

Supplementary materials to: Law LS, Siddiqui F, Al-Aamri A, et al. The effect of pulse steroid therapy on bone density and turnover: A systematic review and meta-analysis.

Ann Acad Med Singap 2026;55:OnlineFirst.

DOI: <https://doi.org/10.47102/annals-acadmedsg.2026123>

Supplementary Table S1. Search strategy.

Population: Patients receive high-dose pulse steroid with no/ low dose maintenance steroids

Intervention: High-dose pulse steroid

Comparison: Matched case controls who do not receive any high dose pulse steroid

Outcomes: Bone density, risk for osteoporosis, fractures rates, osteoporosis treatment

Search strategy

PubMed

(Pulse[Title/Abstract] OR high-dose[Title/Abstract] OR short[Title/Abstract]) AND
(steroid[Title/Abstract] OR corticosteroid[Title/Abstract] OR glucocorticoid[Title/Abstract] OR
methylprednisolone[Title/Abstract] OR dexamethasone[Title/Abstract]) AND
(osteoporosis[Title/Abstract] OR osteopenia[Title/Abstract] OR bone density[Title/Abstract] OR
bone mineral[Title/Abstract] OR fracture[Title/Abstract] OR bone turnover[Title/Abstract])

870 results

Scopus

(TITLE-ABS(Pulse) OR TITLE-ABS(high-dose) OR TITLE-ABS(short)) AND (TITLE-
ABS(steroid) OR TITLE-ABS(corticosteroid) OR TITLE-ABS(glucocorticoid) OR TITLE-
ABS(methylprednisolone) OR TITLE-ABS(dexamethasone)) AND (TITLE-ABS(osteoporosis)
OR TITLE-ABS(osteopenia) OR TITLE-ABS(bone density) OR TITLE-ABS(bone mineral) OR
TITLE-ABS(fracture) OR TITLE-ABS(bone turnover))

1688 results

Embase

1: (pulse or high-dose or short).ab.

1672120

2: (steroid or corticosteroid or glucocorticoid or methylprednisolone or dexamethasone).ab.

440148

3: (osteoporosis or osteopenia or bone density or bone mineral or fracture or bone turnover).ab.

406375

4: 1 and 2 and 3

1525 results

Google Scholar

(intitle:pulse OR intitle:high-dose OR intitle:short) AND (intitle:steroid OR intitle:corticosteroid OR intitle:glucocorticoid OR intitle:methylprednisolone OR intitle:dexamethasone) AND (intitle:osteoporosis OR intitle:osteopenia OR intitle:bone density OR intitle:bone mineral OR intitle:fracture OR intitle:bone turnover)

112 results

https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=%28intitle%3Apulse+OR+intitle%3Ahigh-dose+OR+intitle%3Ashort%29+AND+%28intitle%3Asteroid+OR+intitle%3Acorticosteroid+OR+intitle%3Aglucocorticoid+OR++intitle%3Amethylprednisolone+OR+intitle%3Adexamethasone%29+AND+%28intitle%3Aosteoporosis+OR+intitle%3Aosteopenia+OR+intitle%3Abone+density+OR+intitle%3Abone+mineral+OR+intitle%3Afracture+OR+intitle%3Abone+turnover%29&btnG=

Supplementary Table S2. Risk of bias (ROBINS-E).

[illegible]