Optimizing Physical Activity in Older Adults

HRSA GERIATRIC WORKFORCE ENHANCEMENT FUNDED PROGRAM Grant #U1QHP2870

Acknowledgements

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Learning Objectives

Upon completion of this module, learners will be able to:

1. Discuss the typical physical activity levels among adults in the U.S. and the recommendations for the amount and type of physical activity for older adults
2. Describe how cardiovascular activity, strength training, flexibility, and balance training are necessary to maintain or improve health in late life
3. Discuss behavioral strategy approaches for improving physical activity adherence for older adults
4. Describe the components and benefits of the Fit & Strong! program

Background

Background: Physical Activity in the United States

- Living a physically active life is just as important in older age as it is earlier in life
- Unfortunately, most older Americans are not engaging in sufficient amounts of physical activity

Background: Physical Activity in the United States

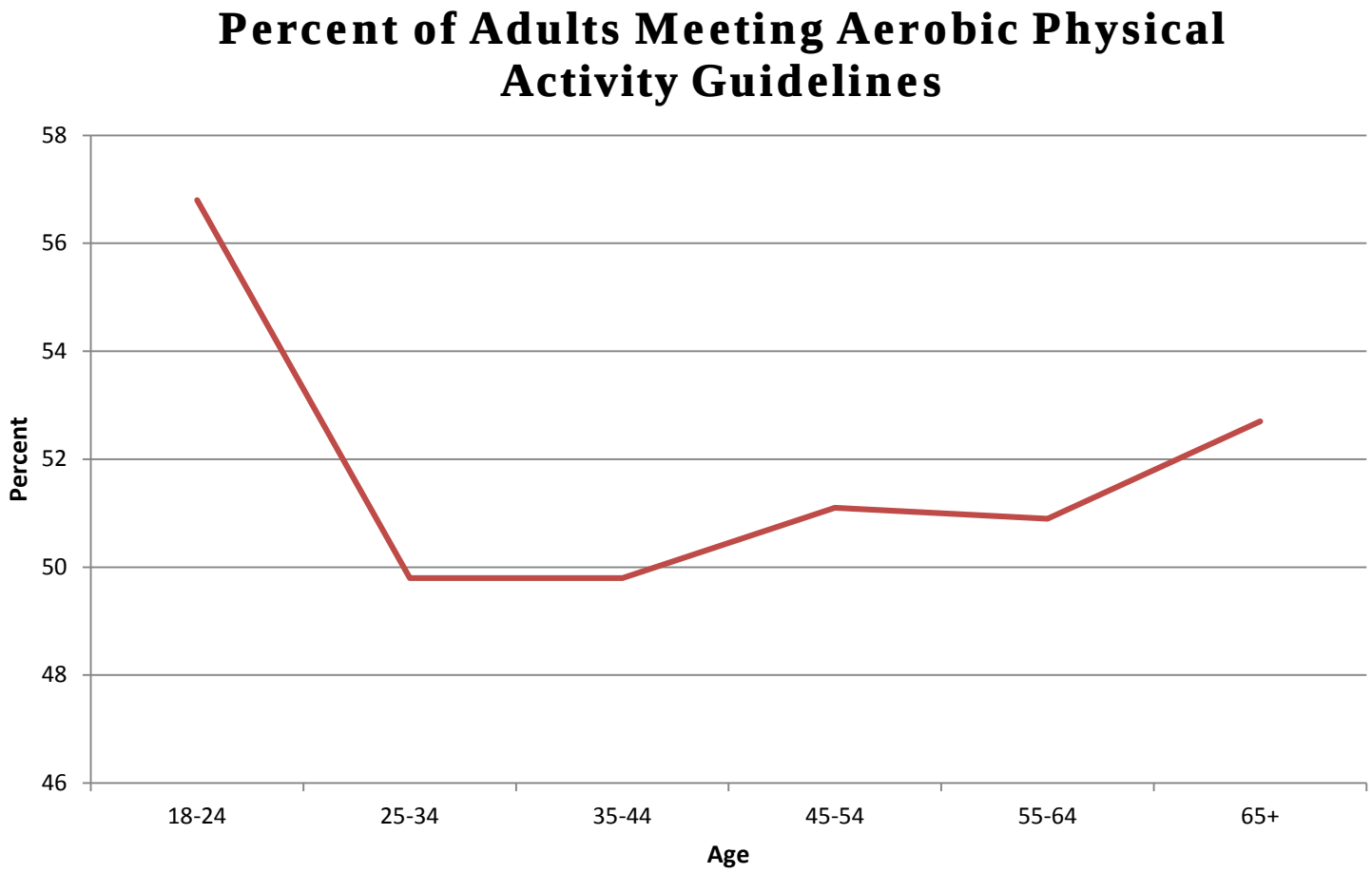
- Annually, the Centers for Disease Control and Prevention collects data on health behaviors among a random sample of 400,000 Americans through the Behavioral Risk Factor Surveillance Survey (BRFSS)
- This survey is the definitive source for understanding physical activity trends across adulthood
- Epidemiological data from the BRFSS demonstrate that rates of aerobic physical activity decline steadily across adulthood

Background: Physical Activity in the United States

- These data also point to regional differences in physical activity patterns within the United States
- Residents of some states, such as Colorado, are more likely to achieve physical activity recommendations, whereas adults in the Southeast and Midwest are less likely to achieve physical activity recommendations

Background: Physical Activity in the United States

Americans Meeting Recommended Guidelines for Physical Activity:



Source: Centers for Disease Control and Prevention, MMWR, May 3, 2013, Vol. 62, No. 17

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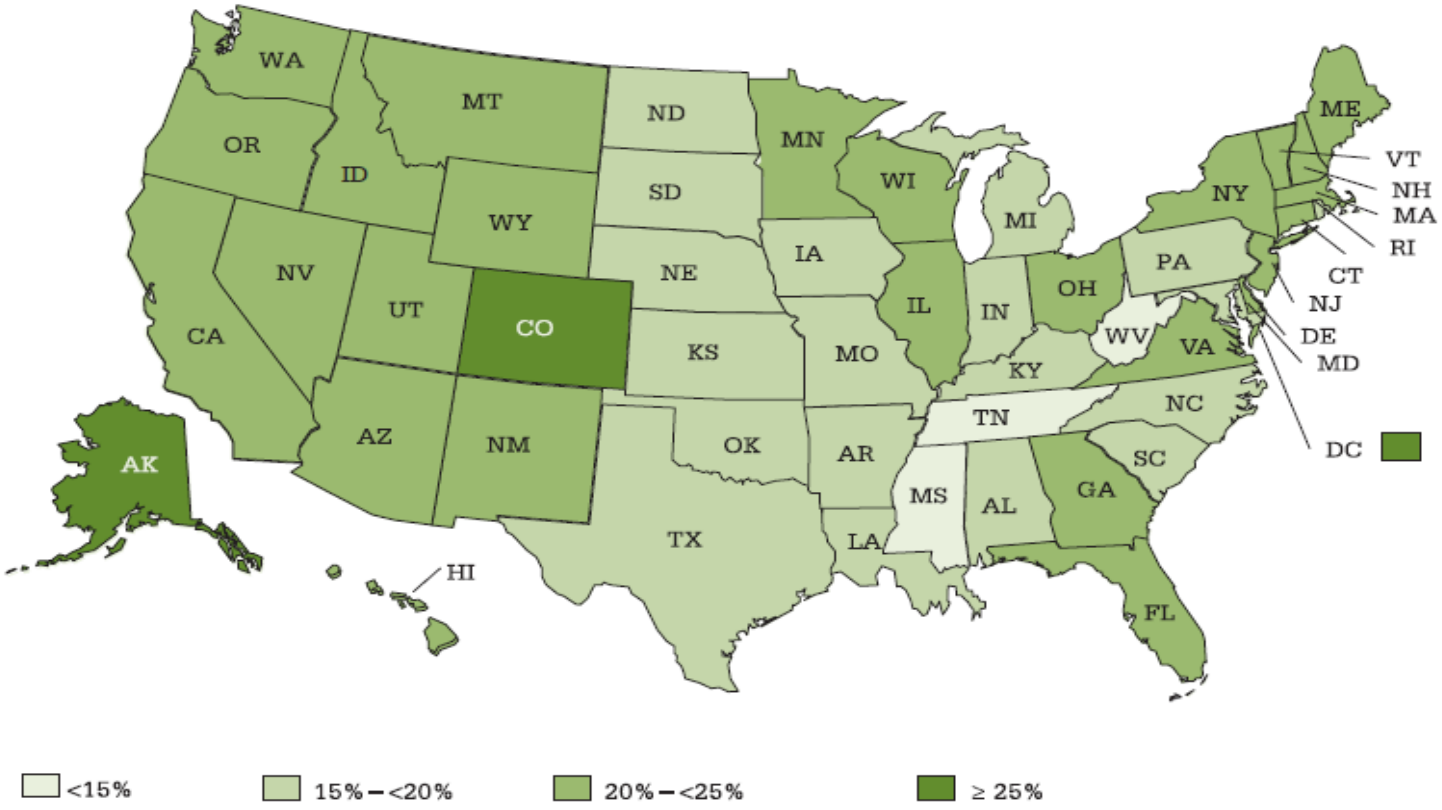


Proportion of U.S. adults meeting aerobic and muscle-strengthening physical activity guidelines by state—Behavioral Risk Factor Surveillance System, United States, 2011

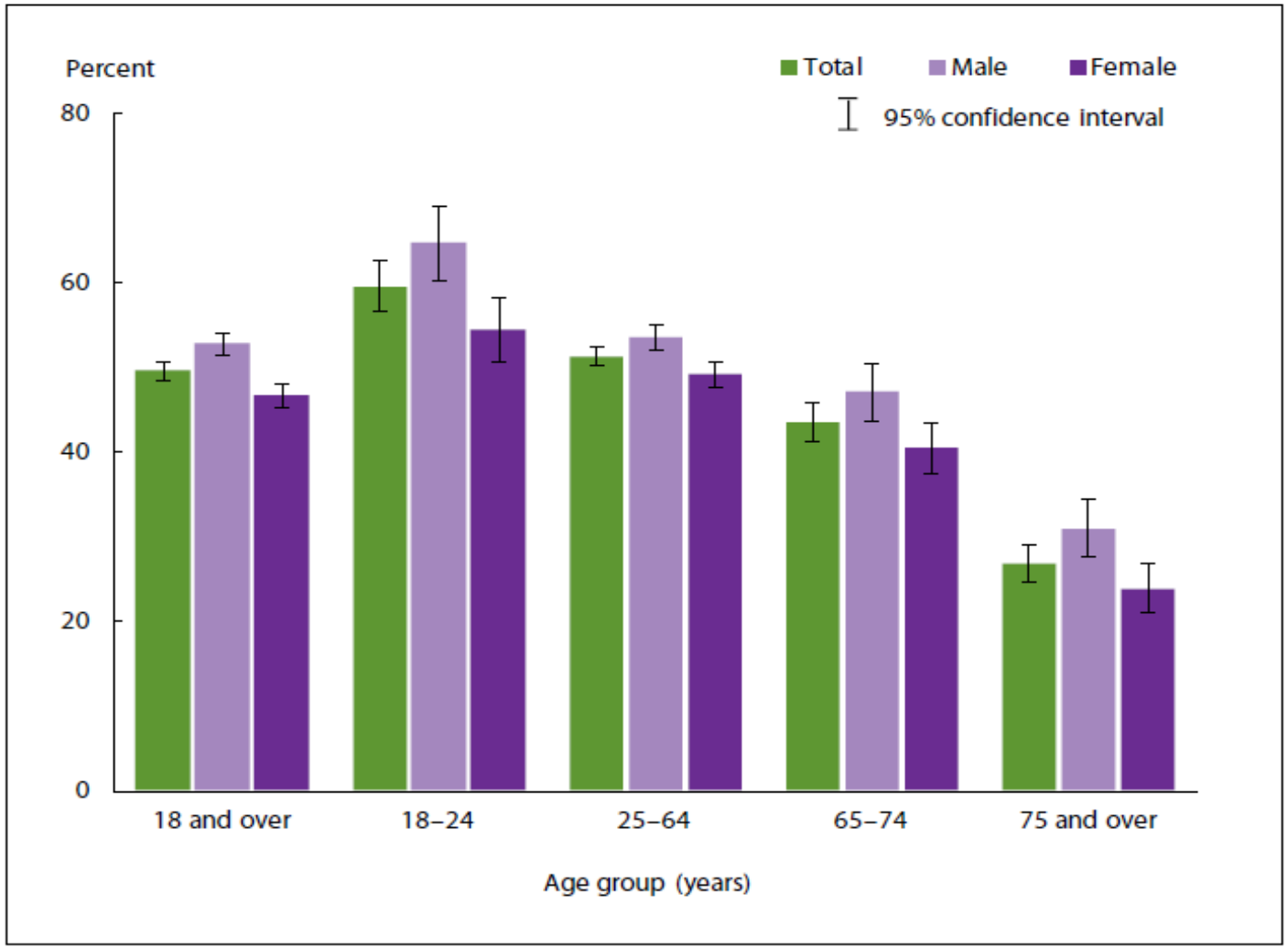
Source: Centers for Disease Control and Prevention, State Indicator Report on Physical Activity, 2014

Background: Physical Activity in the United States

- Males are more likely than females to achieve aerobic physical activity recommendations across adulthood
- Perhaps equally important to understanding the proportion of adults who are meeting physical activity recommendations, is identifying those who engage in no leisure time physical activity
- Unfortunately, around 30% of adults engage in no leisure time physical activity
- Physical inactivity is linked to a number of negative health consequences, such as heart disease, cancer, and diabetes

Background: Physical Activity in the United States

Adults Who Met Aerobic Activity Guidelines by Age and Sex

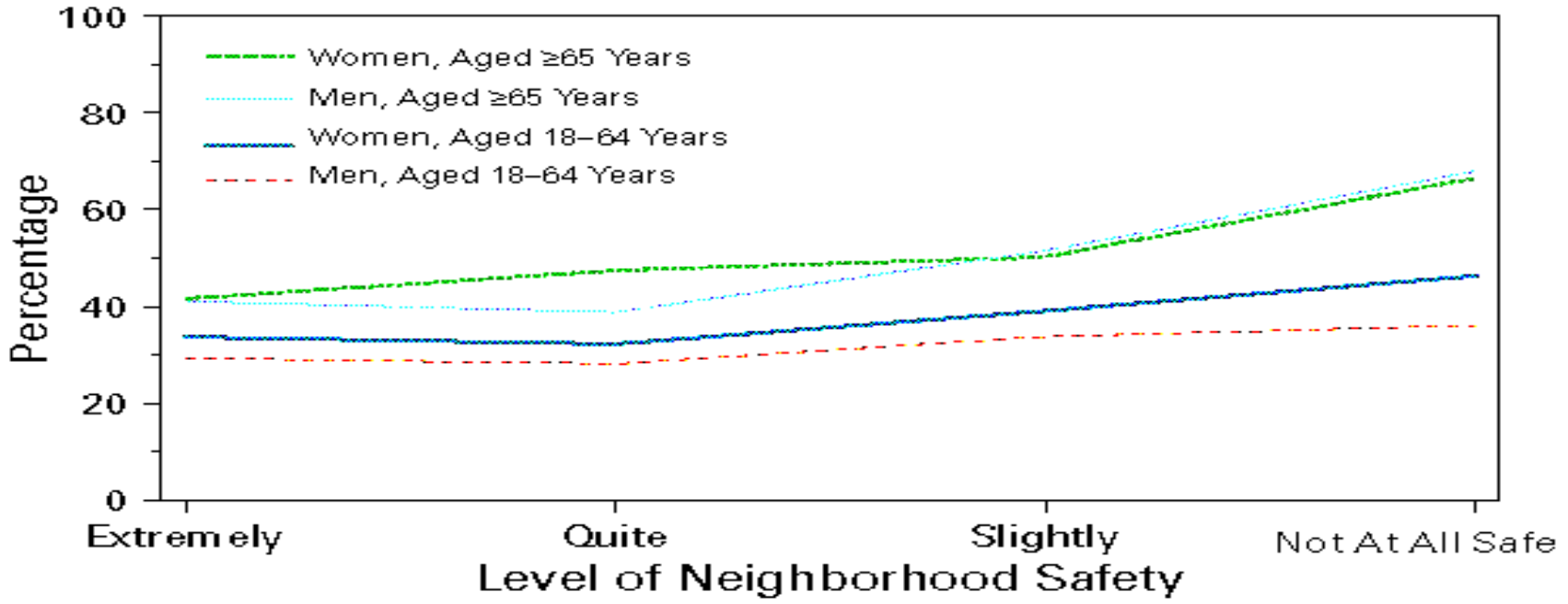


Clarke et al., 2017, p. 44

Background: Physical Activity in the United States

Level of Neighborhood Safety and Physical Activity

FIGURE 1. Percentage of respondents who reported physical inactivity, by sex, age group, and perceived neighborhood safety level — Maryland, Montana, Ohio, Pennsylvania, and Virginia, Behavioral Risk Factor Surveillance System, 1996



(Saelens et al, 2003)

Physical Activity to Improve Health

Recommendations for Physical Activity for Older Adults

- It is well known that older adults can exercise safely and experience health benefits from doing so
- Physical activity guidelines for older adults are similar to the guidelines for adults of younger ages
- The first important point is that older adults should regularly engage in aerobic exercise and strength training exercise
- Both types of exercise are important to maintaining health through old age

Recommendations for Physical Activity for Older Adults

- Older adults need to understand the difference between moderate and vigorous physical activity, because the recommendations vary based on the level of intensity
- Most older adults engage in moderate physical activity, but some adults engage in a vigorous physical activity routine into old age
- It is recommended that adults engage in 150 minutes of moderate activity per week, the equivalent of exercising 30 minutes a day for 5 days a week

(CDC, 2015a)

Recommendations for Physical Activity for Older Adults

- Those who choose to engage in vigorous activity should complete at least 75 minutes a week
- Strength training recommendations are the same for all older adults, regardless of whether they engage in moderate or vigorous activity
- All major muscle groups should be targeted through a well-rounded strength training routine at least 2 days a week

(CDC, 2015a)

Recommendations for Physical Activity for Older Adults

- Moderate Aerobic Activity: 150 minutes/week
  - Moderate Activity: Aerobic, strength training, and flexibility
- Vigorous Aerobic Activity: 75 minutes/week
  - Vigorous Activity: Both aerobic and strength training
- Strength Training: 2 days a week that targets all major muscle groups
  - Legs, hips, back, abdomen, chest, shoulders, and arms
  - Flexibility and balance exercises

(CDC, 2015a)

Assessment Question 1

Recommendations for physical activity for older adults include:

a) Moderate Activity: aerobic, strength training, and flexibility

b) Moderate Aerobic Activity: 20 hours/week

c) Strength Training: 2 days a week that targets all major muscle groups

d) Vigorous Activity: strength training only

Assessment Question 1: Answer

Recommendations for physical activity for older adults includes:

a) Moderate Activity: aerobic, strength training, and flexibility (Correct Answer)

b) Moderate Aerobic Activity: 20 hours/week

c) Strength Training: 2 days a week that targets all major muscle groups (Correct Answer)

d) Vigorous Activity: strength training only

Evidence for Health Benefits of Physical Activity

Strong Evidence
Lower risk of:
• Death
• Heart disease
• Stroke
• Type 2 diabetes
• High blood pressure
• Adverse blood lipid profile
• Metabolic syndrome
• Colon and breast cancer

Strong Evidence
Prevention of weight gain
Weight loss when combined with diet
Improved cardiorespiratory and muscular fitness
Falls prevention
Reduced depression
Better cognitive function

(Kraus et al., 2015; Reiner et al., 2013; Warburton et al., 2006)

Evidence for Health Benefits of Physical Activity

Moderate Evidence
Weight maintenance after weight loss
Lower risk of hip fracture
Increased bone density
Improved sleep quality
Lower risk of lung and endometrial cancers

Moderate to Strong Evidence
Better functional status
Reduced abdominal obesity

(Kraus et al., 2015; Reiner et al., 2013; Warburton et al., 2006)

Evidence for Health Benefits of Physical Activity

- Research continues to examine the impact of physical activity on an expanded set of outcomes, including improving sleep, functional status, and weight maintenance
- While it is biologically plausible that physical activity improves these outcomes, in most cases there have not been enough randomized controlled trials conducted to provide “strong” evidence for these associations

Physical Activity to Improve Health: Activity Levels

What is a Metabolic Equivalent?

Metabolic Equivalents (METs)

- Measure of physical activity intensity
- Ratio of working metabolic rate relative to resting metabolic rate
- One MET = the energy cost of sitting quietly and is equivalent to a caloric consumption of 1 kcal/kg/hour
- It is estimated that, compared with sitting quietly, a person's caloric consumption is three to six times higher when being moderately active (3-6 METs) and more than six times higher when being vigorously active (> 6 METs)

(WHO, n.d.a)

What is Moderate Aerobic Activity?

- Most older adults are more likely to engage in routine moderate physical activities
- Moderate activities are generally those that get your body moving and your heart rate up, but you may not work up a sweat

What is Moderate Aerobic Activity?

Sample Moderate-Intensity Physical Activities (Approximately 3-6 METs)
Brisk walking
Dancing
General gardening
Housework
Water aerobics
Ballroom dancing

(WHO, n.d.b)

Moderate Aerobic Activity: The Talk Test

- One helpful technique for gauging activity level is the talk test
- If you can still talk while you are exercising, that is moderate activity
- During moderate activity, heart rate is 50-70% of maximum heart rate

(CDC, 2015b)

Vigorous Aerobic Activity

- Vigorous physical activity results in a much higher heart rate, between 70-85% of maximum heart rate
- Cannot have a conversation during vigorous physical activity

Sample Vigorous-Intensity Physical Activities (Approximately > 6 METs)
Running
Brisk walking uphill
Fast cycling
Aerobics
Fast swimming
Snow shoveling/heavy gardening
Singles tennis

(CDC, 2015a)

Best Activity for Older Adults

- Most older adults can safely engage in moderate or vigorous-intensity physical activity
- In addition to aerobic exercise, older adults should routinely engage in strength training and balance/flexibility exercises
- Before beginning an exercise routine, older adults should consult with their physician to ensure that they have no contraindications to physical activity

(Elsawy & Higgins, 2010; Nied & Franklin, 2002)

Physical Activity: Small Increments Are OK

- Recent research evidence suggests that physical activity completed in small amounts, such as 5 minutes here and 10 minutes there, has an equal positive impact compared to physical activity completed over longer increments of time
- It is how much total activity per day that counts
- Older adults should, at minimum, strive to engage in 30 minutes of moderate activity per day
- Older adult patients can be taught simple techniques for getting in brief bouts of physical activity

(Glazer et al., 2013)

Physical Activity: Small Increments Are OK

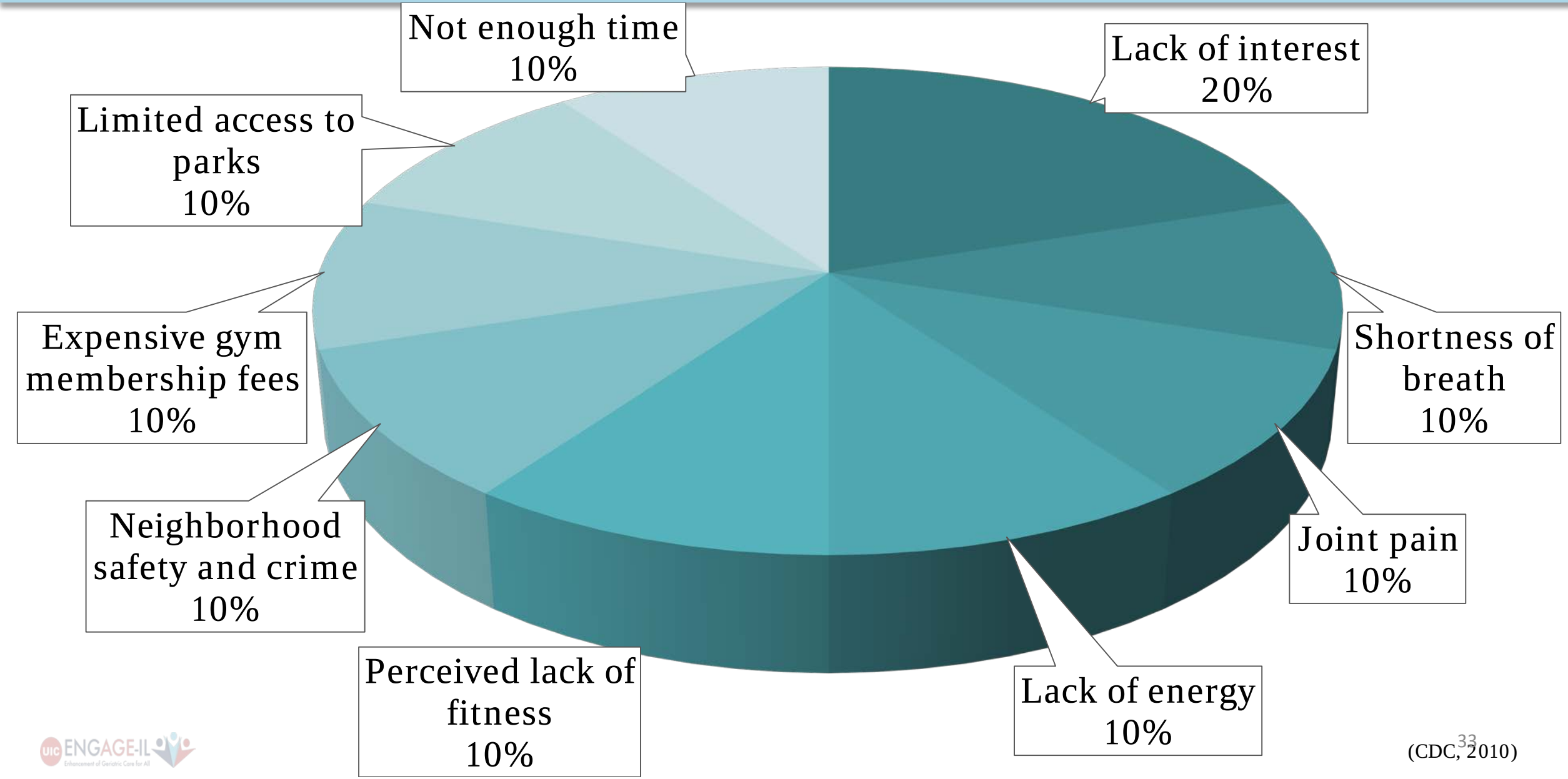
- Suggested activities:
  - Taking the stairs instead of the elevator
  - Parking at the far end of the parking lot
  - Standing while talking on the phone
  - Walking to the neighborhood store instead of driving

(Glazer et al., 2013)

Barriers to Physical Activity

- It is not uncommon for older adults to be faced with a number of environmental and social barriers as they begin a new physical activity program
- In fact, even older adults who have a regular exercise routine are confronted by these barriers occasionally
- Often the most difficult barriers to overcome are the psychological barriers
- However, other barriers pose a different kind of challenge, such as the presence of physical pain or not having a safe place to exercise around one's home

Barriers to Physical Activity



(CDC, 2010)

Assessment Question 2

All of the following are necessary to maintain or improve <u>physical</u> health in later life EXCEPT:

a) Cardiovascular activity
b) Behavioral therapy
c) Strength training
d) Flexibility
e) Balance

Assessment Question 2: Answer

All of the following are necessary to maintain or improve physical health in later life EXCEPT:

a) Cardiovascular activity

b) Behavioral therapy (Correct Answer)

c) Strength training

d) Flexibility

e) Balance

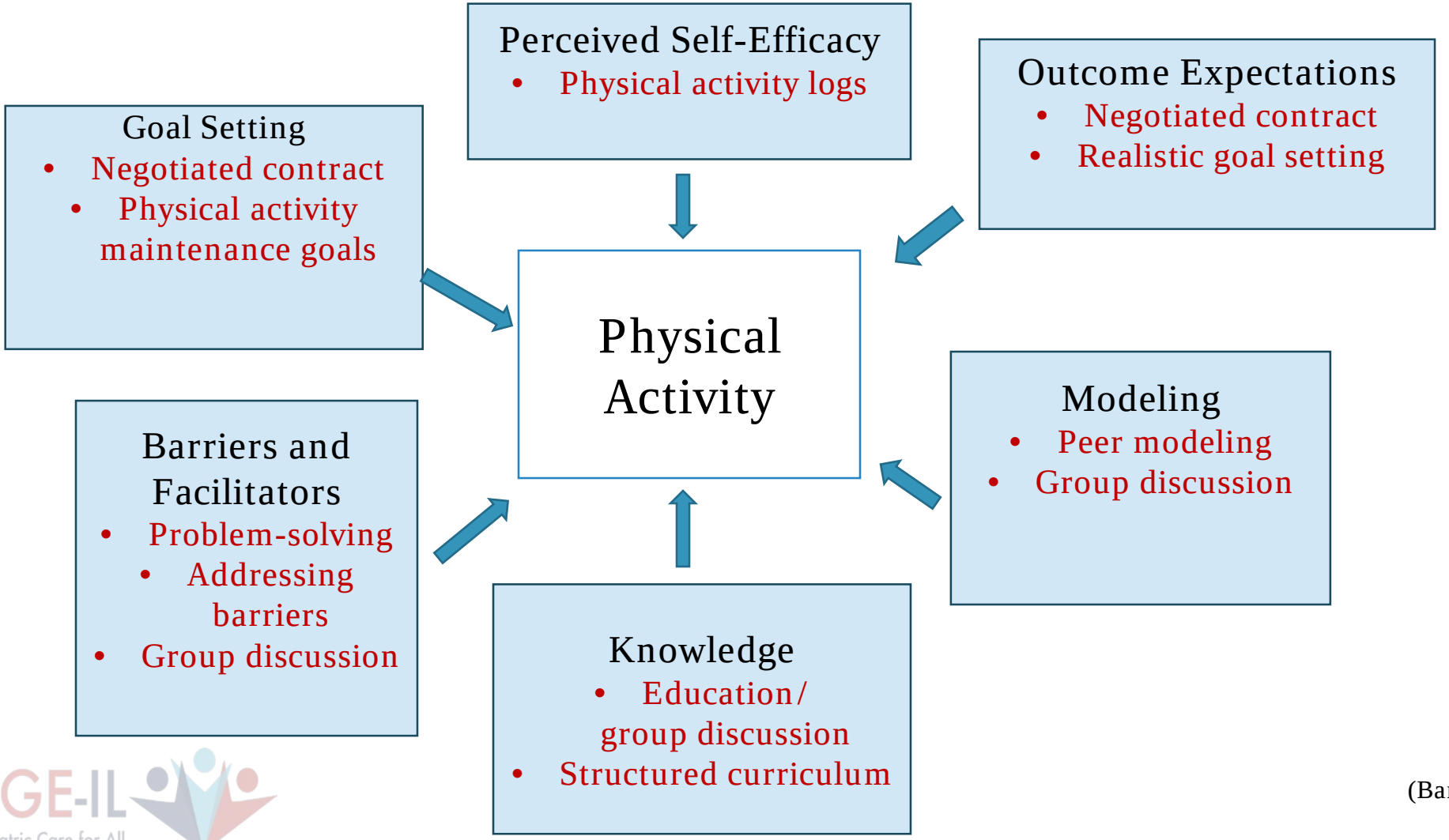
Strategies That Promote Physical Activity Adherence

Behavioral Approaches to Promote Physical Activity

- Even when older adults know how much exercise they should be getting, changing one's behavior can be challenging
- Social cognitive theory is one of the most well-rounded and well-used behavior change theories
- Social cognitive theory addresses many critical elements that help facilitate behavior change
- This theory has six constructs

Behavioral Approaches to Promote Physical Activity

Using Social Cognitive Theory Constructs to Facilitate Behavior Change:



(Bandura, 1991)

UIC ENGAGE-IL
Enhancement of Geriatric Care for All

Behavioral Approaches to Promote Physical Activity

- Arguably the most important construct is perceived self-efficacy
- Behavior change easily fails when the individual does not have confidence that he/she can complete the behavior successfully
- Keeping up that confidence, or self-efficacy, is critical to successful behavior change
- Self-efficacy can be boosted by addressing the other five constructs
- The constructs of goal setting and outcome expectations address the need for setting goals that are realistic

Behavioral Approaches to Promote Physical Activity

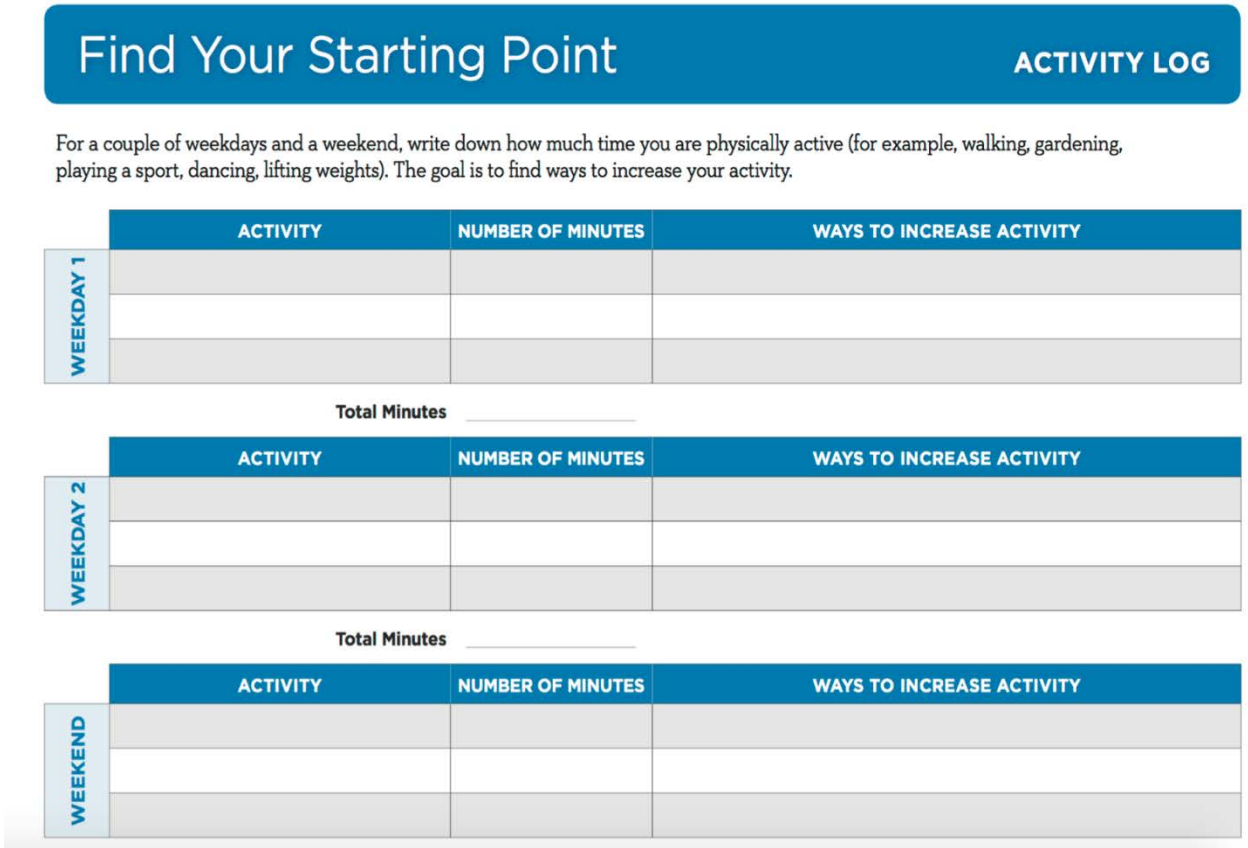
- It is necessary to revisit these goals on a regular basis to ensure that one's outcome expectations are in line with reality
- Through modeling, it is recommended that one looks to peers and others that he/she can relate to who successfully engage in physical activity
- The knowledge construct is critical, as patients must understand why it is important to engage in the behavior and complete the goal
- If the purpose is not clear, it is unlikely that he or she will choose to be physically active

Behavioral Approaches to Promote Physical Activity

- Social cognitive theory prompts the participant to identify all of the possible barriers to physical activity and to devise a plan to work around those barriers when they are present

Behavioral Strategies That Work: Set Realistic Physical Activity Goals

- There are numerous tools available online to assist older adults with completing a realistic plan for physical activity
- The activity log on this slide is free, easy to download, and printable from the National Institute on Aging's (NIA's) Go4Life site



Find Your Starting Point — ACTIVITY LOG

For a couple of weekdays and a weekend, write down how much time you are physically active (for example, walking, gardening, playing a sport, dancing, lifting weights). The goal is to find ways to increase your activity.

	ACTIVITY	NUMBER OF MINUTES	WAYS TO INCREASE ACTIVITY
WEEKDAY 1			

Total Minutes _____

	ACTIVITY	NUMBER OF MINUTES	WAYS TO INCREASE ACTIVITY
WEEKDAY 2			

Total Minutes _____

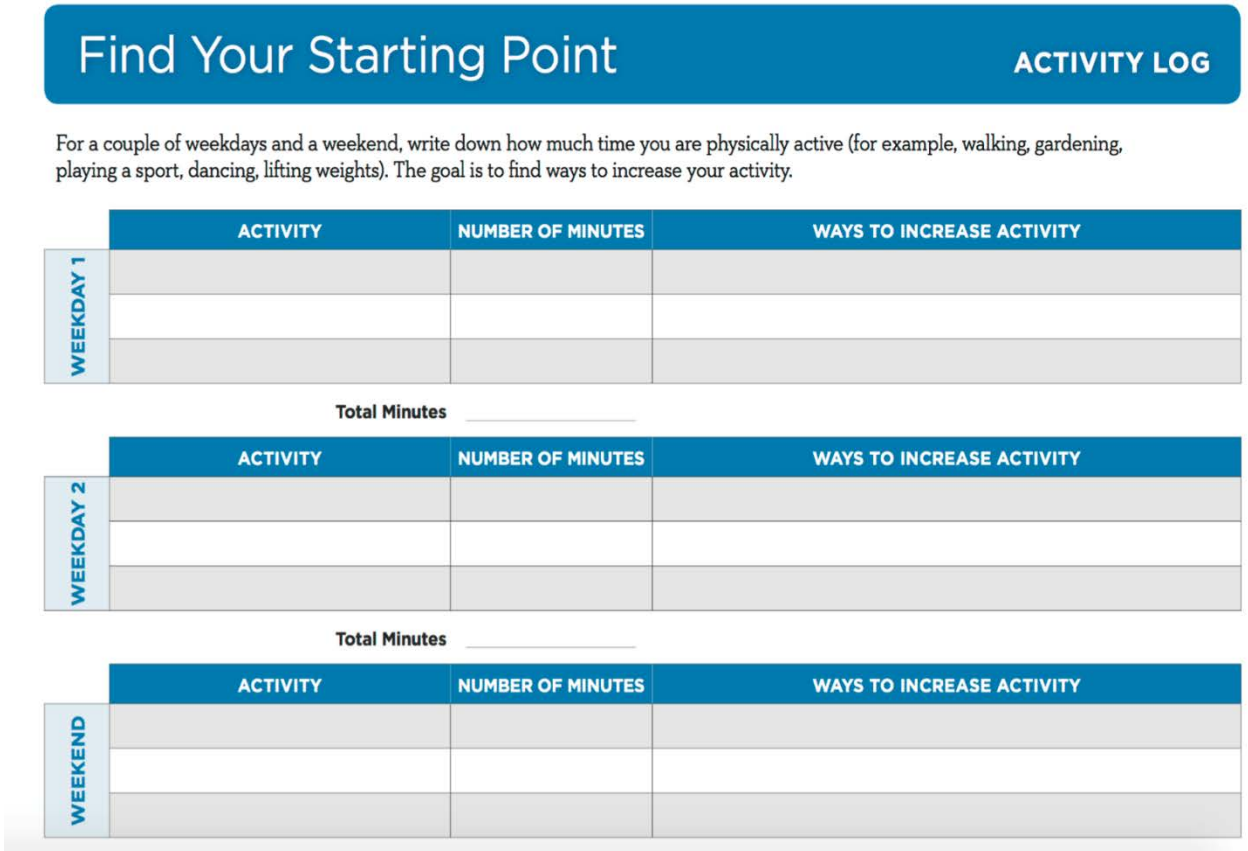
	ACTIVITY	NUMBER OF MINUTES	WAYS TO INCREASE ACTIVITY
WEEKEND			

https://go4life.nia.nih.gov/find-your-starting-point

(NIA, n.d.)

Behavioral Strategies That Work: Set Realistic Physical Activity Goals

- Social cognitive theory constructs targeted:
  - Goal setting
  - Barriers and facilitators



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WEEKEND			

(NIA, n.d.)

Behavioral Strategies That Work: Find an Exercise Buddy

- Research has shown that having an exercise buddy increases the likelihood that one will stick to his/her physical activity plan
- The Go4Life website has an exercise buddy form to which patients can be referred

https://go4life.nia.nih.gov/tip-sheets/making-exercise-buddy-agreement

Exercise Buddy Agreement

What are two short-term goals you'd both like to achieve during the next month?
Be specific. For example, find out about an exercise class in my area.

1.	1.
2.	2.

What are two long-term goals you'd both like to achieve in the next 6 months?
For example, by this time next year, I'll be able to walk a mile three times a week.

1.	1.
2.	2.

We pledge to support and motivate each other in the following way.
For example, if you stick to your agreement, I'll treat you to coffee or do a household chore for you.

(NIA, n.d.)

Behavioral Strategies That Work: Find an Exercise Buddy

- The buddy can be anyone – a spouse, a neighbor, an adult child, a friend, etc.
- The key here is that both agree to keep one another accountable for their physical activity plan

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(NIA, n.d.)

Behavioral Strategies That Work: Find an Exercise Buddy

- Social cognitive theory constructs targeted:
  - Barriers and facilitators
  - Modeling

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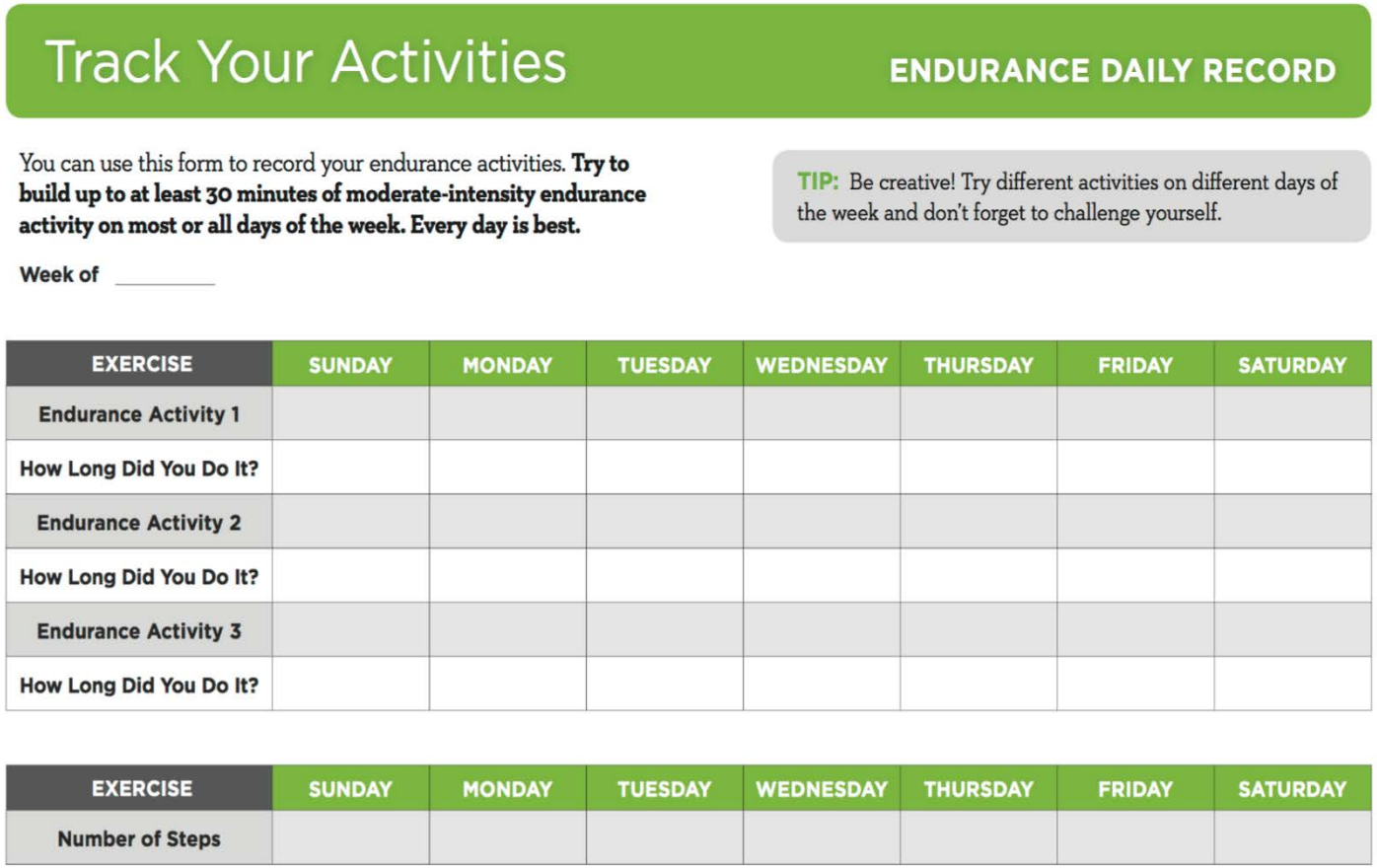
(NIA, n.d.)

Behavioral Strategies That Work: Keep an Exercise Log

- By keeping an exercise log, participants can visualize their achievements
- Logs not only hold the participant more accountable to achieving their plan, but can also boost self-efficacy



Track Your Activities

ENDURANCE DAILY RECORD

You can use this form to record your endurance activities. **Try to build up to at least 30 minutes of moderate-intensity endurance activity on most or all days of the week. Every day is best.**

TIP: Be creative! Try different activities on different days of the week and don't forget to challenge yourself.

Week of _____

EXERCISE	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Endurance Activity 1							
How Long Did You Do It?							
Endurance Activity 2							
How Long Did You Do It?							
Endurance Activity 3							
How Long Did You Do It?							

EXERCISE	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Number of Steps							

https://go4life.nia.nih.gov/tip-sheets/weekly-exercise-and-physical-activity-plan

(NIA, n.d.)

Behavioral Strategies That Work: Keep an Exercise Log

- Social cognitive theory constructs targeted:
  - Self-efficacy

Track Your Activities

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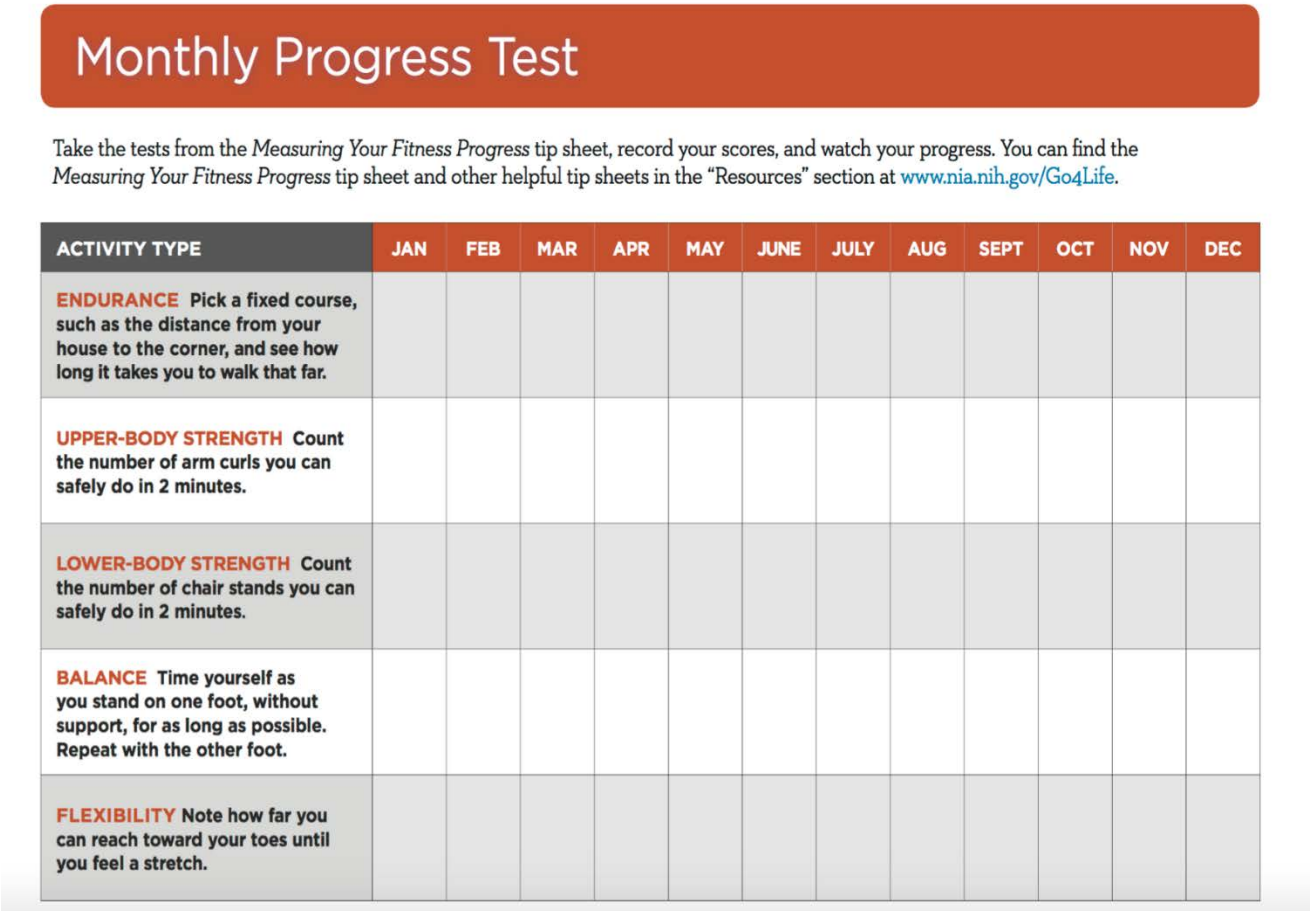
EXERCISE	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Number of Steps							

(NIA, n.d.)

Behavioral Strategies That Work: Track Your Progress

- In addition to documenting daily workouts, it is helpful to conduct regular fitness assessments to track progress
- Patients who are interested in losing weight may become discouraged when they are not seeing changes on the scale



Monthly Progress Test

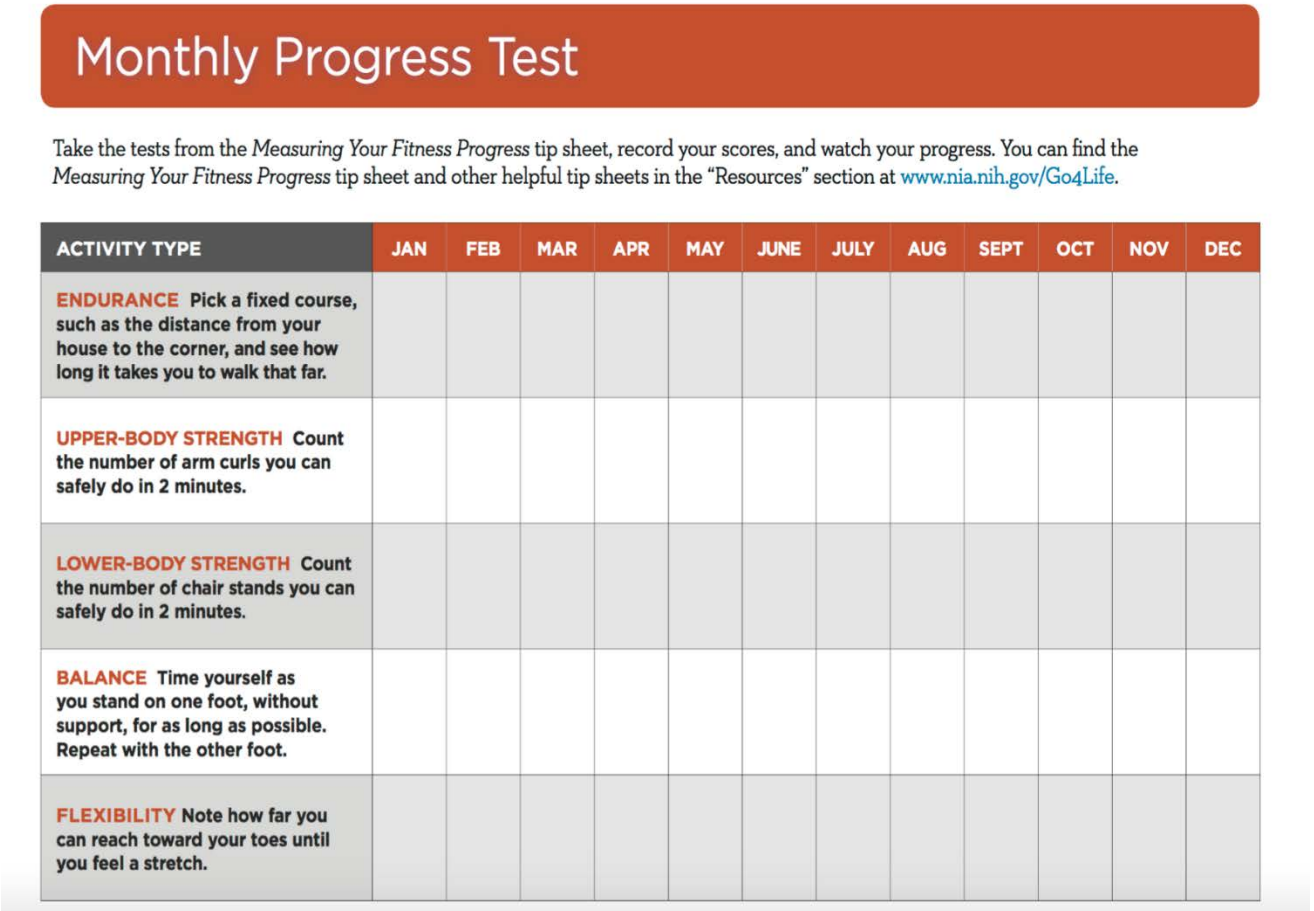
Take the tests from the *Measuring Your Fitness Progress* tip sheet, record your scores, and watch your progress. You can find the *Measuring Your Fitness Progress* tip sheet and other helpful tip sheets in the "Resources" section at www.nia.nih.gov/Go4Life.

ACTIVITY TYPE	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
ENDURANCE Pick a fixed course, such as the distance from your house to the corner, and see how long it takes you to walk that far.												
UPPER-BODY STRENGTH Count the number of arm curls you can safely do in 2 minutes.												
LOWER-BODY STRENGTH Count the number of chair stands you can safely do in 2 minutes.												
BALANCE Time yourself as you stand on one foot, without support, for as long as possible. Repeat with the other foot.												
FLEXIBILITY Note how far you can reach toward your toes until you feel a stretch.												

(NIA, n.d.)

Behavioral Strategies That Work: Track Your Progress

- However, they will be more likely to see changes using these simple endurance, strength, and flexibility assessments
- All of the tools that you're seeing during this module – and many more – are available free of charge on the NIA's Go4Life site



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(NIA, n.d.)

Behavioral Strategies That Work: Track Your Progress

- Social Cognitive Theory constructs targeted:
  - Self-efficacy
  - Outcome Expectations

Monthly Progress Test

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FLEXIBILITY Note how far you can reach toward your toes until you feel a stretch.												

(NIA, n.d.)

Technologically Assisted Physical Activities

Fitness Trackers (Fitbit, Garmin Forerunner, Samsung Gear Fit)

- Commercially available wearable activity monitor
  - Wrist band, sports watch, ring
  - Monitors/tracks activity, heart rate, sleep tracker
- For older adults living with chronic illness, wearable activity trackers are perceived as useful and acceptable
- New users may need support to both set up the device and learn how to interpret their data

(Mercer et al., 2016)

Physical Activity Behavior Strategies Involve More Than Just Individual Volition

- The social ecological model is another well-established and frequently used model, particularly within the context of physical activity and behavior change
- The model states that behavior is not only under individual control, but is also heavily influenced by outside factors within one's community and home environment

Physical Activity Behavior Strategies Involve More Than Just Individual Volition

- Some factors that influence physical activity participation:
  - Is the neighborhood a safe neighborhood for walking?
    - If your patient does not live in a neighborhood that is safe for walking, discuss other safe but feasible options, such as community gyms
  - Does the older adult have strong social support for being physically active?
  - Does the Medicare plan provide reimbursement for physical activity classes?
  - Are affordable, well-equipped community recreation centers available nearby?
  - Senior citizen centers may have options. Unfortunately, a neighborhood may not be safe due to crime, too much traffic, or have un-walkable areas (e.g., sidewalks in poor repair, etc.). Some seniors may not have the resources to go to a gym.

Genetic Influences of Physical Activity

Physiologic Response	Subjective Experience
Body temperature	Rate of perceived exertion
Stress response	Changes in affect
Heart rate	Changes in arousal
Lactate response	Pain

(McBride et al., 2012)

Genetic Influences of Physical Activity

- A number of genetic factors will impact your older patients' experience while engaging in physical activity
- Be mindful of these factors when you talk with your patients about being physically active

Physical Activity Participation When Faced with Multiple Chronic Comorbidities

- Unfortunately, practitioners frequently see older patients who have two or more chronic conditions
- Underlying chronic conditions affect physical fitness, which may make it more challenging for these patients to exercise
- Moreover, we know that the presence of multiple chronic conditions can have an exponential, not additive, effect on physical fitness
- Under most circumstances, patients with chronic conditions can still safely engage in physical activity; they may just need to go about their exercise routine more slowly than a patient with no chronic conditions

(Bayliss et al., 2004)

Assessment Question 3

Which behavioral strategies may increase physical activity in older adults? (Select all that apply)

a) Keeping an activity log

b) Identifying a workout partner

c) Addressing barriers to physical activity

d) Setting difficult to achieve workout goals

Assessment Question 3: Answer

Which behavioral strategies may increase physical activity in older adults? (Select all that apply)

a) Keeping an activity log(Correct Answer)

b) Identifying a workout partner (Correct Answer)

c) Addressing barriers to physical activity (Correct Answer)

d) Setting difficult to achieve workout goals

Assessment

Functional Assessment

- Several techniques are available for assessing physical fitness, ranging from simple tests that involve no special equipment, to accurate clinical measures of oxygen consumption

Equipment Required

- Cardiovascular fitness/aerobic endurance:
  - Maximal oxygen consumption (VO_2 max)
  - Gold standard test

(Ross et al., 2016)

Functional Assessment

No Special Equipment Required

- Cardiovascular fitness/endurance: 6-minute walk test
- Lower extremity strength: 30-second chair stand
- Balance: Timed Up and Go test

(Ross et al., 2016)

Evidence-Based Physical Activity Programs

Interventions to Promote Physical Activity Among Older Adults: Evidence-Based Programs

- Older adults should be referred to evidence-based physical activity programs whenever possible
- Evidence-based programs:
  - Comply with physical activity recommendations
  - Have been shown to work across a range of research studies
- Refer to one of several clearinghouses of evidence-based research programs to find appropriate physical activity programs for older adults

Interventions to Promote Physical Activity Among Older Adults: Evidence-Based Programs

Research-Tested Intervention Programs (RTIPs)

- Searchable database of evidence-based programs
- Sponsored by the National Cancer Institute
  - https://rtips.cancer.gov/rtips/index.do

Aging and Disability Evidence-Based Programs and Practices (ADEPP)

- Website publishes reports of evidence-based programs for older adults
- Sponsored by the Administration for Community Living
  - https://www.acl.gov/programs/strengthening-aging-and-disability-networks/aging-and-disability-evidence-based-programs

Fit & Strong!
An Evidence-Based Physical Activity Program for Older Adults

- Fit & Strong! is one evidence-based physical activity program for older adults that fulfills all recommendations
- Fit & Strong! is a theory-based program that enables participants to engage in the recommended amount of aerobic, strength, and flexibility exercises, and incorporates the constructs of social cognitive theory to facilitate behavior change (Bandura, 1977)
- Include education component geared to increasing self-efficacy

Fit & Strong! Program Components

WHO: Fit & Strong! is a program for older adults with lower extremity pain and stiffness taught by certified “Fit and Strong” instructors

WHAT: Eight-week program, with three 90-minute sessions per week

- First 60 Minutes: Physical activity
- Last 30 Minutes: Group discussion/problem-solving that provides educational content on maintaining healthy lifestyle choices

WHERE: Implemented and evaluated in community-based settings, i.e., senior centers, recreation facilities, health care clinics, independent living facilities

https://www.fitandstrong.org/

Fit & Strong!
Application

Currently:

- Offered in 11 States: AZ, IL, KS, MA, MI, MN, NC, NE, NV, SC, TN, and TX
- Bundling program with Matter of Balance and Chronic Disease Self-Management Programs (DSMP) in 6 states: AZ, IL, MA, MI, MN, and TX
  - The purpose of this bundling is to encourage participants to progress from one evidence-based program to another
- Being evaluated by Centers for Medicare and Medicaid Services (CMS) for Medicare reimbursement

Fit & Strong!
Lifestyle Change = Exercise + Education

- There is little benefit to simply telling people to exercise and teaching them how
- Need to motivate and empower
- Review what exercise means to them in context of their lives:
    - Prior experience
    - Concerns about safety
    - Facilitators and barriers
    - Problem solving

Fit & Strong!
Lifestyle Change = Exercise + Education

- The physical activity portion of the program begins at a relatively easy level and slowly becomes more challenging
- The 30-minute sessions target social cognitive theory constructs, including self-efficacy
  - Participants create physical activity goals, identify barriers, develop a plan for working around them, and are encouraged to identify a workout buddy, friend, or family member
- All of these factors together help increase the participant's self-efficacy for physical activity

Participant Adherence Contracts

- At week 6 of the 8-week program, the participant and instructor meet to develop a Negotiated Adherence Plan
- Each Negotiated Adherence Plan incorporates three types of exercises:
  - Flexibility
  - Aerobic
  - Strength
- Plan is a signed contract for post-Fit & Strong! maintenance

Fit & Strong!
Completed Research

- **Efficacy Trial:** Hughes SL, Seymour RB, Campbell R, Pollak N, Huber G, & Sharma L. (2004). Impact of the fit and strong intervention on older adults with osteoarthritis. *Gerontologist*, *44*(2), 217-228
- **Effectiveness Trial:** Hughes SL, Seymour RB, Campbell RT, Desai P, Huber G, & Chang HJ. (2010). Fit and Strong!: bolstering maintenance of physical activity among older adults with lower-extremity osteoarthritis. *Am J Health Behav*, *34*(6), 750-763
- **Dissemination Study:** Der Ananian C, Smith-Ray R, Meacham B, Shah A, & Hughes S. (2017). Translation of Fit & Strong! for use by Hispanics with arthritis: A feasibility trial of En Forma y Fuerte! *J Aging Phys Act*, 1-36

Fit & Strong!
Future Directions

Currently:

- Next steps are to expand internationally
  - Plans to implement in Portugal and Lithuania
  - Hispanic version of Fit and Strong! now available

(Der Ananian et al., 2017)

Culturally Designed Physical Activities

- To offer culturally specific programs, you should:
  - Target classes and programs toward older adults from similar cultural and linguistic backgrounds
  - Recruit an instructor who speaks the language, communicates well, and holds similar values as the older adults
  - Weave components of the culture, such as music or traditional dance, into the program

(Belza et al., 2004)

Culturally Designed Physical Activities

BAILAMOS

- Balance & Activity In Latinos Addressing Mobility in Older AdultS
- Age-appropriate physical activity for older Latinos
- Challenge physically and cognitively
- Enjoyable
- Not hard, boring, or tedious

UIC ENGAGE-IL
Enhancement of Geriatric Care for All

Culturally Designed Physical Activities

Tai Chi

- Ancient Chinese martial art of meditative movement designed to strengthen and stretch the body, improve the flow of blood and other fluids, improve balance, proprioception, and awareness of how the body moves through space; and it may be practiced in a group format or alone
- Tai Chi is effective for fall prevention, improving psychological health, improving cognitive capacity, and beneficial for osteoarthritis, Parkinson's disease, and chronic obstructive pulmonary disease

(Huston & McFarlane, 2016; Solloway et al., 2016)

Adaptable Physical Activities

Chair Yoga for Older Adults

- Chair yoga is a gentle form of yoga practiced sitting in a chair or standing while holding the chair for support
- Potential reduction in pain and disability among older adults with osteoarthritis
  - Decreases in pain and physical limitations
  - Improved pain level and physical function
  - Low-cost exercise program to prevent or reduce functional disability
  - May result in greater exercise adherence
  - Preferred by older persons because they feel safer in completing exercise while seated in a chair rather than standing

(Furtado et al., 2016; Park et al., 2014)

Assessment Question 4

The Fit & Strong! Program… (Select all that apply)

a) Helps participants set activity goals and make a plan

b) Begins at a hard level of physical activity

c) Incorporates the social cognitive theory, including self-efficacy

d) Encourages participants to engage in physical activity on their own

Assessment Question 4

The Fit & Strong! Program… (Select all that apply)

a) Helps participants set activity goals and make a plan (Correct Answer)

b) Begins at a hard level of physical activity

c) Incorporates the social cognitive theory, including self-efficacy (Correct Answer)

d) Encourages participants to engage in physical activity on their own

Summary

- There is substantial need for improving routine physical activity among older adults
- Regular physical activity participation is as important in old age as it is at any other point in life
- Exercise is not only safe for older adults, but expansive research evidence demonstrates that exercise improves a variety of health outcomes in late life
- Lack of adequate physical activity in older adults leads to several preventable adverse health outcomes

Summary

- Physical activity recommendations for older adults include:
    - Aerobic activity: Either 150 min/week of *moderate* or 75 minutes/week of *vigorous aerobic activity*
    - Strength training: 2 days a week that targets all major muscle groups
    - Flexibility and balance training exercises
- Many great resources are available to help your older patients meet physical activity guidelines
    - NIA's Go4Life
    - Fit & Strong! and other evidence-based programs for older adults

Resources: Ongoing Initiatives

- National Institute on Aging
  - https://go4life.nia.nih.gov/
- Exercise is Medicine
  - http://exerciseismedicine.org/
- American College of Sports Medicine (ACSM): Every Body Walk
  - http://everybodywalk.org/
- Free Walking Rx pads
  - http://www.exerciseismedicine.org/assets/page_documents/Complete%20HCP%20Action%20Guide.pdf

Resources

https://www.acl.gov/programs/strengthening-aging-and-disability-networks/aging-and-disability-evidence-based-programs Accessed June 28, 2017

http://www.cdc.gov/physicalactivity/basics/older_adults Accessed June 28, 2017

http://everybodywalk.org/ Accessed June 28, 2017

http://exerciseismedicine.org/ Accessed June 28, 2017

http://www.exerciseismedicine.org/assets/page_documents/Complete%20HCP%20Action%20Guide.pdf Accessed June 28, 2017

http://www.FitandStrong.org Accessed June 28, 2017

https://go4life.nia.nih.gov/ Accessed June 28, 2017

https://rtips.cancer.gov/rtips/index.do Accessed June 28, 2017

http://www.surgeongeneral.gov/library/calls/walking-and-walkable-communities/index.html Accessed June 28, 2017

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