

Strength training and adiposity in pre-menopausal women: strong, healthy, and empowered study.

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Abstract

BACKGROUND: American women aged 25-44 y gain 0.5-1 kg yearly, most of which is fat. Because few midlife women participate in strength training, this mode of activity may be a novel intervention for preventing age-associated fat increases in this population.

OBJECTIVES: The primary aim was to assess the efficacy of twice-weekly strength training to avoid increases in percentage body fat and intra-abdominal fat.

DESIGN: A randomized controlled trial was conducted in an ethnically diverse sample of 164 overweight and obese [body mass index (in kg/m²): 25-35] women aged 25-44 y. The treatment group did twice-weekly strength training for 2 y. The standard care comparison group was given brochures recommending aerobic exercise. Assessments at baseline, 1, and 2 y included intra-abdominal fat by computed tomography scan and body fat and fat-free mass by dual-energy X-ray absorptiometry.

RESULTS: During 2 y, percentage body fat changes were -3.68 +/- 0.99% for the treatment group and -0.14 +/- 1.04% for the control group, P = 0.01. Two-year intra-abdominal fat changes were 7.05 +/- 5.07% for the treatment group and 21.36 +/- 5.34% for the control group, P = 0.05.

CONCLUSION: This study suggests that strength training is an efficacious intervention for preventing percentage body fat increases and attenuating intra-abdominal fat increases in overweight and obese pre-menopausal women. This is relevant to public health efforts for obesity prevention because most weight gain can be assumed to be fat, including abdominal fat.