

Erratum and additional analyses re: Calcium plus vitamin D supplementation and the risk of fractures: an updated meta-analysis from the National Osteoporosis Foundation

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Published online: 11 July 2016

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Erratum to: Osteoporos Int DOI: 10.1007/s00198-015-3386-5

Dear Editor,

In response to the communication from Drs. Bolland, Avenell, Grey, and Reid [1], we offer the following additional data and analyses. We apologize for several errors in Table 1 of the original publication [2]; the updated table is reproduced here (Table 1). We also offer the following method clarifications:

- If studies reported multiple results, we used the data from participants who completed the studies (ie, per-protocol analysis).
- Porthouse et al. stated: “In our unadjusted analysis we present the incidence of fracture by equally or unequally allocated groups as in any meta-analysis these need to be entered as two separate studies.” Therefore we treated

these data as two studies since there was no overlapping in study participants among groups.

- RRs were calculated using the original numbers of events and non-events in each group.

After incorporating the above suggestions from Bolland et al., the overall RR (95 % CI) for total fractures changed from 0.85 (0.73–0.98) to 0.86 (0.75–0.98) (Fig. 1), and the overall RR (95 % CI) for hip fractures changed from 0.70 (0.56–0.87) to 0.61 (0.46–0.82) (Fig. 2). These alterations do not affect the original publication’s conclusions. These data could further suggest that calcium with vitamin D supplementation may have a greater impact on preventing hip fractures than originally described.

We also apologize for a typographical error in the original text [2]. The dataset contains 192 hip fractures, as listed in the original publication’s table (not 195). Since the number of 192 hip fractures were used in the data analysis, this error did not affect the outcome of the study.

The online version of the original article can be found at <http://dx.doi.org/10.1007/s00198-015-3386-5>.

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Table 1 Summary of meta-analysis results for calcium plus vitamin D supplementation versus placebo and fracture risk

Study	Status	Subgroup	Vitamin D (IU/day)	Calcium (mg/day)	Number of total fracture events/total			Number of hip fracture events/total						
					Reported RR/HR (95 % CI)	Treatment	Control	Reported RR/HR (95 % CI)	Treatment	Control				
Chapuy et al, 1992 [3]	Institutionalized		800	1200	ND	66/877	97/888	ND	0.69 (0.51, 0.93)	ND	21/877	37/888	0.57 (0.34, 0.97)	
Chapuy et al, 2002 [4]	Institutionalized		800	1200	ND	ND	ND	ND	ND	Placebo vs. treatment 1.69 (0.96–3)	27/393	21/190	0.62 (0.36, 1.07)	
Dawson-Hughes et al, 1997 [5]	Community-dwelling		700	500	0.4 (0.2, 1.0)	11/170	26/148	ND	0.37 (0.19, 0.72)	ND	0/170	1/148	0.29 (0.01, 7.08)	
Porthouse et al, 2005 [6]	Community-dwelling	Unequally allocated group	800	1000	ND	34/714	69/1391	ND	0.96 (0.64, 1.43)	ND	3/714	15/1391	0.39 (0.11, 1.34)	
Porthouse et al, 2005 [6]	Community-dwelling	Equally allocated group	800	1000	ND	24/607	22/602	ND	1.08 (0.61, 1.91)	ND	5/607	2/602	2.48 (0.48, 12.78)	
Prentice et al, 2013 [7] ^a	Community-dwelling		400	1000	ND	405/7530 ^b	458/7801 ^b	ND	0.92 (0.80, 1.04)	ND	19/7530 ^b	35/7406 ^b	0.53 (0.31, 0.93)	
Salovaara et al, 2010 [8]	Community-dwelling		800	1000	Adjusted HR 0.83 (0.61, 1.12)	78/1586	94/1609	Adjusted HR 2.23 (0.41–12.29)	0.84 (0.63, 1.13)	ND	4/1586	2/1609	2.03 (0.37, 11.06)	
Grant et al, 2015 [9] ^c	Community-dwelling with history of fracture		800	1000	ND	179/1306	192/1332	ND	0.95 (0.79, 1.15)	ND	ND	ND	ND	ND
Harwood et al, 2004 [10]	Community-dwelling with history of fracture		800	1000	ND	3/29	5/35	ND	0.72 (0.19, 2.78)	ND	ND	ND	ND	ND
Total (random model)						800/12819	963/13806		0.86 (0.75, 0.98)		79/11877	113/12234	0.61 (0.46, 0.82)	

CI confidence interval, ND no data, RR relative risk, HR hazard ratio, WHI Women's Health Initiative

^aData analyzing the WHI for adherence to assigned pills and no personal use of supplements from Table 6 in Prentice et al. [7]

^bData provided from WHI investigators

^cThe results from data of fracture confirmed by radiography

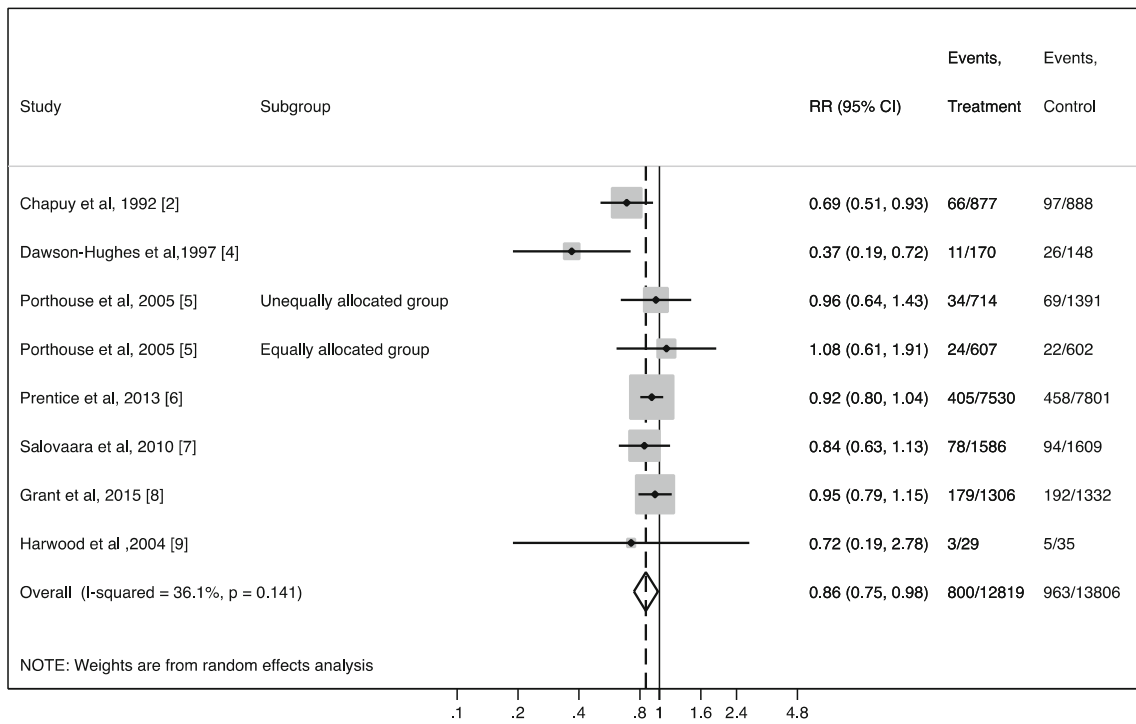


Fig. 1 Total fractures

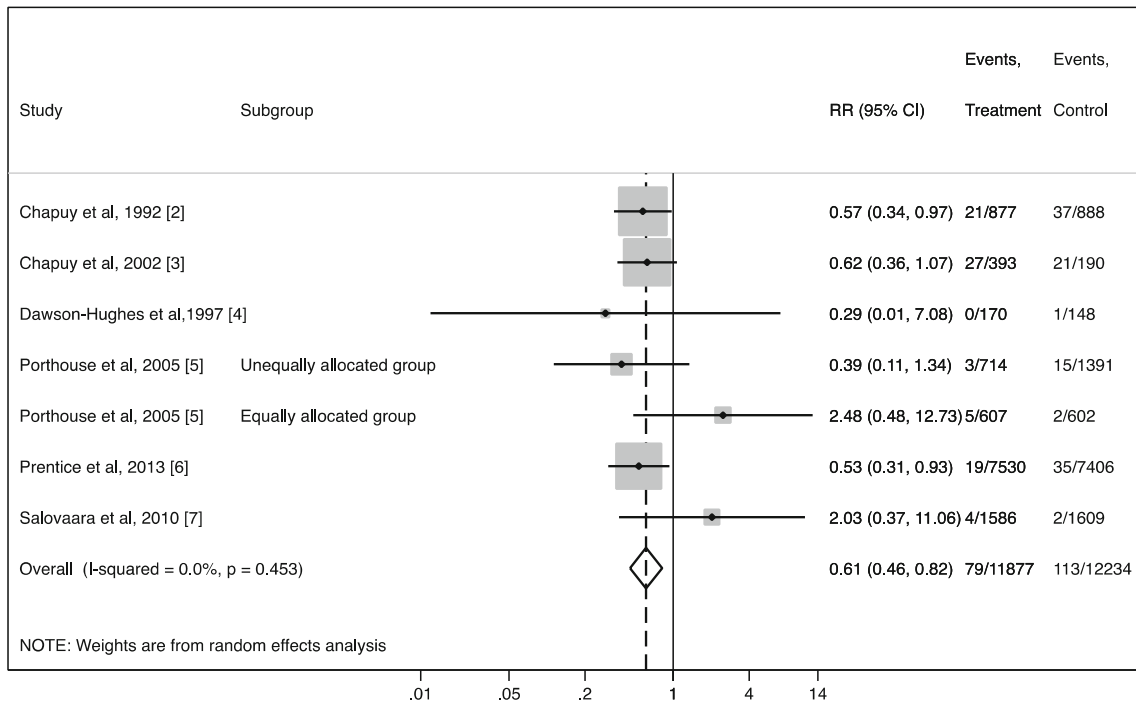


Fig. 2 Hip fractures

Acknowledgments The authors would like to thank Dr. Mei Chung and Zhuxuan Fu for their help in running the additional meta-analyses provided here.

Funding Funding sources for the original analyses (DOI: [10.1007/s00198-015-3386-5](https://doi.org/10.1007/s00198-015-3386-5)) were declared in the publication. The authors have not received additional funding or compensation for the new work reported here.

Compliance with ethical standards

Conflicts of interest The authors declared all conflicts of interest in the original publication (DOI: [10.1007/s00198-015-3386-5](https://doi.org/10.1007/s00198-015-3386-5)).

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