



STAND UP! AND BE STRONG

PROGRAM INSTRUCTION MANUAL

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**MINNESOTA CHAPTER
AMERICAN PHYSICAL THERAPY ASSOCIATION
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**Cosponsored by the
MINNESOTA DEPARTMENT OF HUMAN SERVICES
www.dhs.state.mn.us
www.mnfallsprevention.org**



INTRODUCTION

Stand Up & Be Strong! was initiated by the Minnesota Chapter of the American Physical Therapy Association in collaboration with PrimeWest Health Services and MN Area Agencies on Aging. The program was made possible by a grant from the MN Department of Human Services Community Service/Service Development/System Change program.

Stand Up and Be Strong! has been created in response to the growing evidence that falling is a major cause of hospitalization and declining health in adults over the age of 65 years. The Centers for Disease Control, The Administration on Aging, The National Council On Aging, and The Minnesota Department of Human Services, among others, are moving forward to decrease the incidence of falls in older adults. Research has shown that physical activity is effective in improving balance and strength, two primary elements of strong stance. The Minnesota Chapter of the American Physical Therapy Association, (MN APTA), developed a program to screen adults for risk of falling and included an intervention strategy to prevent falling incidents in community dwelling adults.

Additional evidence has shown that a multifaceted program of falls prevention is most effective. When nine national programs were reviewed, it was found that addressing impaired balance and strength was often a strategy, but hosting intervention programs was cost prohibitive or inconvenient. Individuals were advised to increase their activity levels, but were not provided with screening or instructions to do so. Evidence has shown lower body strengthening to be a primary and effective tactic to decrease the incidence of falling. While strengthening is only one part of a multifaceted, comprehensive approach, it is a key ingredient to achieve and maintain safe and independent function. Please see the full text of the 2005 NCOA Falls Free Coalition guidelines at:

<http://www.healthyagingprograms.org/content.asp?sectionid=69&ElementID=220>.

MN APTA has applied the evidence presented in the literature and is collaborating with PrimeWest Health Services, Minnesota Area Agencies on Aging, County Public Health Departments and other community partners to foster this program of system change.

The intent of this program is to:

1. Enable individuals to assess their risk of falling due to lower body weakness.
2. Enable individuals to take action to decrease that risk or maintain a low risk level.
3. Create community-based systems where assessment and prevention of falls is routinely available to older adults.

RECRUITING PARTICIPANTS

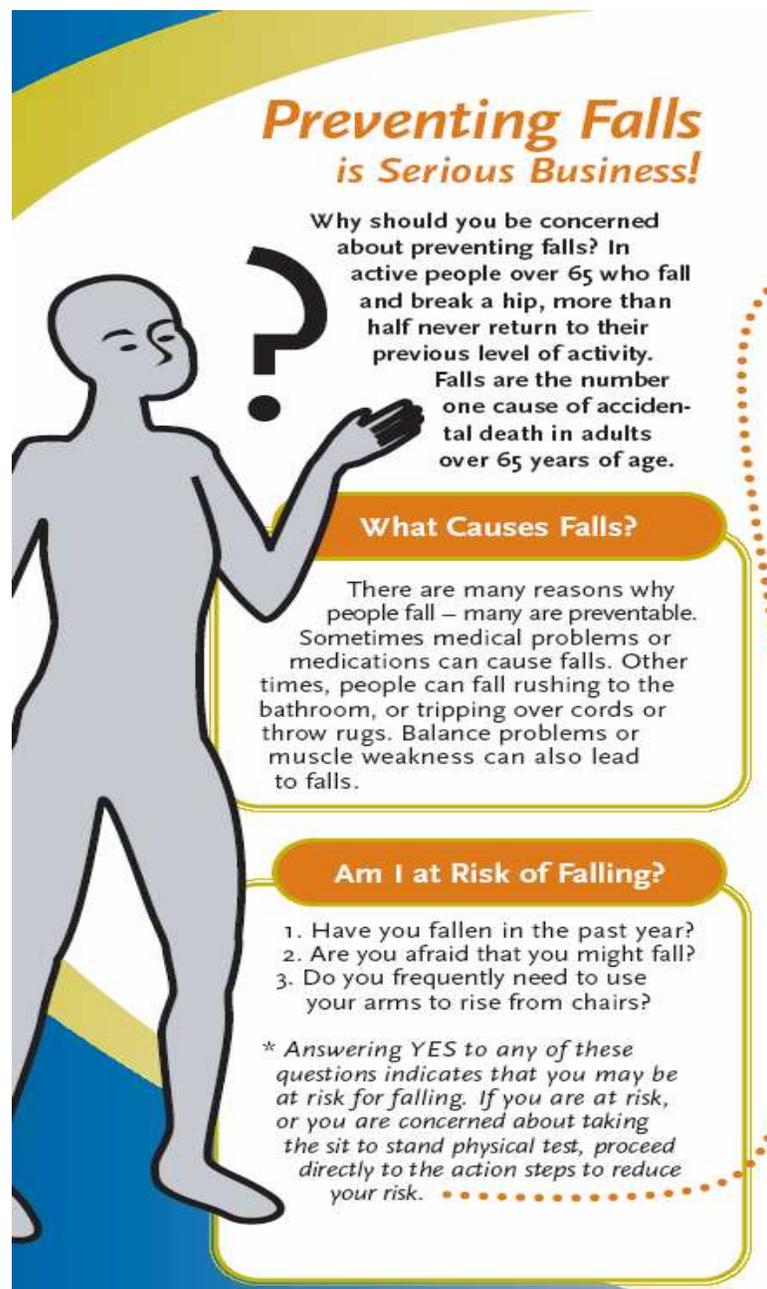
1. Identify your group of possible participants
 - Do you have groups that meet on specific days of the week?
 - If yes, plan to conduct the screening at the usual meeting time.
 - Ask the group how they would like to participate.
 - Are there individuals that will need individual screening due to other health or cognitive issues?
 - If yes, consider scheduling individual screenings at a time when the person is attending your program.
 - Plan to discuss the results with the individual without others present.
2. Advertise to your audience
 - Market the advantages of participating.
 - Reward the individuals by recognizing their participation.
 - Use potential examples of the results of a fall to emphasize the practicality and value of participation.
 - Schedule alternate dates of screening for those who cannot make it on first date.

****Initial screening and instruction in strengthening takes 30-45 minutes.***

3. Have individuals sign up for the testing
 - Record individual screening results after the test is completed.
 - Be sure to keep the information confidential.
4. Schedule screenings to reoccur every three months
 - Individuals should recheck their status 4 times per year
 - Note change in ability
 - Note risk level to determine action required to reduce the level of fall risk.
 - Follow up screenings take 15 – 20 minutes
5. Casually check in with participants between assessments to see if they are doing the strengthening exercises.
6. Do they notice a difference in their movement ability? Encourage continued exercise.
7. Use verbal rewards and testimonials to motivate participants to continue with screening and follow up actions.

PRESENTATION TO YOUR PARTICIPANTS

1. Set up the room for group or individual screening.
2. Gather individuals to be screened.
3. Begin with sharing the information on the first panel of the brochure:
 - Preventing Falls is Serious Business!
 - What Causes Falls?



STAND UP AND BE STRONG!

PHYSICAL THERAPIST TRAINER INSTRUCTIONS

1. Contact the Community Partners that you will be instructing. Arrange a time to explain the program to staff or volunteers of their organization. Aim to train at least two persons in each organization whenever possible.
2. Schedule an instruction time. This will take 1 to 1.5 hours, depending upon the organization's current level of awareness of issues related to falling.
3. Issue a Manual to each Community Partner. Issue two manuals if you feel that it would be beneficial to the project dissemination or the community partner will be screening in more than one setting.
4. NOTE THAT A PHYSICAL PRESCREEN WAS ADDED TO THE TOTAL EVENT. SEE COMMUNITY PARTNER INSTRUCTIONS FOR CONDUCTING THE SCREENING EVENT.
5. During instruction, **be sure to actually administer the complete screen to the trainees.** This includes the questions, the physical prescreen, and discussing the risk levels.. Reinforce collection of the prepaid mailer and mailing to MN APTA for data collection.

If the participant answered, "Yes" to all questions, they may be at high risk and do not need to complete the physical portion of the screening test. They should proceed to the action page of the brochure as **moderate to high risk.**

Physical prescreen:

Instruct participants to sit in the chair and place their arms across their chest.

Ask them to rise from the chair without using their arms. If unable to do this, they should progress to the action page of the brochure at the moderate to high risk level.

6. Issue brochures to the Community Partner. Issue approximately two times the number they think they will need for two months. They will be able to print or order more from www.mnapta.org.
7. Instruct the Community Partner to collect the return mailers and send them to MN APTA. They may be mailed individually or in a large envelope.
8. Explain the process of interpreting the risk levels.
9. Instruct Community Partners in the strengthening exercises. Be sure to make them aware of the options such as elevating the seat height or using your arms for the exercise.
10. **If the Community Partner has or is planning an exercise program, ask them to add the two lower body strengthening exercises to their program.**

STAND UP AND BE STRONG! SCREENING INSTRUCTIONS

1. You will need:
 - A straight-backed chair for each participant, (no swivel or wheels)
 - A stopwatch or clock with second hand
 - A brochure for each participant
2. Set chairs against a wall or other location that will prevent them from sliding.
3. Distribute a brochure to each participant.
4. Ask participants to sit in a chair.
5. Ask the following interview questions as they are listed in the brochure:
 - a. Have you fallen in the past year? YES NO
 - b. Are you afraid that you might fall? YES NO
 - c. Do you frequently require the use of your hands to rise from a chair? YES NO

* **YES to any of the above questions places the individual at risk for falling. This individual should then determine if they feel safe to perform the physical test of lower body strength or whether they should see their physician or physical therapist to receive specific instruction to remediate their risk.**

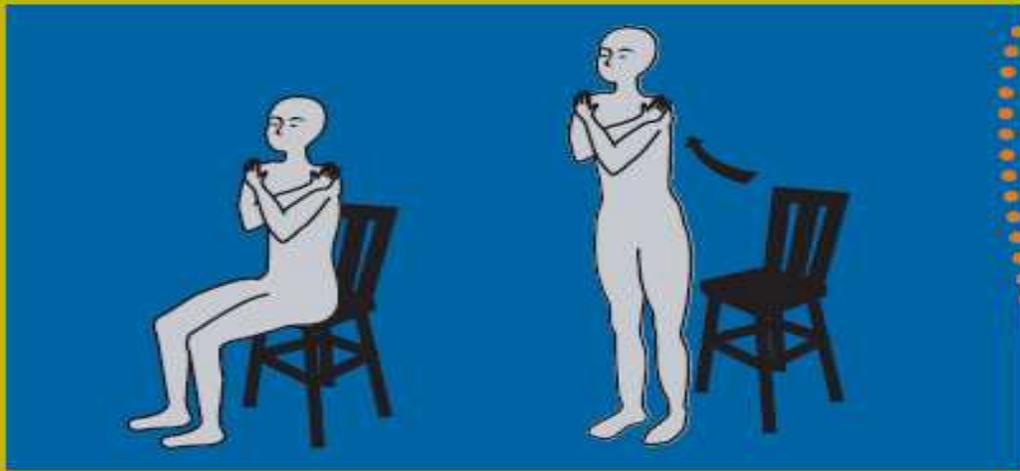
7. Perform a physical prescreen:

- Instruct participants to sit in the chair and place their arms across their chest.
- Instruct them to rise from the chair without using their arms.
- If an individual cannot rise without using their arms, they should progress to the action page of the brochure as high risk. Their score is '0.'

8. Physical test: Timed Sit to Stand

- Instruct participants to sit in chair and fold their arms across their chest.
- Inform them that you will time them for thirty seconds.
- They are to stand up completely and sit down completely as many times as they can, safely, in thirty seconds.
 - Start at the word "Go!"
 - Stop at the end of 30 seconds
- If they are on the way up when you say stop, this counts as one.

Take This Test to Determine Your Risk of Falling



For this test you will need:

- A straight-backed chair
- A stopwatch or clock with a second hand

What to do:

- 1** Sit in the middle of the chair with your feet flat on the floor and your arms folded across your chest
- 2** Time yourself or have someone else time you doing the following:
- 3** Rise to a full stand and return to a complete sitting position. Repeat as many times as you are able in 30 seconds. If you are on your way up when time is up, count that as one. Check the appropriate box on the next page.

ASSESSING FALL RISK/ACTION STEPS

1. Assess individual risk levels and refer to brochure for action guidelines.
2. Remember, if they answered YES to any of the 3 questions they were asked in the beginning, they should be considered at moderate to high risk of falling.

Risk levels:

High: 8 or less repetitions of sit to stand in 30 seconds

Moderate: 9-12 repetitions in 30 seconds

Low: 13 or higher repetitions in 30 seconds

3. “What action do I take in response to my risk level?”

High risk: consult your doctor or physical therapist regarding an exercise program to reduce your risk level. Attempt the exercises only if you feel that it is safe for you.

Moderate risk: Determine if you are able to perform the recommended exercises to reduce your risk. If you feel that you cannot do them at the present time, consult your doctor or physical therapist.

Low risk: Perform the exercises listed in the brochure to maintain your low risk of falling. If you feel that you cannot perform these exercises, consult with your doctor or physical therapist to develop a specific program for you.

Record Your Fall Risk Score

- 8 or less times = **High Risk**
- 9 to 12 times = **Moderate Risk**
- 13 or more times = **Low Risk**

Based upon Your Risk Level,
Take the Following Steps to
Reduce Your Risk of Falling

HIGH RISK Consult your doctor or physical therapist for advice & instruction to improve your strength. Do the exercises in this brochure only if you feel safe doing them on your own.

MODERATE RISK Do the exercises in this brochure. Seek assistance from your doctor or physical therapist if you have difficulty doing the exercises on your own.

LOW RISK Do the exercises in this brochure to keep your risk low!

Reassess your risk level every three months to keep track of your progress.

EXERCISE INSTRUCTION

It is essential that the exercises be performed **VERY SLOWLY** to maximize the strengthening potential. As the individual gains strength, it will become easier to perform the exercise.

Sit to Stand:

Provide instruction as described in brochure. See next page for graphics.

Additional strategies:

1. Start at lower repetition level and gradually increase by one repetition per day working up to 20 total repetitions.
2. Use your arms as needed when you start. Progress to using no hands as you get stronger.
3. Raise the seat height if you have difficulty. You may use a cushion or high-density upholstery foam to raise the seat height by 3-4 inches. When you can perform the activity easily, lower the seat height by 1-2 inch increments over several weeks until you are at standard seat height.

Standing Side Hip Raise:

Provide instruction as described in brochure. See next page for graphics.

Additional strategies:

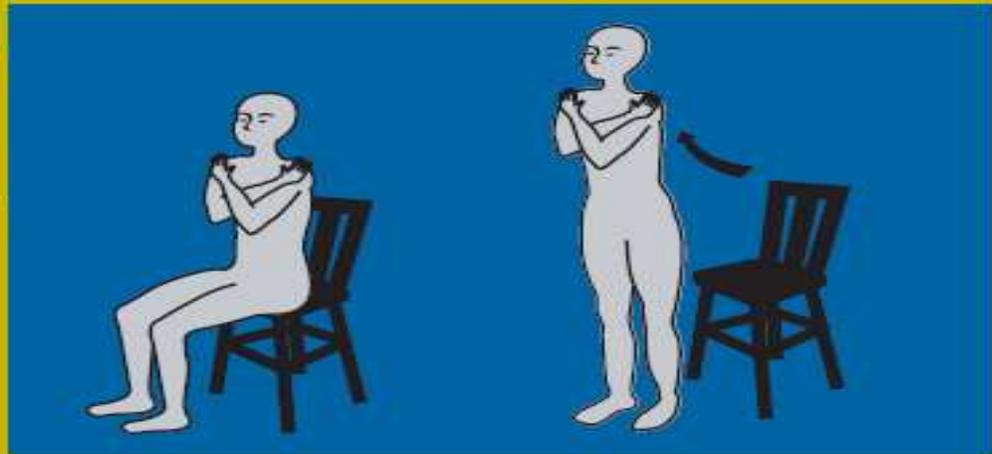
1. The leg being strengthened is the one bearing your weight.
2. Make sure that you do not lock the knee of the leg you are standing on.
3. Try holding on at the kitchen sink or counter for convenient support.
4. Place a chair behind you to sit on if you become tired.
5. As you become stronger, gradually decrease support during exercise to one hand, then fingers of one hand, then one finger for support.

Additional suggestions:

1. Try not to advise the participant, but ask them what they feel that they are able to do safely. If they have concerns, recommend that they discuss the issue with their health care provider or physical therapist.
2. **If your agency conducts an exercise program, be sure to add the sit to stand and side hip raise exercises to your program.**

SIT TO STAND

A great exercise for strengthening thighs & buttocks.
Do three to five times each week.



- 1** Sit in a straight back chair with your feet shoulder-width apart. Count to four as you SLOWLY rise up to a standing position.

** If this exercise is too difficult, start by using your hands for support. Using your hands will still build your strength.*

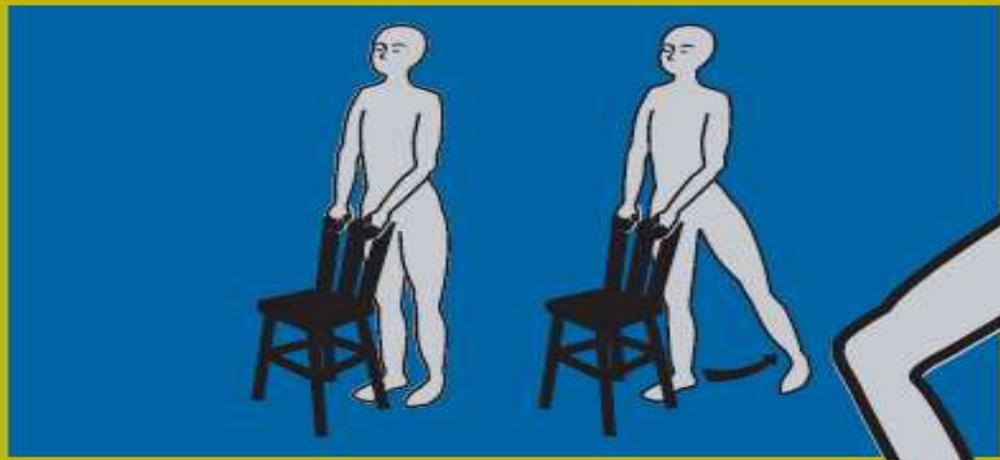
- 2** Pause. SLOWLY lower yourself towards the chair as you bend your knees to the count of four.

- 3** Repeat 10 times. Rest for one minute. Complete a second set of 10. If this is too difficult, start at a lower number and build up to 10.

** Note: If you can't sit all the way down, or, if you feel pain or discomfort, place a cushion on the chair or squat down only four to six inches.*

SIDE HIP RAISE

The side hip raise targets the muscles of your hips and thighs.
Do three to five times each week.



- 1 Stand behind a sturdy chair with feet slightly apart and toes facing forward. Keep your legs straight. Place both hands on the back of the chair for support.
- 2 SLOWLY lift your left leg out to the side as you count to four. Keep your leg straight. (Only a small amount of movement is necessary).
- 3 Pause. Then, SLOWLY lower your left foot back to the ground to the count of four.
- 4 Repeat 10 times with the left leg and 10 times with the right leg. Rest for 1 minute. Complete a second set of 10 repetitions with each leg.

** Note: As you become stronger, you can further increase your strength by holding on to the chair with only one hand. Progress to one finger support as you are able.*

REFERENCES & RESOURCES

1. National Council on Aging. (2005). Falls Free: Promoting a National Falls Prevention Action Plan: Overview of the Falls Free Summit Planning Process. Washington D.C., author unknown.
2. Falls Free Plan from NCOA
<http://www.healthyagingprograms.org/content.asp?sectionid=69&ElementID=220>
3. Rikli, Roberta E., and Jones, C. Jessie 1999. Development and Validation of the Functional Fitness Test for Community-Residing Older Adults. Fullerton: Human Kinetics.
4. Rose, Debra J., 2005., The Roles of Exercising in Reducing Falls and Falls-Related Injuries in Older Adults. Fullerton: California State University
5. Ng, Dennis, PT., 2005, July,. Revisiting the Roles of Exercise in Falls Prevention Among Older Adults: A Review of Recent Evidence. *Gerinotes*: volume 12, No. 4, pg.7-9)
6. WCCO- TV if author unknown., (year, month). Minnesota Department of Health: Seniors' Fatal Fall Double National Average. Retrieved on 2006, February 21.,from www.wcco.com/local/local_story_036142935.html.
7. Rikli, Roberta E., and Jones, C. Jessie (2001). Senior Fitness Test Manual. Champaign: Human Kinetics. www.humankinetics.com

Online Resources

National Council on the Aging
www.ncoa.org

Administration on Aging (AoA)
www.aoa.gov

YOU CAN! from AoA
<http://www.aoa.gov/youcan/about/about.asp>

Health Promotion programs from AoA
<http://www.aoa.gov/prof/aoaprogram/healthpromotion/healthpromo.asp>

Minnesota Chapter
American Physical Therapy Association
www.mnapta.org

American Physical Therapy Association
www.apta.org

American Physical Therapy Association
Section on Geriatrics
www.geriaticspt.org

The Center for Healthy Aging
www.healthyagingprograms.org

Home safety information
<http://www.stopfalls.org/basics.shtml>

Minnesota Safety Council
(Family & Community → Falls)
<http://www.minnesotasafetycouncil.org/family/falls.cfm?L1=70&L2=282>

Minnesota Board on Aging
www.mnfallsprevention.org