## SUPPLEMENT TABLE AND FIGURES

Table S1. Randomized Controlled Trials of Dairy Intake not included in the Meta-Analysis

Study	Sample	Sex	Age	BMI	Country of	Study	Findings
Author,	size		mean± SD	mean± SD	origin	duration	T
Year			or range	or range		(weeks)	Intervention vs
Λ1	T 10	710/1/	(years)	(kg/m²)	T., 1:.	100	Control
Agrawal,	I=12	71%M	16.7±8.9	I=15.8±2.4	India	108	↓ BMI
2011 [23]	C=12	29%F	I 47 ( ) 0 4	C=15.8±3.0	TT-11-1	10	→ Insulin
Anderson,	I=39	12%M 88%F	I=47.6±9.4	27-40	United	12	↔ Body
2005 [16]	C=51	88%F	C=47.3±9.4		States		Weight ↔ WC
Alonso,	I=23	51% M	I= 19.9±1.4	I=23.4±3.5	Spain	20	↑ Body
2009* [33]	C=22	49% F	C=19.9±1.6	C=23.7±3.7			Weight
Al Naggar,	I=15	**	18-33	***	Malaysia	2	↓ Body
2014	C=15						Weight
Azadbakht,	I=38	30%M	41.2±12.3	***	Iran	28	↓ Body Weight
2005 [21]	C=40	70%F					↓WC
Barr,	I=98	36%M/	I=65.1±6.7C=	16-36	Canada	12	↑ Body
2000 [22]	C=102	64%F	65.3±6.6				Weight
Buchowski,	I=17	29%M	21-50	29-35	United	12	→ Body
2010 [24]	C=17	71%F			States		Weight
Chee,	I=91	100%F	I=58.7±3.7	23.8±3.6	Malaysia	108	↔Body
2003 [18]	C=82		C=59±3.2				Weight
							↔ %Body Fat
							↔ Lean Mass
Dugan, 2014	I=14	36%M	54±9.7	94.4±19.9	United	16	→ Lean Mass
[25]	C=23	64%F			States		↓ Body
							Weight
							↓ BMI
E 2007	T4 44	1000/35	20.1.2.1	T1 01 0 0 1	TT ** *	<b>F</b> 0	↓ WC
Eagan, 2006	I1=14	100%M	20.1±2.4	I1=21.9±3.4	United	78	↓ Fat Mass
[32]	I2=14			I2=23.4±4.7	States		
T.	C=10	1000/E	I 574.40	C=21.9±2.6	CI.:	100	<b>↑</b> D 1 147 · 1 ·
Lau,	I=95	100%F	I=57.1±1.8	ካ ক ক 	China	108	↑Body Weight
2001 [17]	C=90	1000/E	C=56.8±1.5	21.24	Ch:	20	****
Liu,	I=12	100%F	24-31	21-24	China	29	<u>ካጥጥ</u>
2011 [26]	C=12	E00/3.f	10.74	-4F	TT-11-1	1.4	↑ T1*
Maki,	I=14	50%M	18-74	≤45	United	14	↑ Insulin
2015 [27]	C=20	50%F			States		↔ Body
							Weight
							↔ WC
						1	↑ HOMA-IR

Palacios, 2011 [28]	I=8 C=8	20%M 80%F	22-50	≥30	Puerto Rico	21	↔ Body Weight ↔ BMI ↔ Lean Mass ↔ Fat Mass ↔ %Body Fat
Rideout, 2013 [29]	I=23 C=23	20%M 80%F	18-75	18.5-35.0	Canada	52	↓ Insulin     ↓ HOMA-IR     ↔ Body     Weight
Sirtori, 1999* [19]	21	38%M 62%F	51.9±13.5	***	Italy	4	***
Van Mejil, 2010 [30]	I=17 C=18	28%M 72%F	18-70	≥27	Netherlands	8	↔ Body Weight
Wagner, 2007 [20]	I=17 C=13	100%F	I= 37.6± 2.2 C=36.0± 2.2	I= 33.7±1.0 C=32.4±1.5	United States	12	↔ Body Weight ↔ Fat Mass
Zemel, 2010* [34]	I=10 C=10	70%M 30% F	31.0±10.3	28.0±1.01	United States	12	↔ Body Weight

<sup>\*</sup>Cross-over design; \*\*Data missing on sex; \*\*\*Data missing on BMI; \*\*\*\*Data missing on the outcome of body weight, waist circumference, or HOMA-IR.  $\downarrow$ = decrease;  $\uparrow$  = increase;  $\leftrightarrow$  = no difference. Abbreviations: BMI, body mass index; C, control; F, female; HOMA-IR, Homeostatic Model Assessment of Insulin Resistance; I, intervention; M, male; SD, standard deviation; WC, waist circumference

Figure S1. Funnel plot of All Studies Evaluating Dairy intake and Body Weight

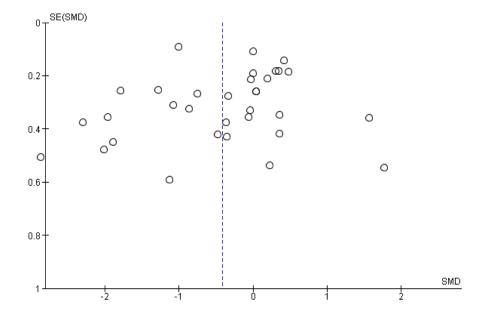


Figure S2. Funnel plot of All Studies Evaluating Dairy intake and Waist Circumference

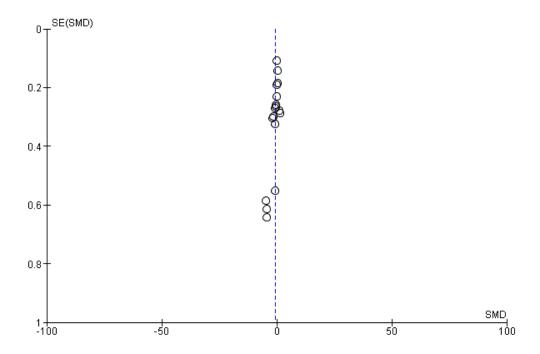


Figure S3. Funnel plot of All Studies Evaluating Dairy intake and HOMA-IR

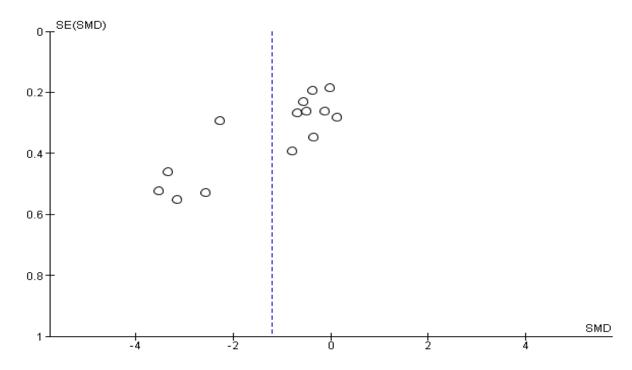
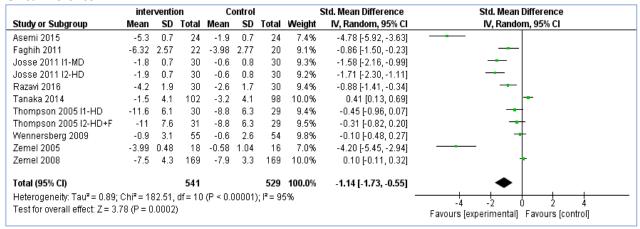


Figure S4. Forest Plot of Randomized Clinical Trials with Low Risk of Bias: Dairy Intake and HOMA-IR

	inte	rventio	n	C	ontrol		,	Std. Mean Difference	Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Random, 95% CI
Adamsson 2011	-0.11	0.51	38	0.22	0.64	40	10.7%	-0.56 [-1.02, -0.11]	
Adamsson 2015	-0.12	0.13	38	0.27	0.2	40	10.3%	-2.28 [-2.85, -1.70]	<del></del>
Asemi 2013	-0.8	0.43	16	1.1	0.71	16	8.2%	-3.16 [-4.23, -2.08]	<del></del>
Asemi 2015	-0.46	0.37	24	0.8	0.37	24	9.0%	-3.35 [-4.25, -2.45]	<del></del>
Razavi 2016	-0.8	0.8	30	-0.2	0.9	30	10.5%	-0.70 [-1.22, -0.17]	<del></del>
Thompson 2005 I1-HD	-1.27	1.59	31	-0.612	0.895	29	10.5%	-0.50 [-1.01, 0.02]	<del></del>
Thompson 2005 I2-HD+F	-0.717	0.688	30	-0.612	0.895	29	10.5%	-0.13 [-0.64, 0.38]	<del></del>
Wennersberg 2009	-0.6	6.2	55	3.1	12.2	54	10.9%	-0.38 [-0.76, -0.00]	<del></del>
Zemel 2005 phase 1	-0.72	0.44	17	-0.53	0.57	17	9.9%	-0.36 [-1.04, 0.31]	<del></del>
Zemel 2005 phase 2	-0.93	0.56	17	-0.57	0.18	12	9.5%	-0.78 [-1.55, -0.01]	<del></del>
Total (95% CI)			296			291	100.0%	-1.14 [-1.72, -0.57]	•
Heterogeneity: Tau² = 0.75;	Chi² = 89	.86, df=	9 (P <	0.0000	1); I² = 9	0%		-	-1 -2 0 3 1
Test for overall effect: $Z = 3$ .	89 (P < 0.	.0001)							Favours [experimental] Favours [control]

Abbreviations: F, fiber; HD, high dairy diet

Figure S5. Forest Plot of Randomized Clinical Trials with Low Risk of Bias: Dairy Intake and Waist Circumference



Waist circumference change measured in cm.

Abbreviations: F, fiber; HD, high dairy diet; MD, moderate dairy diet

Figure S6. Forest Plot of Randomized Clinical Trials with Low Risk of Bias: Dairy Intake and Body Weight

Study or Subgroup Adamsson 2011 Adamsson 2015	Mean -3		Total					Std. Mean Difference	Std. Mean Difference		
	_	4.00		Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Random, 95% CI		
Adamsson 2015		1.86	44	0.03	1.47	42	4.5%	-1.79 [-2.29, -1.28]	<del></del>		
	0.28	0.23	38	0.62	0.29	38	4.5%	-1.29 [-1.78, -0.79]	<del></del>		
Appel 2003	-5.8	5.8	269	-1.1	3.2	273	4.9%	-1.00 [-1.18, -0.83]	<del></del>		
Asemi 2015	-3.6	1.2	24	-1.3	1.1	24	4.1%	-1.97 [-2.66, -1.27]	<del></del>		
Bendsen 2008	-1	0.7	11	-0.7	0.9	11	3.8%	-0.36 [-1.20, 0.49]			
Faghih 2011	-4.43	1.93	22	-2.87	1.55	20	4.2%	-0.87 [-1.51, -0.23]	<del></del>		
Farnsworth 2003(Females)	-6.6	0.5	21	-7.4	0.5	21	4.1%	1.57 [0.87, 2.27]			
Farnsworth 2003(Males)	-11.9	2.1	7	-9.6	1.7	7	3.1%	-1.13 [-2.28, 0.03]	<del></del>		
Gunther 2005 I1-HD	1.5	4.1	48	0.8	2.8	42	4.7%	0.20 [-0.22, 0.61]	<del></del>		
Gunther 2005 I2-MD	0.7	3	45	0.8	2.8	42	4.6%	-0.03 [-0.45, 0.39]	<del></del>		
Harvey-Berino 2005	-7.8	7	25	-5.5	6.7	29	4.4%	-0.33 [-0.87, 0.21]	<del></del>		
Liu 2010 I1-MP	-0.11	1.55	60	-0.6	1.64	60	4.7%	0.31 [-0.05, 0.67]	<del> </del>		
Liu 2010 I2-MP+Iso	-0.03	1.67	60	-0.6	1.64	60	4.7%	0.34 [-0.02, 0.70]	<del></del>		
Razavi 2016	-3.8	2.2	30	-2.3	1.7	30	4.5%	-0.75 [-1.28, -0.23]	<del></del>		
Tanaka 2014	-1.1	3.3	102	-2.6	3.8	98	4.8%	0.42 [0.14, 0.70]	<del></del>		
Thomas 2011	-2.6	4.5	15	-1.2	2.5	14	4.0%	-0.37 [-1.11, 0.37]	<del></del>		
Thompson 2005 I1-HD	-8.8	7.5	30	-9.1	7	29	4.5%	0.04 [-0.47, 0.55]	<del></del>		
Thompson 2005 I2-HD+F	-8.8	7.9	31	-9.1	7	29	4.5%	0.04 [-0.47, 0.55]	<del></del>		
Wennersberg 2009	-0.1	2.5	55	-0.1	2.6	54	4.7%	0.00 [-0.38, 0.38]	<del></del>		
Zemel 2005	-6.63	0.6	18	-4.99	0.5	16	3.5%	-2.88 [-3.88, -1.89]	<b>←</b>		
Zemel 2005 phase 1	0.4	0.6	17	0.2	0.5	17	4.1%	0.35 [-0.32, 1.03]	<del></del>		
Zemel 2008	-11.2	3.8	169	-11.2	3.3	169	4.9%	0.00 [-0.21, 0.21]	+		
Zemel 2009	-4.61	0.63	23	-3.15	0.62	26	4.0%	-2.30 [-3.03, -1.56]	<del></del>		
Total (95% CI)			1164			1151	100.0%	-0.47 [-0.80, -0.14]	•		
Heterogeneity: Tau² = 0.57; Ch	ni² = 291	.40. df	= 22 (F	2 < 0.00	i001) <sup>.</sup> I	z= 929	6				
Test for overall effect: Z = 2.78			(	5.00	,,	02,	•		-2 -1 0 1 2 Favours (experimental) Favours (control)		

Body weight change measured in Kg.

Abbreviations: F, fiber; Iso, isoflavones; HD, high dairy diet; MD, moderate dairy diet; MP, milk protein

Figure S7. Forest Plot of Randomized Clinical Trials without Physical Activity Component: Dairy Intake and HOMA-IR

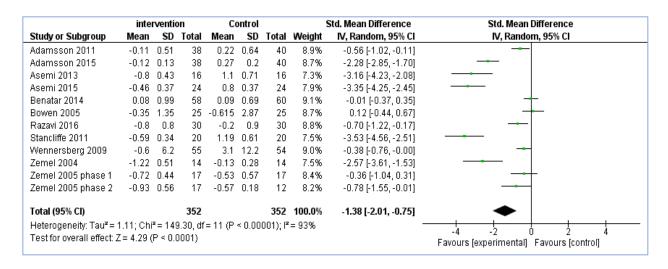


Figure S8. Forest Plot of Randomized Clinical Trials without Physical Activity Component: Dairy Intake and Waist Circumference

	inter	ventio	n	С	ontrol		,	Std. Mean Difference	Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Random, 95% CI
Asemi 2015	-5.3	0.7	24	-1.9	0.7	24	10.2%	-4.78 [-5.92, -3.63]	
Benatar 2014	0.4	3.1	58	-0.7	2.4	60	12.0%	0.40 [0.03, 0.76]	<del>  •  </del>
Faghih 2011	-6.32	2.57	22	-3.98	2.77	20	11.6%	-0.86 [-1.50, -0.23]	
Lukaszuk 2007	-11.28	5.23	7	-8.66	2.51	7	10.4%	-0.60 [-1.68, 0.48]	<del></del>
Razavi 2016	-4.2	1.9	30	-2.6	1.7	30	11.8%	-0.88 [-1.41, -0.34]	
Stancliffe 2011	-2.8	0.8	20	-0.2	0.1	20	10.0%	-4.47 [-5.67, -3.27]	<del></del>
Tanaka 2014	-1.5	4.1	102	-3.2	4.1	98	12.1%	0.41 [0.13, 0.69]	
Wennersberg 2009	-0.9	3.1	55	-0.6	2.6	54	12.0%	-0.10 [-0.48, 0.27]	
Zemel 2005	-3.99	0.48	18	-0.58	1.04	16	9.9%	-4.20 [-5.45, -2.94]	<del></del>
Total (95% CI)			336			329	100.0%	-1.53 [-2.41, -0.64]	•
Heterogeneity: Tau <sup>2</sup> =	: 1.66; Ch	i²= 18	8.18, d	f=8 (P	< 0.00	001); l <sup>a</sup>	= 96%	-	<del></del>
Test for overall effect:	Z=3.38	(P = 0)	.0007)	,		,,			-4 -2 U 2 4 Favours (experimental) Favours (control)

Waist circumference change measured in cm.

Figure S9. Forest Plot of Randomized Clinical Trials without Physical Activity Component: Dairy Intake and Body Weight

	inter	ventio	n	С	ontrol			Std. Mean Difference	Std. Mean Difference		
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Random, 95% CI		
Adamsson 2011	-3	1.86	44	0.03	1.47	42	4.8%	-1.79 [-2.29, -1.28]			
Adamsson 2015	0.28	0.23	38	0.62	0.29	38	4.8%	-1.29 [-1.78, -0.79]	<del></del>		
Asemi 2015	-3.6	1.2	24	-1.3	1.1	24	4.5%	-1.97 [-2.66, -1.27]	<del></del>		
Benatar 2014	0.4	1.3	58	-0.2	1.2	60	5.0%	0.48 [0.11, 0.84]	<del></del>		
Bendsen 2008	-1	0.7	11	-0.7	0.9	11	4.3%	-0.36 [-1.20, 0.49]	<del></del>		
Bowen 2005(Females)	-9.4	1	15	-7.8	0.6	15	4.2%	-1.89 [-2.77, -1.01]	<del></del>		
Bowen 2005(Males)	-9.4	1.3	10	-12	1.5	10	3.8%	1.77 [0.70, 2.84]	<del></del>		
Faghih 2011	-4.43	1.93	22	-2.87	1.55	20	4.6%	-0.87 [-1.51, -0.23]	<del></del>		
Farnsworth 2003(Females)	-6.6	0.5	21	-7.4	0.5	21	4.5%	1.57 [0.87, 2.27]	<del></del>		
Farnsworth 2003(Males)	-11.9	2.1	7	-9.6	1.7	7	3.7%	-1.13 [-2.28, 0.03]	-		
Gunther 2005 I1-HD	1.5	4.1	48	0.8	2.8	42	4.9%	0.20 [-0.22, 0.61]	+-		
Gunther 2005 I2-MD	0.7	3	45	0.8	2.8	42	4.9%	-0.03 [-0.45, 0.39]	+		
Liu 2010 I1-MP	-0.11	1.55	60	-0.6	1.64	60	5.0%	0.31 [-0.05, 0.67]	<del> </del>		
Liu 2010 I2-MP+Iso	-0.03	1.67	60	-0.6	1.64	60	5.0%	0.34 [-0.02, 0.70]	<del>  -</del>		
Lukaszuk 2007	-3.76	2.25	7	-4.27	2.05	7	3.9%	0.22 [-0.83, 1.27]	<del></del>		
Razavi 2016	-3.8	2.2	30	-2.3	1.7	30	4.8%	-0.75 [-1.28, -0.23]	<del></del>		
Tanaka 2014	-1.1	3.3	102	-2.6	3.8	98	5.1%	0.42 [0.14, 0.70]	<del></del>		
Wennersberg 2009	-0.1	2.5	55	-0.1	2.6	54	5.0%	0.00 [-0.38, 0.38]	+		
Zemel 2004	-11.07	1.63	14	-6.6	2.58	14	4.1%	-2.01 [-2.94, -1.08]	<del></del>		
Zemel 2005	-6.63	0.6	18	-4.99	0.5	16	4.0%	-2.88 [-3.88, -1.89]	<del></del>		
Zemel 2005 phase 1	0.4	0.6	17	0.2	0.5	17	4.6%	0.35 [-0.32, 1.03]	+		
Zemel 2009	-4.61	0.63	23	-3.15	0.62	26	4.5%	-2.30 [-3.03, -1.56]	<del></del>		
Total (95% CI)			729			714	100.0%	-0.50 [-0.91, -0.09]	•		
Heterogeneity: Tau <sup>2</sup> = 0.85; C	hi² = 273.	97, df	= 21 (P	< 0.000	001); l <sup>a</sup>	= 92%			-4 -2 0 2		
Test for overall effect: Z = 2.38					,,,				-4 -2 0 2 Favours [experimental] Favours [control]		

Body weight change measured in Kg.

Abbreviations: Iso, isoflavones; HD, high dairy diet; MD, moderate dairy diet; MP, milk protein