**Search Strategy**

**The following search strategy was used to identify relevant articles in Medline:**

**Search Details for Intervention**

1. ("hydroxymethylglutaryl-coa-reductases, nadp-dependent"[MeSH Terms] OR ("hydroxymethylglutaryl-coa-reductases"[All Fields] AND "nadp-dependent"[All Fields]) OR "nadp-dependent hydroxymethylglutaryl-coa-reductases"[All Fields] OR "3 hydroxy 3 methylglutaryl coenzyme a reductase"[All Fields]) AND ("antagonists and inhibitors"[Subheading] OR ("antagonists"[All Fields] AND "inhibitors"[All Fields]) OR "antagonists and inhibitors"[All Fields] OR "inhibitors"[All Fields])
2. "hydroxymethylglutaryl-coa reductase inhibitors"[Pharmacological Action] OR "hydroxymethylglutaryl-coa reductase inhibitors"[MeSH Terms] OR ("hydroxymethylglutaryl-coa"[All Fields] AND "reductase"[All Fields] AND "inhibitors"[All Fields]) OR "hydroxymethylglutaryl-coa reductase inhibitors"[All Fields] OR "statins"[All Fields]

**Search Details for Outcome**

1. "bone density"[MeSH Terms] OR ("bone"[All Fields] AND "density"[All Fields]) OR "bone density"[All Fields] OR ("bone"[All Fields] AND "mineral"[All Fields] AND "density"[All Fields]) OR "bone mineral density"[All Fields]
2. "fractures, bone"[MeSH Terms] OR ("fractures"[All Fields] AND "bone"[All Fields]) OR "bone fractures"[All Fields] OR ("bone"[All Fields] AND "fracture"[All Fields]) OR "bone fracture"[All Fields]
3. "osteoporosis, postmenopausal"[MeSH Terms] OR ("osteoporosis"[All Fields] AND "postmenopausal"[All Fields]) OR "postmenopausal osteoporosis"[All Fields] OR "osteoporosis"[All Fields] OR "osteoporosis"[MeSH Terms]

**Limitations**

1. “humans”[MeSH Terms]
2. systematic[sb] OR Clinical Trial[ptyp] OR Controlled Clinical Trial[ptyp] OR Meta-Analysis[ptyp] OR Review[ptyp]

**Final expression:** Intervention (1 OR 2) AND Outcome (1 OR 2 OR 3) AND Limitations (1 AND 2)

**The following search strategy were used to identify relevant articles in Embase:**

**Search Details for Intervention**

1. ‘3 hydroxyl 3 methylglutaryl’ AND (‘coenzyme’/exp OR coenzyme) AND (‘reductase’/exp OR reductase) AND inhibitors
2. ‘statins’/exp OR ‘statins’

**Search Details for Outcome**

1. ‘bone mineral density’/exp OR ‘bone mineral density’
2. ‘bone fracture’/exp OR ‘bone fracture’
3. ‘osteoporosis’/exp OR osteoporosis

**Limitations**

1. [humans]/lim
2. [embase]/lim
3. [Cochrane review]/lim OR [systematic review]/lim OR [controlled clinical trial]/lim OR [randomized controlled trial]/lim OR [meta analysis]/lim

**Final expression:** Intervention (1 OR 2) AND Outcome (1 OR 2 OR 3) AND Limitations (1 AND 2 AND 3)

**The following search strategy were used to identify relevant articles in CENTRAL:**

**Search Details for Intervention**

1. 3-Hydroxy-3-Methylglutaryl coenzyme A reductase inhibitors: ti, ab, kw
2. statis: ti, ab, kw

**Search Details for Outcome**

1. bone mineral density: ti, ab, kw
2. bone fracture: ti, ab, kw
3. osteoporosis: ti, ab, kw

**Limitations**

1. Cochrane Reviews (Reviews and Protocols)

2. Other Reviews

3. Trials

**Final expression:** Intervention (1 OR 2) AND Outcome (1 OR 2 OR 3) And Limitations (1 AND 2 AND 3)

**Supplementary Table 1 Jadad scale for quality assessment of trials examining the effect of statins on bone health**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| First Author, Year | Was the study described as randomized? | Was the study described as double blind? | Was there a description of withdrawals and dropouts? | The method of randomization was described in the paper, and that method was appropriate. | The method of blinding was described, and it was appropriate. | Total |
| Reid IR, 2001 | 1 | 1 | 1 | 1 | 1 | 5 |
| Rejnmark L, 2004 | 1 | 1 | 1 | 0 | 1 | 4 |
| Bone, HG, 2007 | 1 | 1 | 1 | 1 | 0 | 4 |
| Chuengsamarn, S, 2010 | 1 | 0 | 1 | 0 | 0 | 2 |
| Zhao, C, 2013 | 1 | 0 | 1 | 0 | 0 | 2 |
| Chen ZG, 2014 | 1 | 0 | 1 | 1 | 0 | 3 |
| Peña JM, 2014 | 1 | 1 | 1 | 1 | 1 | 5 |