The effect of prebiotics, alone or as part of synbiotics, on cardiometabolic parameters in women with polycystic ovary syndrome: a systematic review and meta-analysis of randomized controlled trials

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Supplementary Table S4 Meta-analysis showing the effect of prebiotics and synbiotics interventions on anthropometric indices (all analyses were conducted using a random-effects model).

Outcomes	Meta-analysis					Heterogeneity			
	Study group	Number of studies	Number of participants	WMD (95% CI)	*P* effect	Q statistic	*P* within group [1]	*I*-squared (%)	*P* between group [2]
BMI (kg/m^2)	Overall	14	852	-0.510 (-0.669, -0.351)	**<0.001**	3.86	0.996	0.0	-
Weight (kg)	Overall	14	852	-1.857 (2.464, -1.249)	**<0.001**	15.51	0.344	9.8	-
WC (cm)	Overall	9	665	-3.11 (-4.193, -2.028)	**<0.001**	38.47	< 0.001	76.6	-
	DASH diet								
	Yes	3	153	-3.154 (-5.2, -1.109)	**<0.001**	26.28	<0.001	92.4	0.106
	No	6	412	-3.009 (-4.474, -1.544)	**<0.001**	9.33	0.156	35.7	
	LC diet								
	Yes	3	142	-3.839 (-5.209, -2.468)	**<0.001**	15.97	<0.001	87.5	0.024

	No	6	423	-2.660 (-3.539, -1.782)	**<0.001**	3.66	0.723	0.0	
	Baseline BMI								
	Obesity (BMI≥30 kg/m^2)	5	272	-3.345 (-4.614, -2.076)	**<0.001**	30.42	<0.001	86.9	0.127
	Overweight (BMI between 25-29.9 kg/m^2)	4	293	-2.379(-4.104, -0.655)	**0.007**	2.09	0.720	0.0	
HC (cm)	Overall	7	463	-1.203 (-2.992, 0.586)	0.188	21.90	0.003	68.0	-
	Overall (excluding a study by Asemi 2015)	6	415	-0.189 (-1.445, 1.067)	0.768	8.08	0.232	25.8	-
	Type of interventions								
	Prebiotics	3	185	-3.154 (-6.885, 0.577)	0.098	12.04	0.002	83.4	0.006
	Synbiotics	5	330	0.516 (-0.626, 1.657)	0.382	2.31	0.804	0.0	
	DASH diet								
	Yes	2	103	-2.456 (-7.078, 2.167)	0.298	9.96	0.002	90.0	0.036
	No	6	412	0.178 (-0.929, 1.286)	0.752	7.98	0.239	24.9	
	LC diet								
	Yes	3	142	-1.143 (-4.345, 2.059)	0.484	17.47	0.000	88.5	0.513
	No	5	384	-0.733 (-2.224, 0.758)	0.335	4.79	0.442	0.0	

	Type of Prebiotics								
	Other (Psyllium, Fiber)	3	165	-3.154 (-6.885 0.577	0.098	12.04	0.002	83.4	0.006
	Inulin	5	350	0.516 (-0.626 1.657	0.376	2.29	0.804	0.0	
	Baseline BMI								
	Obesity (BMI≥30 kg/m^2)	4	222	-0.965 - 3.577 1.646	0.469	17.47	0.001	82.8	0.406
	Overweight (BMI between 25-29.9 kg/m^2)	4	293	-0.905 (-2.712, 0.903)	0.327	4.74	0.316	15.5	
WHR	Overall	6	401	-0.015 (-0.026 , -0.003)	**0.011**	11.88	0.065	49.5	-
	Overall (excluding a study by Chudzicka-Strugala 2021)	5	362	-0.011 (-0.020 , -0.001)	0.028	6.77	0.238	26.2	-
	Type of intervention								
	Prebiotics	2	103	-0.004 (-0.014, 0.005)	0.346	0.11	0.737	0.0	0.018
	Synbiotics	4	298	-0.021 (-0.034, -0.008)	0.002	6.17	0.187	35.2	
	LC diet								
	Yes	2	94	-0.020 (-0.055, 0.014)	0.239	6.31	0.012	84.2	0.462
	No	4	307	-0.014 (-0.026, -0.002)	**0.023**	5.03	0.284	20.5	
	Type of Prebiotics								

	Other (Psyllium, Fiber)	2	103	-0.004 (-0.014, 0.005)	0.346	0.11	0.737	0.0	0.018
	Inulin	4	298	-0.021 (-0.034, -0.008)	0.002	6.17	0.187	35.2	
	Duration of Intervention								
	12 weeks	3	193	-0.013 (-0.035, 0.008)	0.212	6.79	0.034	70.5	0.199
	8 weeks	3	208	-0.018 (-0.030, -0.005)	**0.007**	3.45	0.328	13.0	
	Baseline BMI								
	Obesity (BMI≥30 kg/m^2)	3	193	-0.013 (-0.035, 0.008)	0.212	6.79	0.034	70.5	0.199
	Overweight (BMI between 25-29.9 kg/m^2)	3	208	-0.018 (-0.030, -0.005)	**0.007**	3.45	0.328	13.0	
Fat Mass (kg)	Overall	4	202	-1.496 (-2.205, -0.787)	<0.001	7.93	0.047	62.2	-
	Country								
	Iran	2	103	-1.066 (-1.836, -0.296)	**0.007**	0.29	0.589	0.0	0.505
	Other countries	2	99	-1.827, -3.181, -0.474)	0.008	7.19	0.007	86.1	
	Duration of Intervention								
	12 weeks	2	94	-1.194 (-1.490, -0.899)	<0.001	0.07	0.798	0.0	0.010
	8 weeks	2	108	-2.199 (-4.142, -0.255)	0.027	1.29	0.257	22.2	

[1] Calculated from a random-effects model

[2] Calculated from a fixed-effect model

Abbreviations**:** DASH, dietary approaches to stop hypertension; LC, low-calorie; HC, hip circumference; WC, waist circumference; WHR, waist-to-hip ratio; BMI, body mass index; WMD, weighted mean difference.

(Negative signs in WMD indicate a negative difference in the outcome).