

Lifespan Fitness

By Leah Smejkal, PT, CMTPT

Orthopedic & Spine Therapy of Clintonville

Introduction

Aging is inevitable! What do we think are the typical changes with aging? How does that compare with actual changes?

Chronologic vs. biologic age
Some statistics about aging...

Bone Density

- By age 90, as many as 32% of women and 17% of men will have sustained a hip fracture, and 12-20% of these people will die from complications due to hip fracture.
- Bone mass is decreased 10% at age 65 and 20% at age 80.
- Men lose bone mass by 1% per year after age 50. Women begin to lose bone mass in their early 30's with a 2-3% decrease after menopause.
- Causes for loss of bone density include hormonal changes, genetic influences, nutritional and mechanical factors, immobilization and physical inactivity.
- Women age 50-73 years of age who exercised for 1 hour two days per week for 8 months increased their bone mineral content by 3.5% whereas sedentary controls of similar age lost 2.7% of bone mineral during the same time period.

Strength

- Muscular strength decreases around age 40 with acceleration in decline after age 60.
- For each decade after 25, 3-5% of muscle mass is lost.
- After age 74, 28% of men and 66% of women may not be able to lift objects greater than 10 pounds.
- Loss of strength due mostly to decrease in use of the neuromuscular system and lifestyle changes (decreased activity).

Flexibility

- Loss of flexibility due to decreased activity level, increased arthritis or stiffness of joints, decrease elasticity of collagen tissue.

Basal Metabolic Rate (BMR)

- On average, this is a 10% decrease in BMR between early adulthood and retirement and another 10% decrease after age 65.
- By age 75, typical composition of your body is 8% bone, 15% muscle, and 40% adipose.
- Study found that there was a 6% increase in resting metabolic rate in endurance trained older men.

Reality is that changes will happen to your body with aging, but the common theme is that negative changes are most attributed to decrease in activity level, and increasing activity level can minimize changes with aging and promote healthier years ahead!

20's

Recommendation: 30 minutes of weight training followed by 30 minutes of cardio three times per week plus 45-60 minutes of straight cardio three times per week. One day of rest.

- Strong body but focus is typically on cardio, crunches and fad diets.
- Weight training builds definition of muscles and bone density to prevent osteoporosis.
- Emphasis should be on health, not appearance.
- Diet should be lean meats, vegetables and fruits.
- Core strengthening exercises versus tons of sit ups/crunches.
- Yoga for focusing on the inside rather than the outside.

30's

Recommendation: One hour of circuit training four times a week, plus at least one day of cardio for 45-60 minutes at a high intensity. One day of rest.

- Basal metabolism drops by 1-2 percent every decade, lean muscle decreases and body fat increases. Don't need as many calories to sustain yourself.
- Keeping fit means working harder.
- Benefit of circuit training is that you are doing strength and cardio together to save time.
- Vary the weight and reps with your strength and good posture.
- Stand instead of sit, stairs instead of elevators.

40's

Recommendations: One hour of weight training 3 days a week if you do your whole body at once (4 days for half an hour if you split it up), plus 45 minutes of cardio 5 days a week (less impact and intensity than in your 20's and 30's) One day of rest.

- Gravity, hormones, and slower metabolism as lean muscle mass continues to decrease and body fat increases.
- More fat gain in the torso-below the bra, through the triceps area, on the back and in the belly as body composition changes.
- Resistance training crucial. Do with proper form and higher intensity.
- Pilates and core training for the abdomen and gluteus muscles.
- Hold positions longer and do things more slowly and better control. Precision and form over quantity.
- Find a mode of exercise that you enjoy.

50's

Recommendation: 4-6 cardio sessions a week, 20-40 minutes each, with an intensity that lets you answer a simple question but not chat, plus half an hour of weight training twice a week, 8-12 repetitions of each exercise, or 15-20 using lighter weights. Always stretch afterward.

- Average gain of 12 pounds 8 years after menopause. Pot belly develops with loss of muscle tone. Shoulders begin to slump due to work related duties that bend you forward.
- Strength training a must! Can gain strength at any age.
- Aim for 10,000 steps a day. Get a pedometer.
- Recovery time is greater, so may need to alternate an intense workout day with a lighter one.
- Warm up before exercise with walking or light stretches, cool down and stretch after exercise.
- Yoga, Tai Chi, balance training important.

60's

Recommendation: 3 days a week of challenging but not exhausting cardio, such as a brisk walk, plus 3 days of weight training using lighter weights and slower, more controlled movements combined with slow, sustained stretching. Walk whenever possible and do daily balance exercises.

- Arthritis, aches and pains common problems, but appropriate exercise can decrease symptoms.
- Decline in fitness due to a lack of use, not just natural progression of aging!
- Choose low impact exercise for cardio – recumbent bike, swimming, walking.
- Strengthening still important, but must be modified to protect joints.
- Stretching and balance exercises are essential!

70's Plus

Recommendation: Daily exercise at shorter duration (10-15 minutes to start), more frequently throughout the day, intensity 40-50% of heart rate maximum. Warm up and cool down are important.

Keywords: fitness, exercise, stretching, yoga, strength training, patient education, bone mass, strength, aging, cardio, pilates, circuit training, metabolism, balance, walking,