

## Fitness: Women Should Lift Weights to Prevent Midlife Weight Gain

During the middle years of their lives, women on average gain one to two pounds in weight with each year that passes. Although such an annual weight gain doesn't sound particularly worrying, the effects over a ten to twenty year period can be very significant. Most of the weight gain is assumed to be fat and as is widely accepted, there are significant health concerns not only with being over weight but also in the type of fat the body is laying down. Visceral fat (intra-abdominal fat) is closely associated with increased risks of heart disease.

Researchers have specifically looked at the situation that women face, with a view to ascertaining what type of exercise programme may help to keep this "midlife spread" at bay. At the American Heart Association's 46th Annual Conference on Cardiovascular Disease Epidemiology and Prevention in March 2006, lead author Kathryn H. Schmitz, Ph.D., assistant professor, Center for Clinical Epidemiology and Biostatistics at the University of Pennsylvania in Philadelphia., presented the Strong Healthy and Empowered (SHE) study.

The study examined whether twice-weekly strength training would prevent increases in intra-abdominal and total body fat in women who were already overweight or obese. The participants were 164 overweight or obese women aged 25-44 (average age 36) who were premenopausal. Approximately 40 percent of the sample was non-Caucasian, about two-thirds were college educated and about half had children under five years old at home. All had similar calorie intakes.

The participants were split into two groups – both groups being similar in age and BMI. They were told not to change their diets in any way that might affect their weight during the study period.

One group was asked to undertake strength training sessions twice a week for a two year period. They participated in supervised strength training classes for the first 16 weeks, and they then received booster sessions with certified fitness professionals four times a year. Each weight training session took about an hour and included exercises for all the major muscle groups. The women were encouraged to gradually increase the amount of weight lifted. On average, the participants completed 70% of all the prescribed exercise sessions.

On the other hand, the control group simply received a brochure recommending 30 minutes to 1 hour of exercise on most days of the week.

Researchers took measurements at baseline and again at one year and at two years. Body composition was measured by dual energy X-ray absorptiometry (DEXA) scan and measurements of abdominal and total body fat by single slice CT scan.

At the end of the two year period, women in the weight-training group were found to have decreased their body fat percentage by 3.7 percent. Body fat percentage remained stable in the control group. Importantly, the strength training group experienced only a 7 percent increase in intra-abdominal fat compared to a 21 percent increase in such fat in the control group. It is well established that intra-abdominal fat is closely linked to the risk of heart disease and stroke and it is vitally important for our health to keep such fat in check.

One of the major plus points of prescribing such an exercise program is that strength training is fairly time efficient and for many busy women finding time to do two one hour sessions a week is achievable. The problem with so many exercise programs is that they are simply too demanding in terms of the time that they require and so, although they may be embarked upon with enthusiasm they are unlikely to be sustained.

Strength training to increase muscle mass also has other benefits. In older people, it may help to delay functional declines associated with aging and by increasing muscle strength it may allow aerobic activity in overweight people. As Kathryn Schmitz noted "making women stronger and more confident behaviorally may serve as a gateway to getting overweight women to be more active."

### References:-

Press release from the American Heart Association  
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Schmitz KH, Jensen MD, Kugler KC, Jeffery RW, Leon AS. Strength training for obesity prevention in midlife women. *Int J Obes Relat Metab Disord.* 2003 Mar; 27(3):326-33.