

Source	Treatment		No. of Participants		
	Duration	Intervention	Total Fracture	Hip fracture	Vertebral Fracture
<b>Avenell et al, 2004</b> (United Kingdom)	3.8 y	Calcium(1 g/d) (n = 29)	4	1	0
		D <sub>3</sub> ( 800IU/d) (n = 35)	3	0	0
		Calcium (1g/d) + D <sub>3</sub> (800IU/d) (n = 35)	2	1	0
		No treatment (n = 35)	4	1	1
<b>Baron et al, 1999</b> (United States)	4 y	Calcium: 1.2 g/d (n = 464)	4	1	
		Placebo (n = 466)	14	0	
<b>Dawson-Hughes et al, 1997</b> (United States)	3 y	Calcium (0.5g/d) + D <sub>3</sub> (700IU/d) (n = 187)		0	
		Placebo (n = 202)		1	
<b>Grant et al, 2005</b> (United Kingdom)	2-5 y	Calcium(1 g/d) (n = 1311)	166	49	3
		D <sub>3</sub> ( 800IU/d) (n = 1343)	188	47	4
		Calcium (1g/d) + D <sub>3</sub> (800IU/d) (n = 1306)	165	46	0
		Placebo (n = 1332)	179	41	1
<b>Hansson and Roos, 1987</b> (Sweden)	3 y	Calcium (1g/d) (n = 25)			1
		Placebo (n = 25)			1
<b>Harwood et al, 2004</b> (United Kingdom)	1 y	D <sub>3</sub> (300000 IU once) (n = 38)	0	0	
		Calcium (1g/d) + D <sub>2</sub> (300000 IU once) (n = 36)	6	1	
		Calcium (1g/d) + D <sub>3</sub> (800IU/d) (n = 39)			
		No treatment (n = 37)	5	1	
<b>Hin et al, 2017</b> (United Kingdom)	1 y	D <sub>3</sub> (4000 IU/d)(n = 102)	6		
		D <sub>3</sub> (2000 IU/d)(n = 102)			
		Placebo (n = 101)	1		
<b>Jackson et al, 2006</b> (United States)	7 y	Calcium (1g/d) + D <sub>3</sub> (400 IU/d) (n = 4015)		70	
		Placebo (n = 3957)		61	

<b>Lips et al, 1996</b> <b>(The Netherlands)</b>	3-4 y	400 IU/d (n = 1291)	135	58	
		Placebo (n = 1287)	122	48	
<b>Liu et al, 2015</b> <b>(China)</b>	1 y	Calcium (1.5g/d) + D <sub>3</sub> (600 IU/d) (n = 50)	1		
		Placebo (n = 48)	2		
<b>Mitri et al, 2011</b> <b>(United States)</b>	4 mo	D <sub>3</sub> (2000 IU/d)(n = 23)	1		
		Placebo (n = 24)	0		
<b>Peacock et al, 2000</b> <b>(United States)</b>	4 y	Calcium (0.75g/d) (n = 126)			7
		Placebo (n = 135)			13
<b>Porthouse et al, 2005</b> <b>(United Kingdom)</b>	1.5-3.5 y	Calcium (1g/d) + D <sub>3</sub> (800 IU/d) (n = 1321)	58	8	
		No treatment (n = 1993)	91	17	
<b>Prince et al, 2006</b> <b>(Australia)</b>	5 y	Calcium (0.48g/d) (n = 730)	110	11	38
		Placebo (n = 730)	126	6	39
<b>Recker et al, 1996</b> <b>(United States)</b>	4 y	Calcium (1.2 g/d) (n = 95)			27
		Placebo (n = 102)			34
<b>Reid et al, 1993</b> <b>(New Zealand)</b>	4 y	Calcium (1 g/d) (n = 68)	2	0	0
		Placebo (n = 67)	7	2	1
<b>Reid et al, 2006</b> <b>(New Zealand)</b>	5 y	Calcium (1 g/d) (n = 732)	134	17	27
		Placebo (n = 739)	147	5	38
<b>Riggs et al, 1998</b> <b>(United States)</b>	4 y	Calcium (1.6 g/d) (n = 119)			8
		Placebo (n = 117)			9
<b>Salovaara et al, 2010</b> <b>(Finland)</b>	3 y	Calcium(1g/d) + D <sub>3</sub> (800 IU/d) (n = 1718)	78	4	9
		No treatment (n = 1714)	94	2	13
<b>Sanders et al, 2010</b> <b>(Australia)</b>	3-5 y	D <sub>3</sub> (500000 IU every year) (n = 1131)	155	19	35
		Placebo (n = 1127)	125	15	28
<b>Smith et al, 2007</b> <b>(United Kingdom)</b>	3 y	D <sub>3</sub> (300000 IU every year) (n = 4727)		66	
		Placebo (n = 4713)		44	
<b>Trivedi et al, 2003</b> <b>(United Kingdom)</b>	5 y	D <sub>3</sub> (100000 IU every 4 mo) (n = 1345)	119	21	18
		Placebo (n = 1341)	149	24	28

<b>Uusi-Rasi et al, 2015</b> <b>(Finland)</b>	2 y	D <sub>3</sub> (800 IU/d) (n = 102)	6	2
		Placebo (n = 102)	6	0
<b>Witham et al, 2013</b> <b>(United Kingdom)</b>	1 y	D <sub>3</sub> (100000 IU every 3 mo) (n = 80)	2	
		Placebo (n = 79)	3	
<b>Xue et al, 2017</b> <b>(China)</b>	1 y	Calcium (0.6g/d) + D <sub>3</sub> (800 IU/d) (n = 139)	3	
		Placebo (n = 173)	2	

**Supplementary Table 4.** The detailed data of outcomes