

How to Stay Fit as You Age

Course Guidebook

Dr. Kimberlee Bethany Bonura
Fitness and Wellness Consultant



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Kimberlee Bethany Bonura, Ph.D.

Fitness and Wellness Consultant

Dr. Kimberlee Bethany Bonura earned her Ph.D. in Educational Psychology from Florida State University, with a research focus in Sport and Exercise Psychology and graduate certificates in Program Evaluation and Educational Measurement and Statistics.

Her doctoral dissertation, *The Impact of Yoga on Psychological Health in Older Adults*, won national awards from the American Psychological Association (Division 47) and the Association for Applied Sport Psychology (AASP).

Dr. Bonura serves as a peer reviewer and a member of the editorial board of the *International Journal of Yoga Therapy*. She is also a peer reviewer for the *Journal of Aging and Physical Activity*, *The Journal of Alternative and Complementary Medicine*, the *Journal of Asynchronous Learning Networks*, *The Journal of Social Change*, and the *Journal of Sport & Exercise Psychology*. Dr. Bonura serves as a member of the Master's Thesis Award Review Committee for the AASP and as a peer reviewer for the annual International Conference on College Teaching and Learning, as well as the annual conferences of the American Educational Research Association, the Canadian Psychological Association, and the American Psychological Association. She served as editor in chief of the Yoga Alliance newsletter *Yoga Matters* from 2002 to 2004.

Dr. Bonura has been practicing yoga since 1989 and teaching yoga since 1997. She is a triple-certified yoga instructor, registered with the Yoga Alliance, and a member of the International Association of Yoga Therapists. Dr. Bonura holds certifications as a personal trainer, group fitness instructor, kickboxing instructor, Tai Chi and Qigong instructor, senior fitness specialist, weight management instructor, and prenatal and youth fitness specialist. These certifications are issued by the Aerobics and Fitness Association of America and the International Fitness Professionals Association. She

is also a Certified Anger Resolution Therapist and a Reiki Master in the Usui system.

Dr. Bonura has a line of instructional yoga and fitness DVDs that focus on older adult and adapted fitness programs. She has been published in local, national, and international magazines and journals in the topic areas of yoga, health, wellness, fitness, stress management, and performance enhancement. Dr. Bonura has developed specialized programs in seated/ chair yoga for senior citizens; pelvic yoga for pre- and postpregnancy, pre- and postmenopause, incontinence prevention, and sexual enhancement; yoga for empowerment, designed to encourage self-esteem in teenagers and young adults; and partner yoga for family and marital enhancement. She has consulted with individuals and organizations, including elite athletes, higher education institutions, nonprofit community organizations, and corporations. ■

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Disclaimer

This series of lectures is intended to increase your knowledge of physiology, exercise, and health-related lifestyle choices and their basic effects on the human body as it ages. It is not designed for use as a medical reference to diagnose, treat, or prevent medical illnesses or trauma. Neither The Teaching Company nor Kimberlee Bethany Bonura is responsible for your use of this educational material or its consequences. If you have questions about the diagnosis, treatment, or prevention of a medical condition or illness, you should consult your personal physician.

How to Stay Fit as You Age

Scope:

Do you want to age, or do you want to age healthfully? A balanced fitness program will help you stay physically and psychologically healthy throughout your lifespan. You can cultivate a healthy body and a healthy mind through exercise. Whether you're already over 65, in your 50s but dealing with chronic conditions, or proactively planning ahead to stay healthy as you get older, the intent of this course is to support you in making good decisions that promote health and help you make the most of all the years you have. Whether you are just getting started with fitness or want to revitalize your existing fitness activities, this course will help you develop a plan to age healthfully.

To get the benefits of physical activity, you have to do it, and understanding motivational theory will help you leverage strategies for success. We will review barriers to change and stages-of-change theory to help you assess your current motivation level and establish a plan to get started.

Self-care is a vital part of health and wellness. Although self-care includes physical exercise, other considerations, such as stress management, a healthy diet, sufficient sleep, and mental exercise, all contribute to overall well-being. The consistent use of stress management techniques is an important part of any fitness program.

A balanced fitness program will help you stay physically and psychologically healthy throughout your lifespan. To support overall physical fitness, your exercise program should include cardiovascular exercise, strength and resistance training, flexibility training, balance training, and pelvic floor exercise. We will address the FITT principles (frequency, intensity, time, and type) to support you in developing the right plan for your current fitness level and your fitness goals.

You do not have to go to the gym to get fit. A broad array of activities supports physical fitness, including such activities of daily living as

gardening and housekeeping. In fact, even if you exercise regularly, how much you sit will have an impact on your health. We will discuss workplace fitness and how you can better support your health in the office. We will also review opportunities to challenge yourself and expand your horizons through competitive sports and social fitness activities, such as dancing.

Mindfulness fitness practices are types of exercise intended to unify your mind and body through the combination of physical and psychological exercise. Mindful fitness practices include programs in yoga, Tai Chi, and the martial arts, all of which combine physical exercise with deliberate breathing and mental training. Mindful fitness practices provide physical fitness benefits, such as strength, flexibility, and balance training, but they also offer benefits beyond physical exercise. Research literature shows that mindfulness practices are particularly well suited to supporting mental health and well-being, helping to improve self-esteem, reducing depression and anxiety, and reducing perceptions of pain.

Our environments affect our fitness levels more than we may realize; the presence or absence of sidewalks and grocery stores, for instance, can influence the health-promoting decisions we make. If your environment does not set you up for success, then you are relying on willpower to push through in spite of obstacles. Research shows that we have limited reserves of willpower and that temptation and stress reduce our ability to exercise willpower; it's wise, then, to establish an environment that helps you conserve your willpower resources.

Having strong social relationships is also important for our health. In fact, in terms of risk for premature death, having a low level of social interaction is more harmful than not exercising, twice as harmful as being obese, and as harmful as smoking 15 cigarettes per day or being an alcoholic. When we have connections with other people, we have a greater sense of purpose, and that can help us feel motivated to take better care of ourselves and take fewer health risks.

When fitness and exercise become your central focus—when you live to exercise and eat healthfully—then you are no longer aging healthfully. If you find that the activities that should promote health are beginning to

consume your life, you may have a problem. Even older adults are at risk for disordered behaviors, such as eating disorders, overtraining, and exercise addiction.

How you respond to illness, disability, or a chronic health condition will play a large part in determining your quality of life for the rest of your life. The times when exercise is hardest are when you just might need it the most. Adapted or modified physical fitness programs can help you recover more quickly and retain greater independence during illness, with chronic health conditions, and in spite of disabilities.

Physical activity promotes physical health. Benefits include improved energy and stamina; improved immune functioning and reduced risk for minor illnesses; and reduced risk for chronic conditions, such as diabetes, cardiovascular disease, and cancer. Physical activity also promotes psychological health; individuals who exercise regularly have a reduced risk for depression and anxiety and are more likely to experience marital satisfaction and earn higher pay. The goal of this course is to help you establish a plan for success that will enable you to reap these benefits, while having fun and maintaining your motivation.

This 12-lecture course is supported by 6 active sessions, including a relaxation session, a 30-minute chair yoga session; a 30-minute Tai Chi/ Qigong session; a 30-minute foundational fitness session (including key strength and flexibility exercises); two 15-minute core strength and balance sessions (one chair based and one floor based); and three 10-minute workplace fitness sessions, one each for getting energized, managing stress, and simply standing up and moving. The relaxation session includes 15 minutes of progressive relaxation, 5 minutes of meditation using the anapana breathing technique, 5 minutes of meditation using alternate nostril breathing, and a 5-minute Reiki energy session. ■

Fitness beyond the Gym—Active Daily Living

Lecture 5

Even if you make good health-promoting decisions, such as getting 8 hours of sleep a night and exercising for 30 minutes 5 times a week, you still have to worry about the other 15½ hours in your day. Large-scale studies show that increased sitting raises your risk of disease and premature death, and this increased risk holds even among people who exercise regularly. The problem is that most of us sit for 12 or more hours each day. In this lecture, we'll talk about building movement into our daily lives in addition to 30 minutes a day of deliberate exercise.

The Benefits of Movement

- When you stand up and move around, your muscles contract; in turn, those muscular contractions stimulate blood flow and the movement of lymph through your body, helping to clear bacteria out of your cells. Muscle contractions also help your body clear out fats and sugars.
- Animal studies indicate that when animals rest for prolonged periods, they have decreased enzymatic activity. Most chemical reactions that occur at the cellular level require enzymatic activity; thus, decreased enzymatic activity may indicate that your body is not functioning as effectively as it should be at a cellular level.
- Thermogenesis is the production of heat by the cells of the body, in other words, the burning of calories. There are several forms of thermogenesis, including exercise-associated thermogenesis (EAT); non-exercise activity thermogenesis (NEAT); shivering thermogenesis; and diet-induced thermogenesis (DIT).
 - About 10% of food calories consumed are required to process calories in the body, and DIT is the energy required for that processing. But DIT means that all calories are not alike. A calorie of carbohydrates can take 5% to 10% of its energy just to process it; a calorie of protein can take 20% to 30% of

its energy to process; and a calorie of fat may take as little as 3% of its energy to process. Thus, a cup of full-fat ice cream not only has more calories than a cup of non-fat, high-protein Greek yogurt, but it is also easier for your body to burn, which means that you keep more of those calories.

- NEAT can be a great way to boost your metabolism and support weight loss or weight maintenance. In one research study, lean people were found to move more—up to 67% more movement in a day—and obese people were found to sit more—up to 61% more sitting in a day. In other words, fidgeting is a great way to burn calories all day long.

Activities of Daily Living

- If you get only one exercise device to support your health, it should be a pedometer. Attach it to your waistband every day and keep track of how much you walk. If you're like the average American, you will walk between 2,000 and 3,000 steps a day, but to promote health through daily movement, you should aim for 10,000 steps a day. Large-scale research studies show that middle-aged adults who accumulate more than 10,000 steps per day have more favorable body composition and a lower risk of cardiovascular disease.
- As we've said, a little goes a long way. Try to combine a little bit of exercise with a focused effort to sit less and move more. Shoot for 30 minutes a day of actual exercise, and remember that three 10-minute blocks is fine. Then, make a conscious decision to stand more than you sit and walk whenever you can.
- To incorporate more movement in your daily activities, try taking the stairs instead of the elevator, parking at the back of the parking lot, or pacing instead of sitting while on the telephone. You can also think of chores, such as raking leaves or mopping, as ways to incorporate more movement into your life. The following chart shows how many calories a 155-pound individual burns by performing some common daily activities.

| Activity (performed for 30 minutes) | Calories Burned (by a 155-pound individual) |
|--|--|
| Exercise | |
| Walking | 150 |
| Taking a gentle yoga class | 150 |
| Taking a low-impact aerobics class | 200 |
| Riding a stationary bike | 250 |
| Running on a treadmill (at 5 miles per hour) | 300 |
| Inactivity | |
| Napping | 23 |
| Watching TV | 27 |
| Reading | 42 |
| Standing in line | 47 |
| Household Chores | |
| Raking the lawn | 149 |
| Performing general gardening | 167 |
| Weeding the garden | 172 |
| Digging and spading the garden | 186 |
| Chopping wood | 223 |
| Shoveling snow | 223 |
| Cooking | 93 |
| Working on your car | 112 |
| Grocery shopping with a cart | 130 |
| Washing windows | 167 |
| Painting the house | 186 |
| Moving furniture | 223 |
| Leisure Activities | |
| Playing pool or billiards | 93 |
| Going bowling or playing Frisbee | 112 |
| Practicing archery | 130 |

| | |
|---|--------------------------------------|
| Playing golf | 130 (with cart)/205 (carrying clubs) |
| Coaching a children's sports event | 149 |
| Playing hopscotch or other active games with children | 186 |
| Ballroom or square dancing | 200 |

- You can increase movement at work by walking to a colleague's office to talk rather than emailing, pacing while you're on the phone, or walking around the building with a colleague rather than sitting at a conference table. You might consider using a standing desk or sitting on an exercise ball rather than a standard chair.
 - Make sure your keyboard and monitor are at the right height and try to get some natural light into your work area. Research shows that people who work in office buildings that have natural or full-spectrum light have better health, reduced absenteeism, and increased productivity.
 - Be aware of your posture while you work. One research study found that when people were reminded to sit up straight, they had more confidence in their own abilities than when they were slumped over a desk.



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Sitting on an exercise ball at work engages your core body muscles and your back muscles, enabling you to develop your balance all day long.

Outdoor Exercise

- Japanese has a word that literally means “forest bathing”; it refers to the restorative benefits of being out in nature. Being outside can

Posture Check

If you're seated, plant your feet firmly on the floor with your and knees about hip width apart and your shoulders stacked over your hips. Roll your shoulders gently down and back, with your chest soft and open. Your head and gaze should be level, with the back of your neck neutral. Notice how you feel in this position: calm, confident, centered.

Now, as a contrast, let yourself slump forward. Drop your spine backward and let your shoulders and neck roll forward, with your head drooping downward. Feel how your body and mind become more tired. Your energy is just as “slumpy” as your posture.

Deliberately sit back up; roll your shoulders down and back and concentrate on pulling your belly button in to engage your core. Again, notice how much more stable, centered, and strong you feel.

If you really feel need to boost your energy, spread your legs wide, with your knees and hips open at angles, and feel how that “pops” your chest open and lifts you up naturally. It's actually uncomfortable to slump in a wide-legged position. When you've got a wide base, it's easier to maintain better posture.

Next, stand with your feet about hip width apart, allowing your body to stack up in alignment—ankles over feet, knees over ankles, hips over knees, shoulders over hips. Gently roll your shoulders down and back to open the chest. Your arms are relaxed beside you. Your head is neutral, and your neck is comfortable. This isn't the Marine Corps chest-popped posture; it's open, comfortable, and relaxed. Every hour throughout the day, stand up from your chair for a moment and try this deliberate stance. This exercise engages the muscles of your back and core and reduces your total sitting time during the day.

have profound health benefits, including effects on psychological health. Research indicates that walking outside can reduce depression and improve memory.

- One theory holds that nature gives our attention a break from the distractions of the modern world. When we're outdoors, we have more space to rest and allow our attention to wander, and the things that we do attend to are richly rewarding—the changing colors of leaves or the flash of a bird flying by.
- You get more benefit from a 3-mile walk on a nature trail or in a park than you do from a 3-mile walk in a mall. As you plan your exercise routine, think about taking your workout outside the gym and into the natural world. You may experience even greater benefits when fresh air, natural light, and a green landscape are combined with physical fitness activities.

Dance and Sports

- Dancing or sports allow you to experience social benefits combined with physical activity. Dancing provides aerobic exercise and is an excellent workout for improving your balance.
 - You'll find many styles of dancing to try, including ballroom dancing, line dancing, contra dancing, polka, square dancing, salsa, and Latin dancing. In addition to dance studios, you can find dance programs in community or senior citizen centers and at local community colleges or universities.
 - Learning dance routines provides mental exercise to challenge your memory and improve cognitive ability, and music can support an elevated mood. Further, the social component of dance helps you develop and strengthen relationships with others and can provide an opportunity to connect with both older and younger people.
- Even if you've never been particularly active and don't consider yourself athletic, consider trying a sport. The results may be

surprising; you might find that training for a triathlon or learning tennis adds a spark of excitement to your life.

- Use the FITT plan we discussed in the last lecture to build the fitness components you need to add sports to your life. For instance, if you've always walked and would like to try running a 5-kilometer race, begin transitioning a portion of your walking time to running. Try walking for 15 minutes, running for 5, and walking for 15 more minutes. When you begin to feel comfortable with that routine, add more running time.
- Before you get started with a new sport, talk to your doctor to make you understand any safety recommendations you should follow. For instance, if you've had a knee replacement or have a history of stress fractures in your feet, running may not be the right goal for you to set.
- You may also consider making an investment in the process. Hire an instructor or coach to learn correct form and strategies, which will help you stay safe. And make sure you have appropriate equipment.

Exercise on Vacation

- Think about your vacation as another opportunity to get moving. A vacation doesn't have to mean that you just pay money and eat food. Even on a cruise ship, you'll find numerous opportunities for activity. Many ships have rock walls to climb or surfing machines, dance or fitness classes, and personal trainers. Without your work schedule and the stressors of daily life to get in your way, you can spend time taking better care of your body.
- Of course, on vacation, you can also go exploring. On a cruise, instead of signing up for a bus tour in port, try swimming with stingrays or zip-lining across the rain forest. Think about opportunities for eustress and surprise yourself with activities that are fun, different, interesting.

- Consider planning your whole vacation around physical activities. If you love to bike, plan a biking tour of French wine country. If you're into hiking, try a volksmarching tour in Germany. Build fitness into the planning stages of your vacation to heighten your sense of anticipation and the fun once you arrive at your destination.

Suggested Reading

Buder, *The Grace to Race*.

Levine, *Move a Little, Lose a Lot*.

National Senior Games Association, www.nsga.com.

Switzer, *Running and Walking for Women over 40*.

Team Hoyt, www.teamhoyt.com.

Activities and Assignments

Go back to the list of activities to leverage as creative approaches to exercise that you generated in Lecture 4. Assess how many of them qualify as activity based on calories burned. Which ones burn as many calories as a 30-minute workout? How can you turn those activities into workouts? For instance, do you do enough yard work for a dedicated 10-, 20-, or 30-minute block of active gardening? Visit <http://www.health.harvard.edu/newsweek/Calories-burned-in-30-minutes-of-leisure-and-routine-activities.htm> for a list of calories burned by various activities for individuals weighing 125 pounds, 155 pounds, and 185 pounds.

How can you stretch yourself to try something new? What's a fitness activity you have always wanted to try but haven't thought you could do? How can you challenge your preconceived notions and surprise yourself? Think about the practical components—equipment, instruction, and location—so that you can use logistical planning to set yourself up for success.