 2022	0	1	1	1	2	2	1	8
Rivas et al ³ 2012	0	0	0	1	2	2	1	6
Wang et al ⁴ 2019	1	0	0	1	2	1	1	6
Wei et al ⁵ 2021	1	0	0	1	2	2	1	7
Wolf et al ⁶ 2005	1	0	0	1	2	2	1	7
Wu et al ⁷ 2020	1	1	0	1	2	2	1	8
Xue et al ⁸ 2022	1	1	0	0	2	2	1	7

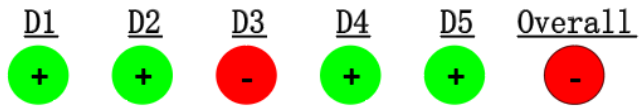
Table iii. Quality assessment of included case-control studies.

Case-control studies	Selection				Comparability	Exposure			Total
	Case definition	Representativeness of the case	Selection of controls	Definition of controls		Based on design and analysis	Assessment of exposure	Same measurement for case and controls	
Al-E-Ahmad et al ⁹ 2018	1	1	1	1	1	1	1	0	7
Arikan et al ¹⁰ 2011	1	0	0	1	1	1	1	0	5
Kul et al ¹¹ 2021	1	0	0	1	2	1	1	0	6
Wang et al ¹² 2015	1	0	0	1	2	1	1	0	6
Odabasi et al ¹³ 2008	1	0	0	0	2	1	1	0	5
Sun et al ¹⁴ 2014	1	1	0	1	1	0	1	0	5
Zhang et al ¹⁵ 2006	1	1	1	1	2	0	0	1	7

Table iv. Quality assessment of included cohort studies.

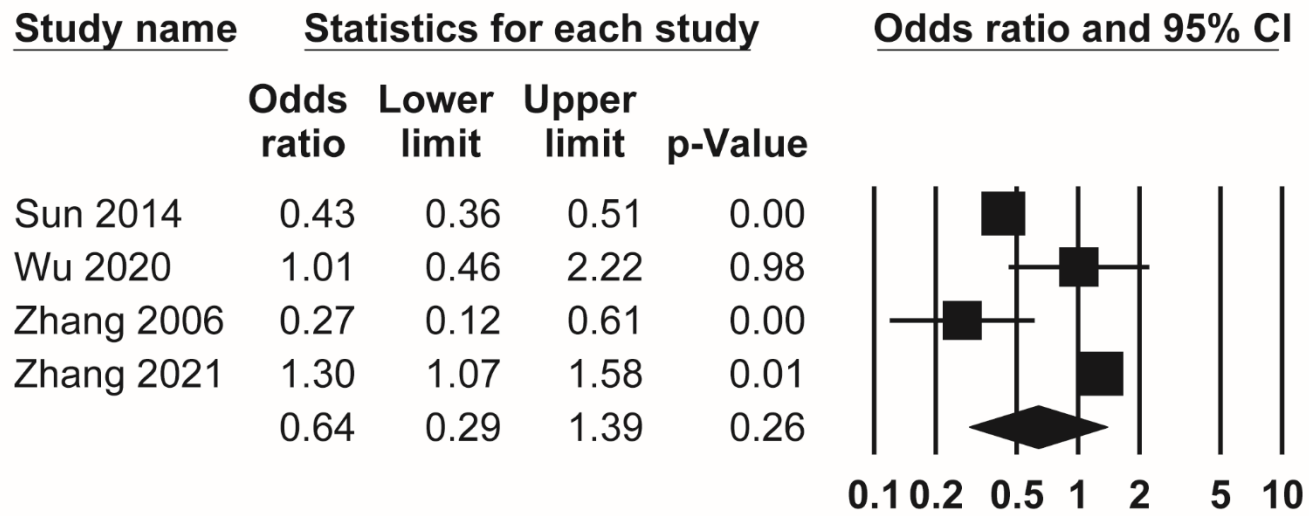
Cohort studies	Selection				Comparability	Exposure			Total
	Representativeness of the exposed cohort	Selection of the non-exposed cohort	Ascertainment of exposure	Outcome not present at start of study		Based on design and analysis	Assessment of outcome	Follow-up long enough for outcomes to occur	
Galvez-Fernandez et al ¹⁶ 2021	0	0	1	1	2	1	1	0	6
Hoeg et al ¹⁷ 2012	1	1	1	1	2	1	0	1	8
Zhang et al ¹⁸ 2021	1	1	1	1	0	0	1	0	5

Study ID
Walsh-2021



- D1 Randomisation process
- D2 Deviations from the intended int
- D3 Missing outcome data
- D4 Measurement of the outcome
- D5 Selection of the reported result

Fig. a. Risk of bias graph for randomized controlled trial (Walsh et al 2021).¹⁹



Meta Analysis

Fig b. Forest plot of the association between dietary selenium and any fractures. CI, confidence interval.

References

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