ONLINE SUPPLEMENTARY DOCUMENT

Title: Efficacy of vitamin D supplementation on COPD and asthma control:

a systematic review and meta-analysis

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Fig. S1 Risk of bias assessed by the Cochrane assessment tool

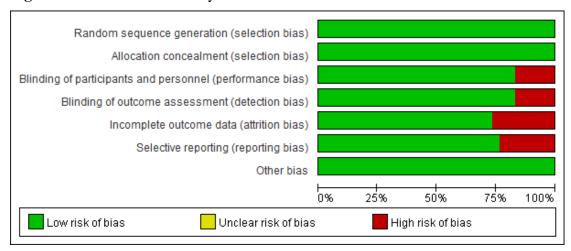
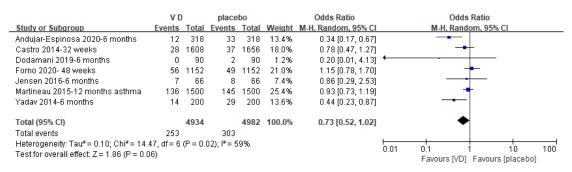
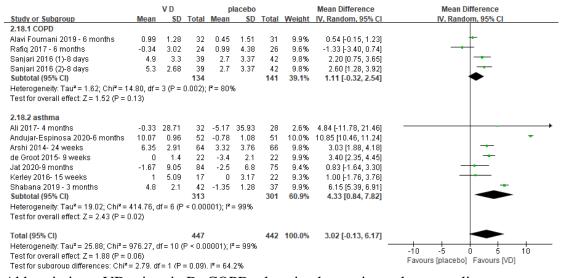


Fig. S2 Meta-analysis of VD supplementation on number of exacerbations of asthma



The total number is the number of patients multiplied by the month of observation. Abbreviations: VD, vitamin D.

Fig. S3 Meta-analysis of VD supplementation on FEV1/FVC change from baseline to end



Abbreviations: VD, vitamin D; COPD, chronic obstructive pulmonary disease.

Fig. S4 Meta-analysis of VD supplementation on mMRC score change from baseline to end of COPD

	V D			placebo				Mean Difference	Mean Difference				
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Fixed, 95% CI	IV, Fixed, 95% CI				
Dastan 2019-6 days	-0.97	0.86	33	-0.82	0.81	34	47.9%	-0.15 [-0.55, 0.25]					
Pourrashid 2018-120 days	-1.27	0.78	30	-1	0.76	32	52.1%	-0.27 [-0.65, 0.11]					
Total (95% CI)			63			66	100.0%	-0.21 [-0.49, 0.06]	-				
Heterogeneity: Chi² = 0.18, d Test for overall effect: Z = 1.5		-1 -0.5 0 0.5 1 Favours IV D1 Favours [placebo]											

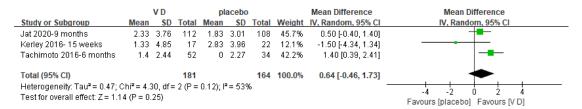
Abbreviations: Mmrc, Modified Medical Research Council; VD, vitamin D; COPD, chronic obstructive pulmonary disease.

Fig. S5 Meta-analysis of VD supplementation on SGRQ score change from baseline to end of COPD

		V D placebo						Mean Difference	Mean Difference					
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI		IV, R	andom, 95	% CI		
Bjerk 2013-6 weeks	1.3	5.6	18	-1	6.9	18	20.8%	2.30 [-1.81, 6.41]			-			
Martineau 2015 - 12 months	-1	7.67	122	-2.4	8.36	118	36.9%	1.40 [-0.63, 3.43]			+-	_		
Pourrashid 2018-120 days	8.66	3.32	30	3.99	2.19	32	42.4%	4.67 [3.26, 6.08]				-		
Total (95% CI)			170			168	100.0%	2.97 [0.51, 5.43]			-	>		
Heterogeneity: $Tau^2 = 3.20$; $Chi^2 = 7.08$, $df = 2$ ($P = 0.03$); $i^2 = 72\%$ Test for overall effect: $Z = 2.37$ ($P = 0.02$)										-5 Favours (0 V D1 Favo	5 urs [place]	10 bol	

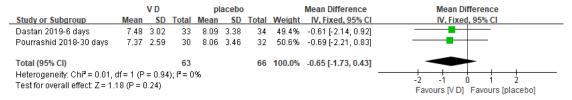
Abbreviations: SGRQ, St George's Respiratory Questionnaire; VD, vitamin D; COPD, chronic obstructive pulmonary disease.

Fig. S6 Meta-analysis of VD supplementation on ACT score change from baseline to end of asthma



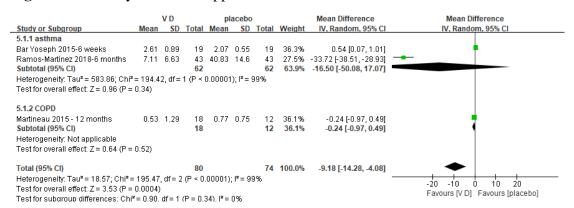
Abbreviations: ACT, asthma control test; VD, vitamin D.

Fig. S7 Meta-analysis of VD supplementation on length of hospital stay of COPD



Abbreviations: VD, vitamin D; COPD, chronic obstructive pulmonary disease.

Fig. S8 Meta-analysis of VD supplementation on IL-5



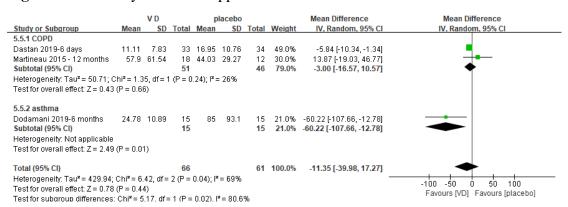
Abbreviations: VD, vitamin D; COPD, chronic obstructive pulmonary disease.

Fig. S9 Meta-analysis of VD supplementation on IgE of asthma

	V D			placebo			Mean Difference			Mean Difference			
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Fixed, 95% CI		IV, Fixed	1, 95% CI		
Andujar-Espinosa 2020-6 months	297.02	562.4	52	353.12	964.45	53	1.0%	-56.10 [-357.40, 245.20]					
Bar Yoseph 2015-6 weeks	398.1	412.6	19	539.5	651.8	19	0.8%	-141.40 [-488.26, 205.46]	_				
Ramos-Martínez 2018	108.8	33.8	41	209.8	95.6	42	98.2%	-101.00 [-131.71, -70.29]					
Total (95% CI)			112			114	100.0%	-100.85 [-131.28, -70.42]		•			
Heterogeneity: Chi ² = 0.14, df = 2 (P : Test for overall effect: Z = 6.50 (P < 0							-500	-250 Favours [V D]	0 250 Favours [pl				

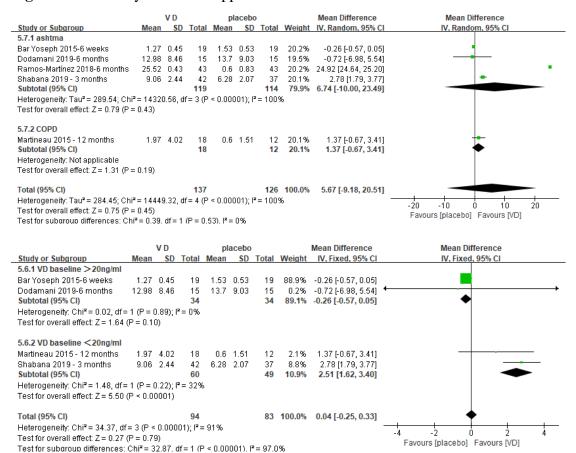
Abbreviations: VD, vitamin D.

Fig. S10 Meta-analysis of VD supplementation on IL-6



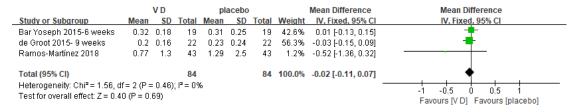
Abbreviations: VD, vitamin D; COPD, chronic obstructive pulmonary disease.

Fig. S11 Meta-analysis of VD supplementation on IL-10



The research of Ramos-Martinez didn't include the character of VD baseline. Abbreviations: VD, vitamin D; COPD, chronic obstructive pulmonary disease.

Fig. S12 Meta-analysis of VD supplementation on eosinophils of asthma



Abbreviations: VD, vitamin D.