

| Source | Intervention | Women, No. (%) | Mean Age, y | Previous Fracture | Calcium Intake, mg/d | Baseline 25OHD, ng/mL | Treatment Duration |
|--|--|----------------------|-----------------|----------------------|----------------------|-----------------------|--------------------|
| Avenell et al, 2004 (United Kingdom) | Calcium(1 g/d) (n = 29) | NA ^a (83) | 78 ^b | Yes | NA | NA | 3.8 y |
| | No treatment (n = 35) | | | | | | |
| | D ₃ (800IU/d) (n = 35) | NA ^a (83) | 78 ^b | Yes | NA | NA | 3.8 y |
| | No treatment (n = 35) | | | | | | |
| Baron et al, 1999 (United States) | Calcium: 1.2 g/d (n = 464) | 258 (28) | 61.0 | NA | 877 | NA | 4 y |
| | Placebo (n = 466) | | | | | | |
| Dawson-Hughes et al, 1997 (United States) | Calcium (0.5g/d) + D ₃ (700IU/d) (n = 187) | 213 (54) | 71.1 | NA | 729 | 29.6 ^e | 3 y |
| | Placebo (n = 202) | | | | | | |
| Grant et al, 2005 (United Kingdom) | Calcium(1 g/d) (n = 1311) | 2241 (85) | 77 | Yes | NA | 15.2 ^{e,f} | 2-5 y |
| | Placebo (n = 1332) | | | | | | |
| | D ₃ (800IU/d) (n = 1343) | 2264 (85) | 77 | Yes | NA | 15.2 ^{e,f} | 2-5 y |
| | Placebo (n = 1332) | | | | | | |
| Hansson and Roos, 1987 (Sweden) | Calcium (1g/d) (n = 25) | 50 (100) | 65.9 | Yes | NA | NA | 3 y |
| | Placebo (n = 25) | | | | | | |
| Harwood et al, 2004 (United Kingdom) | D ₃ (300000 IU once) (n = 38) | 75 (100) | 80.5 | Yes | NA | 11.6 | 1 y |
| | No treatment (n = 37) | | | | | | |
| | Calcium (1g/d) + D ₂ (300000 IU once) (n = 36) | 112 (100) | 81.7 | Yes | NA | 11.9 | 1 y |
| | Calcium (1g/d) + D ₃ (800IU/d) (n = 39) | | | | | | |
| Hin et al, 2017 (United Kingdom) | D ₃ (4000 IU/d)(n = 102) | 150 (49) | 71.7 | Partial ^c | 710 | 20.1 | 1 y |
| | D ₃ (2000 IU/d)(n = 102) | | | | | | |
| Jackson et al, 2006 (United States) | Placebo (n = 101) | | | | | | |
| | Calcium (1g/d) + D ₃ (400 IU/d) (n = 4015) | 7972 (100) | 62.4 | Partial ^c | 1151 | 18.9 ^e | 7 y |

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| | Placebo (n = 3957) | | | | | | |
| Lips et al, 1996 (The Netherlands) | 400 IU/d (n = 1291) Placebo (n = 1287) | 1916 (74) | 80.0 | No hip fracture | 868 | 10.6 ^e | 3-4 y |
| Liu et al, 2015 (China) | Calcium (1.5g/d) + D ₃ (600 IU/d) (n = 50) Placebo (n = 48) | 98 (100) | 62.1 | No | 1500 | NA | 1 y |
| Mitri et al, 2011 (United States) | D ₃ (2000 IU/d)(n = 23) Placebo (n = 24) | 25 (53) | 58.0 | NA | 926 | 25.3 | 4 mo |
| Peacock et al, 2000 (United States) | Calcium (0.75g/d) (n = 126) Placebo (n = 135) | 187 (72) | 73.8 | Partial ^c | 597 | 25.0 | 4 y |
| Porthouse et al, 2005 (United Kingdom) | Calcium (1g/d) + D ₃ (800 IU/d) (n = 1321) No treatment (n = 1993) | 3314 (100) | 76.8 | Partial ^c | 1080 | NA | 1.5-3.5 y |
| Prince et al, 2006 (Australia) | Calcium (0.48g/d) (n = 730) Placebo (n = 730) | 1460 (100) | 75.2 | Partial ^c | 915 | 31.0 ^e | 5 y |
| Recker et al, 1996 (United States) | Calcium (1.2 g/d) (n = 95) Placebo (n = 102) | 197 (100) | 73.5 | Partial ^c | 434 | 25.5 ^e | 4 y |
| Reid et al, 1993 (New Zealand) | Calcium (1 g/d) (n = 68) Placebo (n = 67) | 135 (100) | 58 | No vertebral fracture | 750 | 37.5 | 4 y |
| Reid et al, 2006 (New Zealand) | Calcium (1 g/d) (n = 732) Placebo (n = 739) | 1471 (100) | 74.3 | Partial ^c | 857 | 20.7 | 5 y |
| Riggs et al, 1998 (United States) | Calcium (1.6 g/d) (n = 119) Placebo (n = 117) | 236 (100) | 66.2 | No | 714 | 30.1 | 4 y |
| Salovaara et al, 2010 (Finland) | Calcium(1g/d) + D ₃ (800 IU/d) (n = 1718) No treatment (n = 1714) | 3432 (100) | 67.3 | Partial ^c | 957 | 19.8 ^e | 3 y |
| Sanders et al, 2010 (Australia) | D ₃ (500000 IU every year) (n = 1131) Placebo (n = 1127) | 2258 (100) | 76.1 | Partial ^c | 976 | 19.8 ^e | 3-5 y |
| Smith et al, 2007 (United Kingdom) | D ₃ (300000 IU every year) (n = 4727) Placebo (n = 4713) | 5086 (54) | 79.1 | Partial ^c | 625 ^d | 22.6 ^e | 3 y |
| Trivedi et al, 2003 (United Kingdom) | D ₃ (100000 IU every 4 mo) (n = 1345) Placebo (n = 1341) | 649 (24) | 74.8 | NA | 742 | NA | 5 y |
| Uusi-Rasi et al, 2015 | D ₃ (800 IU/d) (n = 102) | 204 (100) | 73.9 | NA | 1082 | 26.7 | 2 y |

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|--|---|-----------|------|----------------------|------|------|-----|
| (Finland) | Placebo (n = 102) | | | | | | |
| Witham et al, 2013 (United Kingdom) | D ₃ (100000 IU every 3 mo) (n = 80) Placebo (n = 79) | 77 (49) | 76.8 | NA | 1125 | 18.0 | 1 y |
| Xue et al, 2017 (China) | Calcium (0.6g/d) + D ₃ (800 IU/d) (n = 139) Placebo (n = 173) | 312 (100) | 63.6 | Partial ^c | NA | 30.8 | 1 y |

Abbreviation: 25OHD, 25-hydroxyvitamin D; NA, not available

^a Women accounted for 83% of total participants in this trial, but detailed data not available for each group.

^b Mean age is 78 y for total participants in this trial, but detailed data not available for each group.

^c This trial reported partial participants with fracture history.

^d Partial participants were assessed for dietary calcium intake.

^e Partial participants received measurement of baseline 25OHD concentrations.

^f The RECORD trial reported that the mean baseline 25OHD concentrations for a sample of 60 participants was 15.2 ng/mL, but detailed data were not available for each group.

supplementary Table 3. The characteristics of the included studies.