## **Supplementary information 2**

## Table S1 Minor changes

Numbers	Changes
1	Delete "body fat mass" and add "waist-to-hip ratio, waist circumference, and hip
1	circumference".
2	Delete "mean baseline, follow-up" from the data extraction content.
3	Statistical software Change the "Review Manager" to "Stata".
4	Add water aerobics subgroup analysis.

## Table S2 Database search terms

Database	Search terms	Results
PubMed	((((((((((((((((((((((((((((((((((((((	375
Medline	(Physical Activity)) OR (Activities, Physical)) OR (Activity, Physical))	
	OR (Physical Activities)) OR (Exercise, Physical)) OR (Exercises,	
	Physical)) OR (Physical Exercise)) OR (Physical Exercises)) OR (Acute	
	Exercise)) OR (Acute Exercises)) OR (Exercise, Acute)) OR (Exercises,	
	Acute)) OR (Exercise, Isometric)) OR (Exercises, Isometric)) OR	
	(Isometric Exercises)) OR (Isometric Exercise)) OR (Exercise, Aerobic))	
	OR (Aerobic Exercise)) OR (Aerobic Exercises)) OR (Exercises,	
	Aerobic)) OR (Exercise Training)) OR (Exercise Trainings)) OR	
	(Training, Exercise)) OR (Trainings, Exercise)) AND ("Water"[Mesh]))	
	OR ((((((((((water aerobics) OR (waterobics)) OR (aquarobics)) OR	
	(aquatic fitness)) OR (aquafitness)) OR (aquafit)) OR (aqua zumba)) OR	
	(water yoga)) OR (aqua aerobics)) OR (aqua jog))) AND	
	((("Obesity"[Mesh]) OR ((fat) OR (obese))) OR ("Overweight"[Mesh])))	
	AND (("Randomized Controlled Trials as Topic"[Mesh]) OR	
	((((((Randomised controlled trial) OR (controlled trial)) OR (randomized	
	controlled study)) OR (Clinical Trials, Randomized)) OR (Trials,	
	Randomized Clinical)) OR (Controlled Clinical Trials, Randomized)))	
Embase	('randomised controlled trial'/exp OR 'randomised controlled trial' OR	2169
	'randomized controlled trials as topic'/exp OR 'randomized controlled	
	trials as topic' OR 'controlled trial'/exp OR 'controlled trial' OR	
	'randomized controlled study'/exp OR 'randomized controlled study' OR	
	'clinical trials, randomized' OR 'trials, randomized clinical' OR	
	'controlled clinical trials, randomized') AND ('obesity'/exp OR 'obesity'	

	OR 'fat'/exp OR 'fat' OR 'obese' OR 'overweight'/exp OR 'overweight') AND ('water aerobics'/exp OR 'water aerobics' OR 'waterobics' OR 'aquarobics' OR 'aquatic fitness' OR 'aquafitness' OR 'aquafit' OR 'aqua zumba' OR 'water yoga' OR 'aqua aerobics' OR 'aqua jog' OR (('water'/exp OR 'water') AND ('exercise'/exp OR 'exercise' OR 'aerobics'/exp OR 'aerobics' OR 'exercises' OR 'cycling'/exp OR 'cycling' OR 'physical activity'/exp OR 'physical activity' OR 'activities, physical' OR 'aetotics, physical'/exp OR 'activity, physical' OR 'physical activities' OR 'exercise, physical' OR 'exercises, physical' OR 'physical exercise'/exp OR 'physical exercise' OR 'physical exercises' OR 'acute exercise'/exp OR 'physical exercise' OR 'acute exercises' OR 'acute exercise'/exp OR 'acute exercise' OR 'acute exercises' OR 'exercise, acute' OR 'exercises, acute' OR 'exercise, isometric'/exp OR 'exercise, isometric' OR 'exercise, aerobic' OR 'isometric exercises' OR 'aerobic exercise'/exp OR 'aerobic exercises' OR 'acrobic exercise'/exp OR 'aerobic exercise'/exp OR 'aerobic exercises' OR 'aerobic exercise' OR 'aerobic exercises' OR 'aerobic exercises' OR 'aerobic exercise' OR 'aerobic exercises' OR 'aerobic exercise'/exp OR 'aerobic exercise' OR 'aerobic exercises' OR 'exercise training'/exp OR 'exercise training' OR 'exercise training, exercise' OR 'trainings, exercise'))))	
Ovid MEDLINE	<ol> <li>"Randomised controlled trial ".mp.</li> <li>exp Randomized Controlled Trials as Topic/</li> <li>" controlled trial".mp.</li> <li>" randomized controlled study ".mp.</li> <li>"Clinical Trials, Randomized".mp.</li> <li>"Trials, Randomized Clinical".mp.</li> <li>"Controlled Clinical Trials, Randomized".mp.</li> <li>1 or 2 or 3 or 4 or 5 or 6 or 7</li> <li>exp Obesity/</li> <li>exp Fats/</li> <li>"obese".mp.</li> <li>exp Overweight/</li> <li>9 or 10 or 11 or 12</li> <li>"water aerobics ".mp.</li> <li>"aquarobics ".mp.</li> <li>"aquafitess ".mp.</li> <li>"aquafitess ".mp.</li> <li>"aquafitess ".mp.</li> <li>"aqua aerobics".mp.</li> <li>14 or 15 or 16 or 17 or 18 or 19 or 20</li> <li>exp Water/</li> <li>exp Exercise/</li> <li>"aerobics ".mp.</li> </ol>	19

	26 "cycling".mp.	
	27 "Physical Activity".mp.	
	28 "Activities, Physical".mp.	
	29 "Activity, Physical".mp.	
	30 "Physical Activities".mp.	
	31 "Exercise, Physical".mp.	
	32 "Exercises, Physical".mp.	
	33 "Physical Exercise".mp.	
	34 "Physical Exercises".mp.	
	35 "Acute Exercise".mp.	
	36 "Acute Exercises".mp.	
	37 "Exercise, Acute".mp.	
	38 "Exercises, Acute".mp.	
	39 "Exercise, Isometric".mp.	
	40 "Exercises, Isometric".mp.	
	41 "Isometric Exercises".mp.	
	42 "Isometric Exercise".mp.	
	43 "Exercise, Aerobic".mp.	
	44 "Aerobic Exercise".mp.	
	45 "Aerobic Exercises".mp.	
	46 "Exercises, Aerobic".mp.	
	47 "Exercise Training".mp.	
	48 "Exercise Trainings".mp.	
	49 "Training, Exercise".mp.	
	50 "Trainings, Exercise".mp.	
	51 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34	
	or 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or	
	47 or 48 or 49 or 50	
	52 22 and 51	
	53 21 or 52	
	54 8 and 13 and 53	
Scopus	( ( TITLE-ABS-KEY ( "randomised controlled trial " ) OR	468
-	TITLE-ABS-KEY ( "randomized controlled trials as topic " ) OR	
	TITLE-ABS-KEY ( " controlled trial" ) OR TITLE-ABS-KEY ( "	
	randomized controlled study ") OR TITLE-ABS-KEY ( "clinical trials,	
	randomized") OR TITLE-ABS-KEY ("trials, randomized clinical") OR	
	TITLE-ABS-KEY ( "controlled clinical trials, randomized" ) ) ) AND	
	( ( TITLE-ABS-KEY ( obesity ) OR TITLE-ABS-KEY ( fat ) OR	
	TITLE-ABS-KEY ( obese ) OR TITLE-ABS-KEY ( overweight ) ) )	
	AND ( ( ( TITLE-ABS-KEY ( water ) ) AND ( ( TITLE-ABS-KEY	
	( exercise ) OR TITLE-ABS-KEY ( exercises ) OR TITLE-ABS-KEY	
	( cycling ) OR TITLE-ABS-KEY ( "physical activity" ) OR	
	TITLE-ABS-KEY ( "activities, physical" ) OR TITLE-ABS-KEY	
L		

	("activity, physical") OR TITLE-ABS-KEY ("physical activities") OR TITLE-ABS-KEY ("exercise, physical") OR TITLE-ABS-KEY ("exercises, physical") OR TITLE-ABS-KEY ("physical exercise") OR TITLE-ABS-KEY ("physical exercises") OR TITLE-ABS-KEY ("acute exercise") OR TITLE-ABS-KEY ("acute exercises") OR TITLE-ABS-KEY ("exercise, acute") OR TITLE-ABS-KEY ("exercises, acute") OR TITLE-ABS-KEY ("exercise, isometric") OR TITLE-ABS-KEY ("exercises, isometric") OR TITLE-ABS-KEY ("isometric exercises") OR TITLE-ABS-KEY ("isometric exercise") OR TITLE-ABS-KEY ("exercise, aerobic") OR TITLE-ABS-KEY ("aerobic exercise") OR TITLE-ABS-KEY ("aerobic exercises") OR TITLE-ABS-KEY ("exercises, aerobic") OR TITLE-ABS-KEY ("exercise training") OR TITLE-ABS-KEY ("aerobic exercises") OR TITLE-ABS-KEY ("training, exercise") OR TITLE-ABS-KEY ("trainings, exercise")))) OR ((TITLE-ABS-KEY ("water aerobics")) OR TITLE-ABS-KEY ("utaterobics ") OR TITLE-ABS-KEY ("aquarobics ") OR TITLE-ABS-KEY ("aquatic fitness ") OR TITLE-ABS-KEY ("aquafitness") OR TITLE-ABS-KEY ("aquafit") OR TITLE-ABS-KEY ("aqua aerobics") OR TITLE-ABS-KEY ("aqua jog"))))	
The	#1 MeSH descriptor: [Randomized Controlled Trials as Topic] explode	1284
Cochrane	all trees	
Library	<ul> <li>#2 MeSH descriptor: [Randomized Controlled Trial] explode all trees</li> <li>#3 " controlled trial"</li> <li>#4 " randomized controlled study "</li> <li>#5 "Clinical Trials, Randomized"</li> <li>#6 "Trials, Randomized Clinical"</li> <li>#7 "Controlled Clinical Trials, Randomized"</li> <li>#8 #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7</li> <li>#9 MeSH descriptor: [Obesity] explode all trees</li> <li>#10 MeSH descriptor: [Fats] explode all trees</li> <li>#11 obese</li> <li>#12 MeSH descriptor: [Overweight] explode all trees</li> <li>#13 #9 OR #10 OR #11 OR #12</li> <li>#14 "water aerobics "</li> <li>#15 waterobics</li> <li>#16 aquarobics</li> <li>#17 "aquatic fitness "</li> <li>#18 aquafitness</li> <li>#19 aquafit</li> <li>#20 " aqua zumba"</li> <li>#21 " water yoga"</li> </ul>	

		I
	#22 "aqua aerobics"	
	#23 " aqua jog"	
	#24 #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR	
	#22 OR #23	
	#25 MeSH descriptor: [Water] explode all trees	
	#26 MeSH descriptor: [Exercise] explode all trees	
	#27 Exercises	
	#28 cycling	
	#29 "Physical Activity"	
	#30 "Activity, Physical"	
	#31 "Exercise, Physical"	
	#32 "Exercises, Physical"	
	#33 "Physical Exercise"	
	#34 "Physical Exercises"	
	#35 "Acute Exercise"	
	#36 "Acute Exercises"	
	#37 "Exercise, Acute"	
	#38 "Exercises, Acute"	
	#39 "Exercise, Isometric"	
	#40 "Exercises, Isometric"	
	#41 "Isometric Exercises"	
	#42 "Isometric Exercise"	
	#43 "Exercise, Aerobic"	
	#44 "Aerobic Exercise"	
	#45 "Aerobic Exercises"	
	#46 "Exercises, Aerobic"	
	#47 "Exercise Training"	
	#48 "Exercise Trainings"	
	#49 "Training, Exercise"	
	#50 "Trainings, Exercise"	
	#51 #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR	
	#34 OR #35 OR #36 OR #37 OR #38 OR #39 OR #40 OR #41 OR #42	
	OR #43 OR #44 OR #45 OR #46 OR #47 OR #48 OR #49 OR #50	
	#52 #25 AND #51	
	#53 #24 OR #52	
	#54 #8 AND #13 AND #53	
Web of	((((((((((((((((((((((((((((((((((((((	194
science	TS=(cycling)) OR TS=("Physical Activity")) OR TS=("Activities,	
	Physical")) OR TS=("Activity, Physical")) OR TS=("Physical")	
	Activities")) OR TS=("Exercise, Physical")) OR TS=("Exercises,	
	Physical")) OR TS=("Physical Exercise")) OR TS=("Physical	
	Exercises")) OR TS=("Acute Exercise")) OR TS=("Acute Exercises"))	
	OR TS=("Exercise, Acute")) OR TS=("Exercises, Acute")) OR	
	on 15-(Enclose, freque )) on 15-(Encloses, freque )) on	

TS=("Exercise, Isometric")) OR TS=("Exercises, Isometric")) OR
TS=("Isometric Exercises")) OR TS=("Isometric Exercise")) OR
TS=("Exercise, Aerobic")) OR TS=("Aerobic Exercise")) OR
TS=("Aerobic Exercises")) OR TS=("Exercises, Aerobic")) OR
TS=("Exercise Training")) OR TS=("Exercise Trainings")) OR
TS=("Training, Exercise")) OR TS=("Trainings, Exercise")) AND
TS=(water)
OR ((((((((TS=("water aerobics ")) OR TS=("waterobics ")) OR
TS=("aquarobics ")) OR TS=("aquatic fitness ")) OR TS=("aquafitness
")) OR TS=("aquafit")) OR TS=(" aqua zumba")) OR TS=(" water
yoga")) OR TS=("aqua aerobics")) OR TS=(" aqua jog") AND
((((((TS=("Randomised controlled trial ")) OR TS=("Randomized
Controlled Trials as Topic")) OR TS=(" controlled trial")) OR TS=("
randomized controlled study ")) OR TS=("Clinical Trials,
Randomized")) OR TS=("Trials, Randomized Clinical")) OR
TS=("Controlled Clinical Trials, Randomized")AND ((((TS=(obesity))
OR TS=(fat)) OR TS=(obese)) OR TS=(Overweight)