



## Exercise and Menopause

If you're in the middle of menopause, you may be experiencing challenges such as weight gain, hot flashes or fatigue. Ugh! The good news is that exercise can make a positive difference.

Although there is much more to learn about exercise research and menopause, what we do know supports physical activity as a means to help manage menopausal consequences and protect against heart disease and osteoporosis, says Jan Schroeder, PhD, an associate professor of kinesiology at California State University, Long Beach. Below, Schroeder explains what research says and offers tips for designing a fitness program for this time of life.

### Cardiorespiratory Research

Most cardiorespiratory research involving menopausal and postmenopausal women has focused on how aerobic activity affects body composition and abdominal fat distribution. Many studies have used walking as the primary mode of aerobic activity. In one such study, postmenopausal women (55–66 years) wore pedometers for 14 days to determine whether body composition variables differed across activity levels. Research determined that women who accumulated more steps per day (> 7,500) had more favorable body composition—

including lower body fat percentage, trunk fat, body mass index (BMI), waist and hip circumferences and waist-hip ratio—than women who took fewer steps (Krumm et al. 2006).

### Resistance Training Research

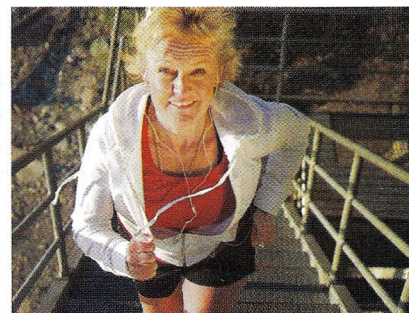
Numerous researchers have reported on the effects of resistance training for menopausal women. Positive outcomes have included improvements in strength, body composition and bone density. For example, strength improvements of approximately 30% in the lower body and 25% in the upper body occurred in postmenopausal women following a 6-month resistance training protocol consisting of 8 repetitions of 12 exercises at 80% of one-repetition maximum (Bemben et al. 2000).

### Flexibility Training Research

Flexibility research targeting menopausal women is severely lacking. Much more research is needed in this area to determine the appropriate exercise design for menopausal women. For now, follow the American College of Sports Medicine's (ACSM) flexibility guidelines for clients (ACSM 2006). See "Practical Advice" for specifics. ■

### References

- American College of Sports Medicine (ACSM). 2006. *ACSM's Guidelines for Exercise Testing & Prescription* (7th ed.). Philadelphia: Lippincott Williams & Wilkins.
- Bemben, D.A., et al. 2000. Musculoskeletal responses to high- and low-intensity resistance training in early postmenopausal women. *Medicine & Science in Sports & Exercise*, 32 (11), 1949–57.
- Krumm, E.M., et al. 2006. The relationship between daily steps and body composition in postmenopausal women. *Journal of Women's Health*, 15 (2), 202–10.



### practical advice

When devising an exercise program for use during menopause, include cardiovascular, strength and flexibility segments that challenge and motivate you. For assistance in developing a program, use the suggestions below and contact a certified personal trainer.

**Cardiorespiratory Fitness.** The goal of a cardiorespiratory fitness program is to improve your aerobic conditioning and body composition. Choose a weight-bearing activity, such as walking, to help protect bone density.

**Resistance Training.** Improvement in bone mineral density (BMD) is site-specific. Only those bones attached to the exercising muscles are affected, owing to specificity of stimulation. Therefore, choose exercises to strengthen the small and large muscle groups of the spine and hip, the most common sites of osteoporotic fractures. In addition, pick exercises that help with posture and realign the spine and pelvic girdle (e.g., upper-back and leg/hip exercises).

**Flexibility Training.** Until there is a clearer understanding of the most appropriate flexibility design, follow ACSM's flexibility guidelines. The organization recommends performing a static stretching routine that exercises all major muscle groups at least 2–3 (preferably 5–7) days per week, holding each stretch for 15–30 seconds to mild discomfort, with 2–4 repetitions per stretch (ACSM 2006).

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**Kimberly A. Searl**  
[www.mindbodybalance.com](http://www.mindbodybalance.com)  
By Appointment Only  
Phone: 734 - 241 - 7457  
Fax: 734 - 241 - 7457  
[kim@mindbodybalance.com](mailto:kim@mindbodybalance.com)

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