**Table 5c Waist circumference outcomes among intervention studies among adults in the general population**

| **Author,****Year** | **Arm** | **Out-come defined** | **Base-line N** | **Baseline Waist circum-ference, mean** | **N at 12 months** | **Waist circum-ference, 12 months, mean** | **Change from BL** | **Final measure, months** | **N at final measure** | **Waist circum-ference, final measure, mean** | **Change from BL** | **Measure of association** | **Test for trend** | **Variables adjusted for** | **Comment** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Diet interventions** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Bhargava, 20029 | 1 | Meters | 351 | Mean : 0.86SD : 0.11 | N : 351Check if this is the last time-point reported | Mean : 0.86SD : 0.11 |  |  |  |  |  | Reported separately for intervention and control. Looked at dietary components/phys activity that predicted waist circumference change | In the intervention group, there was a significant difference between baseline and 12 month waist circumference (p<0.05). This effect was not observed in the control group. |  | In the control group,household incomes and physical exercise patterns were negatively associated with waist circumference whereasthe index of unhealthy eating habits was positively associated (P,0·05). The intakes of carbohydrate and saturated fat were significant (P,0·05) andpositively associated with waist circumference in both model 1 and 2. In the intervention group, education was negatively associated with waist circumference. The index ofunhealthy eating habits and physical exercise patterns were significantly associated with waist circumference of the women in the intervention group. Moreover, while the carbohydrate and saturated fat intakes were not significant predictors, the intake of monounsaturated fat was a significant predictor. |
|  | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Physical activity interventions** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Muscari, 20105 | 1 |  | 60 |  | Check if this is the last time-point reported | 60 |  |  |  |  |  |  | No value was reported in this article, the result section on page 1061 only states no significant changes were detected concerning waist circumference in either group. |  |  |
|  | 2 |  | 60 |  | Check if this is the last reported time-point | 60 |  |  |  |  |  |  |  |  |  |
| **Combination intervention** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Howard, 20061 | 1 |  | 29216 | Mean : 89.0SD : 13.7 | 29216 | Mean : 89.0SD : 13.7 |  |  | 90 | 9517 |  |  | At 90 months, the waist circumference was significantly different (p = 0.12) in Arm 1 (Control; n = 9517) versus Arm 2 (N = 6154).The difference in mean change from baseline to 90 months was non-significant (p = 0.04) in Arm 1 (Control; N = 9157) versus Arm 2 (N = 6154) |  | The last-reported time point was a follow-up of 7.5 years |
|  | 2 |  | 19485 | Mean : 89.0SD : 13.9 | 19485 | Mean : 89.0SD : 13.9 |  |  | 90 | 6154 | Mean : 90.1SD : 14.4Mean change : 1.6 |  |  |  |  |
| Burke, 20038 | 1 |  | 43 |  | N : 31Check if this is the last time-point reported | Mean change : 1.4 |  |  |  |  |  |  | There were greater changes in the control and low-level groups, but between-group differences were not significant (P=.31 and P=.30, respectively).Baseline waist circumference reported by gender within group.mean change adjusted for age, sex and accounted for correlation within couples |  |  |
|  | 2 |  | 47 |  | N : 20Check if this is the last reported time point | Mean change : 1.4 |  |  |  |  |  |  |  |  |  |
|  | 3 |  | 47 |  | N : 27Check if this is the last reported time point | Mean change : 0.5 |  |  |  |  |  |  |  |  |  |

Mo = month; N = Sample Size; SD = Standard Deviation; Tx = Treatment

**References**

 1. Howard BV, Manson JE, Stefanick ML et al. Low-fat dietary pattern and weight change over 7 years: the Women's Health Initiative Dietary Modification Trial. JAMA 2006; 295(1):39-49.

 2. Schmitz KH, Hannan PJ, Stovitz SD, Bryan CJ, Warren M, Jensen MD. Strength training and adiposity in premenopausal women: strong, healthy, and empowered study. Am J Clin Nutr 2007; 86(3):566-72.

 3. Petrella RJ, Koval JJ, Cunningham DA, Paterson DH. Can primary care doctors prescribe exercise to improve fitness? The Step Test Exercise Prescription (STEP) project. Am J Prev Med 2003; 24(4):316-22.

 4. Lamb SE, Bartlett HP, Ashley A, Bird W. Can lay-led walking programmes increase physical activity in middle aged adults? A randomised controlled trial. Journal of Epidemiology and Community Health 2002; 56(4):246-52.

 5. Muscari A, Giannoni C, Pierpaoli L et al. Chronic endurance exercise training prevents aging-related cognitive decline in healthy older adults: A randomized controlled trial. International Journal of Geriatric Psychiatry 2010; 25(10):1055-64.

 6. French SA, Gerlach AF, Mitchell NR, Hannan PJ, Welsh EM. Household Obesity Prevention: Take Action-a Group-Randomized Trial. Obesity (Silver Spring) 2011.

 7. Levine MD, Klem ML, Kalarchian MA et al. Weight gain prevention among women. Obesity (Silver Spring) 2007; 15(5):1267-77.

 8. Burke V, Giangiulio N, Gillam HF, Beilin LJ, Houghton S. Physical activity and nutrition programs for couples: a randomized controlled trial. Journal of Clinical Epidemiology 2003; 56(5):421-32.

 9. Bhargava A, Guthrie JF. Unhealthy eating habits, physical exercise and macronutrient intakes are predictors of anthropometric indicators in the Women's Health Trial: Feasibility Study in Minority Populations. The British Journal of Nutrition 2002; 88(6):719-28.

 10. Fortmann SP, Williams PT, Hulley SB, Haskell WL, Farquhar JW. Effect of health education on dietary behavior: the Stanford Three Community Study. Am J Clin Nutr 1981; 34(10):2030-8.

 11. Adair LS, Gultiano S, Suchindran C. 20-year trends in Filipino women's weight reflect substantial secular and age effects. J Nutr 2011; 141(4):667-73.

 12. Berry TR, Spence JC, Blanchard C, Cutumisu N, Edwards J, Nykiforuk C. Changes in BMI over 6 years: the role of demographic and neighborhood characteristics. Int J Obes (Lond) 2010; 34(8):1275-83.

 13. Bes-Rastrollo M, Basterra-Gortari F, S+ínchez-Villegas A, Marti A, Mart+¡nez J, Mart+¡nez-Gonz+ílez M. A prospective study of eating away-from-home meals and weight gain in a Mediterranean population: the SUN (Seguimiento Universidad de Navarra) cohort. Public Health Nutrition 2010; 13(9):1356-63.

 14. Lee I, Djouss+\_ L, Sesso H, Wang L, Buring J. Physical activity and weight gain prevention. JAMA: Journal of the American Medical Association 2010; 303(12):1173-9.

 15. Lewis C, Smith D, Wallace D, Williams O, Bild D, Jacobs DJr. Seven-year trends in body weight and associations with lifestyle and behavioral characteristics in Black and White young adults: the CARDIA Study. American Journal of Public Health 1997; 87(4):635-42.

 16. Mozaffarian D, Hao T, Rimm EB, Willett WC, Hu FB. Changes in Diet and Lifestyle and Long-Term Weight Gain in Women and Men: New England Journal of Medicine. N Engl J Med 2011; 364(25):2392-404.

 17. Pereira MA, Kartashav AI, Ebbeling CB et al. Fast-food habits, weight gain, and insulin resistance (the CARDIA study): 15-year prospective analysis. The Lancet 2005; 365(9453):36-42.

 18. Purslow LR, Sandhu MS, Forouhi N et al. Energy intake at breakfast and weight change: prospective study of 6,764 middle-aged men and women. Am J Epidemiol 2008; 167(2):188-92.

 19. Schulz M, Nothlings U, Hoffmann K, Bergmann MM, Boeing H. Identification of a food pattern characterized by high-fiber and low-fat food choices associated with low prospective weight change in the EPIC-Potsdam cohort. J Nutr 2005; 135(5):1183-9.

 20. Ballor DL, Harvey-Berino JR, Ades PA, Cryan J, Calles-Escandon J. Contrasting effects of resistance and aerobic training on body composition and metabolism after diet-induced weight loss. Metabolism 1996; 45(2):179-83.