

**Question 12B. What is the evidence that physical activity in obese adults effects a change in abdominal fat?**

Reference	Design/Demographics	Overweight defined as:	Adjuvant therapy	Intervention	Drop-out total	Mean weight change  (n) mean weight change (95% CI)	WHR Waist circumference Skinfolds  Baseline (n) mean (95% CI)	WHR Waist circumference Skinfolds  Change (n) mean (95% CI)	Comments/side effects
	<b>Exercise only</b>								
Ready 685	Randomization: unclear Self-selected: yes Included: postmenopausal women Mean age: not given Mean weight: 79.7 Female/Total 40/40	post-menopausal women	Diet: no Exercise: yes 60 min 5x/wk Max HR: 60% Behavioral: no	1. Control (no exercise) 2. Exercise	1. 6/16 (37%) 2. 9/24 (37%)	Weight in kg 1. 0.6 2. -1.9  <u>2vs1</u> -2.5 (-11.0, 6.0)	WHR 1. (10) 0.82 (0.8, 0.9) 2. (15) 0.8 (0.8, 0.8)	WHR 1.(10) 0.82 (0.8, 0.9) 2.(15) 0.79 (0.8, 0.8)  <u>2vs1</u> -0.01 (-0.04, 0.02)	
Coon 700	Randomization: unclear Self-selected: yes Included: not specified Mean age: 59 Mean weight: 94 Female/Total: none/20	not given	Diet: group 1 only AHA Step I Exercise: yes 40 min 3-5x/wk Max HR: 75-85% Behavioral: yes group weekly	1. Weight loss diet 2. Exercise training	none	1. -11.4 2. -0.3  <u>2vs1</u> 11.1 (5.31, 16.8)	WHR 1. (10) 0.97 (0.9, 1.0) 2. (10) 0.96 (0.9, 1.0)  <u>Skinfolds. d</u> 1. (10) 1.62 (1.4, 1.9) 2. (10) 1.52 (1.4, 1.7)	WHR 1. (10) 0.95 (0.9, 1.0) 2. (10) 0.98 (0.9, 1.0) <u>2vs1</u> 0.04 (-0.01, 0.09)  <u>Skinfolds. d</u> 1. (10) 1.6 (1.2, 2.0) 2. (10) 1.78 (1.4, 2.2) <u>2vs1</u> 0.3 (0.0, 0.6)	
Williams 707  *Standford Exercise Training Study	Randomization: yes Self-selected: no Included: <140% IBW Mean age: not given Mean weight: not given Female/Total: 0/81	<140% IBW	Diet: no Behavioral: no	1. Sedentary control (no intervention) 2. Supervised running	1. 1/33 (3%) 2. 2/48 (4.2%)	1. 1.1 2. -1.4 <u>2vs1</u> -2.5 (-4.5, -0.5)		<u>Skinfold. abdominal</u> 2. (46) -5.3 (-7.7, -2.9) 1. (32) -0.2 (-2.4, 2.0) <u>2vs1</u> -5.1 (-7.58, -2.62)  <u>Waist circumference. cm</u> 2. (46) -3 (-4.1, -1.9) 1. (32) -0.1 (-1.4, 1.2) <u>2vs1</u> 2.9 (1.7, 4.1)  <u>Skinfold. c</u> 2. (46) -3.1 (-4.3, -1.9) 1. (32) -0.4 (-1.7, 0.9) <u>2vs1</u> 2.7 (1.48, 3.92)  <u>WHR</u> 2. (35) -1.3 (-2.0, -0.6) 1. (29) 0.2 (-0.6, 1.0) <u>2vs1</u> 1.5 (0.8, 2.2)	

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Suter 705	Randomization: unclear Self-selected: unclear Included: non-overweight Mean age: 41.2 Mean weight: 24.9 kg/m <sup>2</sup> Female/Total: 0/47	not given	Diet: no Exercise: yes 30 min 4-6x/wk Max HR: 50-75%	1. No intervention 2. Walking 3. Jogging	none	1. -0.09 2. -0.07 3. -0.28  *mean diff in BMI <u>3vs1</u> -0.19 (-0.5, 0.1) <u>3vs2</u> -0.2 (-0.5, 0.19) <u>2vs1</u> 0.02 (-0.38, 0.42)	<u>Skinfolds, mm</u> 1. (19) 61.2 (52.2, 70.2) 2. (28) 60.7 (53.9, 67.5) 3. (28) 58.2 (50.1, 66.3)  <u>WHR</u> 1. (19) 0.88 (0.9, 0.9) 2. (28) 0.87 (0.9, 0.9) 3. (28) 0.86 (0.8, 0.9)	<u>Skinfolds, mm</u> 1. (19) -3.3 (-7.5, 0.9) 2. (28) -1.5 (-7.0, 4.0) 3. (28) -3.7 (-8.0, 0.6) <u>3vs1</u> -0.40 (-4.5, 3.7) <u>3vs2</u> -2.2 (-7.0, 2.6) <u>2vs1</u> 1.8 (-3.1, 6.7)  <u>WHR</u> 1. (19) 0.03 (0.0, 0.0) 2. (28) 0.04 (0.0, 0.1) 3. (28) 0.03 (0.0, 0.0) <u>3vs1</u> 0 (0, 0) <u>3vs2</u> -0.01 (-0.04, 0.02) <u>2vs1</u> 0.01 (-0.03, 0.05)	Pearson correlation coefficient between amount of training and changes in Joggers Walkers Change in BMI 0.07 -0.26 Change in skinfolds -0.10 -0.48 Change in WHR 0.05 -0.45
Gwinup 725	Randomization: unclear Self-selected: yes Included: 30-40% total body weight as fat Mean age: 30.3 Mean weight: 149.5 lbs Female/Total: 44/44	30-40% total body weight as fat	Diet: no Exercise: yes daily Behavioral: no	1. Walking 2. Cycling 3. Swimming	1. 4/15 (27%) 2. 5/15 (33%) 3. 7/15 (47%)	1. -17 2. -19 3. 5  *lbs	<u>Skinfolds</u> 1. (11) 32 (n/a, n/a) 2. (10) 30 (n/a, n/a) 3. (8) 28 (n/a, n/a)	<u>Skinfolds</u> 1. (11) 19 (n/a, n/a) 2. (10) 17 (n/a, n/a) 3. (8) 28 (n/a, n/a)  * no statistics done	
Hellenius 365	Randomization: unclear Self-selected: no Included: includes non-overweight Mean age: 46.2 Mean weight: 25.3 mg/kg <sup>2</sup> Female/Total: 0/158	includes non-overweight	Diet: NCEP I  Exercise: yes groups 3 and 4 30-45 min 3x/wk Max HR: 60-80%  Behavioral: no	1. Control (no intervention) 2. Diet alone 3. Exercise alone 4. Diet and exercise	1. 1/40 (2%) 2. 0/40 3. 0/39 4. 0/39	<u>BMI</u> 1. (39) 0.3 (0.1, 0.5) 2. (40) -0.3 (-0.6, 0.03) 3. (39) -0.3 (-0.5, -0.01) 4. (39) -0.6 (-0.9, -0.3) <u>BMI 4vs3</u> -0.30 (-0.57, -0.03) <u>BMI 4vs2</u> -0.30 (-0.60, 0.00) <u>BMI 4vs1</u> -0.90 (-1.15, -0.65) <u>BMI 3vs1</u> -0.60 (-0.82, -0.38) <u>BMI 3vs2</u> 0.00 (-0.28, 0.28) <u>BMI 2vs1</u> -0.60 (-0.86, -0.34)	<u>Waist circumference</u> 1. (39) 89.8 (86.2, 93.4) 2. (40) 91.3 (87.8, 94.8) 3. (39) 93.3 (90.4, 96.2) 4. (39) 95.9 (93.0, 98.8)  <u>WHR</u> 1. (39) 0.97 (1.0, 1.0) 2. (40) 0.98 (1.0, 1.0) 3. (39) 0.98 (1.0, 1.0) 4. (39) 0.97 (1.0, 1.0)	<u>Waist circumference</u> 1. (39) 0.3 (-0.5, 1.1) 2. (40) -1.3 (-2.5, -0.1) 3. (39) -2.2 (-3.2, -1.3) 4. (39) -3 (-3.9, -2.0) <u>4vs3</u> -0.8 (-1.7, 0.1) <u>4vs2</u> -1.7 (-2.8, -0.6) <u>4vs1</u> -3.3 (-4.2, -2.4) <u>3vs1</u> -2.5 (-3.4, -1.6) <u>3vs2</u> -0.9 (-2.0, 0.2) <u>2vs1</u> -1.6 (-2.6, -0.6)  <u>WHR</u> 1. (39) -0.05 (-0.07, -0.04) 2. (40) -0.05 (-0.07, -0.02) 3. (39) -0.06 (-0.08, -0.05) 4. (39) -0.05 (-0.06, -0.03) <u>4vs3</u> 0.01 (0.00, 0.02) <u>4vs2</u> 0.00 (-0.02, 0.02)	

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								<u>4vs1</u> 0.00 (-0.01, 0.01) <u>3vs1</u> -0.01 (-0.02, 0.0) <u>3vs2</u> -0.01 (-0.03, 0.01) <u>2vs1</u> 0.0 (-0.02, 0.02)	
Blonk 470	Randomization: unclear Self-selected: no Included: BMI >27 diabetes Mean age: ng Mean weight: ng Female/Total: ng	BMI >27	Diet: yes 500 kcal less than usual intake  Exercise: yes 60 min daily Max HR 60-80%  Behavioral: yes q4mo	1. Conventional diet program (diet counseling alone) 2. Comprehensive diet, behavioral and exercise program	1. 4/26 (15%) 2. 3/27 (11%)	*Median difference between groups (comprehensive vs. conventional)  <u>Weight in kg</u> <u>2vs1</u> -1.3 (-3.3, 0.7)		Results are reported as median changes for the comprehensive group compared to the conventional program.  <u>WHR</u> <u>2vs1</u> -0.002 (-0.018, 0.016)	

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