# Integrated BALANCE

YOUR GUIDE TO BALANCE & FALL PREVENTION



#### INFO

#### MEET THE BALANCE TEAM

#### **GRANT FUNDING**

Michigan Health Endowment Fund: mihealthfund.org

#### **GRANT DIRECTOR**

Judith Vander Woude, PhD,
CCC-SLP
Calvin University
Speech Pathology & Audiology

#### **DATA ANALYSIS**

Tex Bryant, MA
Bryant Healthcare
Solutions

#### **BALANCE INSTRUCTORS**

Emily Champion, MA
CCC-SLP
Katie DeVries, MA, CCC-SLP
Dawn Frambes, RN
Holly Grieves, OTD, OTRL
Stacia Hoeksema, LMSW
Marie-Louise Merkx-Quinn,
PT, DPT, OCS, DIP MDT, CEEAA
Meredith Mockabee, LMSW
Steve VanderKamp, PT

#### ADMINISTRATIVE STAFF, EDITOR & DESIGN

Emily Vedra

Calvin University

#### **PRINTING**

Calvin University Printing Services: https://calvin. edu/offices-services/ printing-services/



#### **DONALD TEX BRYANT**

Tex is the owner of Bryant's Healthcare Solutions, a business that provides data analytics services to its clients as well as quality improvement services.



#### **EMILY CHAMPION, MA, CCC-SLP**

Emily is a Speech-Language Pathologist who has worked with adult clients over the past decade to reach their goals across the hospital, home and community settings.



#### DAWN FRAMBES, PhD, RN

Dawn is a Registered Nurse and Assistant Professor of Nursing at Calvin University.



#### HOLLY GRIEVES, OTD, OTRL

Holly is an Occupational Therapist and Faculty Clinical Specialist in the Department of Occupational Therapy at Western Michigan University.



#### STACIA HOEKSEMA, LMSW

Stacia is a licensed social worker and assistant professor of social work at Calvin University.



#### MARIE-LOUISE MERKX-QUINN, PT, DPT, OCS, DIP MDT, CEEAA

Marie-Louise is a Physical Therapist and Adjunct Faculty member in the Departments of Doctor of Physical Therapy at Western Michigan University and the College of Saint Scholastica, Duluth, MN.



#### CARA RASMUSSEN, AuD, CCC-A

Cara is a licensed Clinical Audiologist with a passion for providing patient-centered care and education to all ages, from pediatrics to older adults.

#### MESSAGE FROM THE DIRECTOR



#### UNPRECEDENTED TIMES

Even a global pandemic can't stop the desire to educate and encourage seniors to improve balance and reduce risk of falls

Judith Vander Woude, Ph.D, CCC-SLP

t was late on a Wednesday evening when our university made the decision to discontinue all on- campus classes and programming at the end of the week. The first thing we thought of was the group of senior citizens we had coming to campus the next day for our balance classes which were part of our fall prevention program. The group was deeply committed to the program and would be disappointed to hear of the cancellation. We were glad we would be able to give them the news in person.

Of course the group was understanding and in

hindsight, the decision
to cancel was absolutely
correct, but over the next
week we couldn't get the
balance program off our
minds. Despite the circumstances all around us, the
need to serve the elderly and
encourage them to improve
their balance remained. If
we couldn't meet in person,
was there another way to
get them the research and
instruction that we had
compiled?

Out of those challenging circumstances and the wealth of material we have compiled for our balance classes, this magazine was born. Thanks to the Michigan Health Endowment Fund
- Healthy Aging grant and
our wonderful instructors,
we are able to offer this
resource to our community.
No matter the circumstances,
we can encourage and equip
our seniors to improve
balance and reduce the risk
of falling.

In this time, it is particularly important to stay active to reduce risk of falling, strengthen the immune system, and improve overall quality of life. Exercising at home can be just as safe and effective as a group setting, and we hope you will find ways to improve your balance and decrease risk of falling!

#### **BALANCE PARTNERS**

# ASSOCIATION FOR THE BLIND & VISUALLY IMPAIRED



WESTERN MICHIGAN UNIVERSITY





The Source for Seniors

Our Balance Program was made possible through a generous grant by the Michigan Health Endowment Fund (mihealthfund.org)

#### **CONTENTS**







# 3 UNPRECEDENTED TIMES

A message from our director during the COVID-19 pandemic.

#### 5 TWENTY GOOD REASONS TO EXERCISE

#### 6 BALANCE PROGRAM DOES WORK

Check out the latest data on our balance prgram.

# 8 WHAT IS YOUR FALL RISK?

Know your risk for falls and why it is important to take action.

#### 10 YOUR SAMPLE BALANCE ASSESSMENT

A snapshot of the initial assessment offered in our balance program.

# 13 THE HEARING CONNECTION

Your hearing health is connected to balance and fall risk.

#### 16 HIDDEN FACTORS

Health conditions that contribute to risk of falling.

# 20 THE MEDICATION QUESTION

Find out if your medication is contributing to a risk of falls.

## 24 DEPRESSION IN OLDER ADULTS

Depression can be a hidden fall risk.

#### 28 COGNITIVE CHANGES WITH AGE

Each area of cognition is impacted in different ways.

#### 31 COGNITIVE STRATEGIES FOR MANAGING CHANGE

Strategies to manage each obstacle you may be experiencing.

# 37 DEVELOPING YOUR BRAIN WORKOUT

Suggestings to stimulate thinking skills.

# 39 SAFETY TIPS TO PREVENT FALLS

You can help prevent common causes of falls found in the environment around you.

# 40 SIMPLE SOLUTION TO PREVENT FALLS

Use the AARP's HomeFit Guide to self-evaluate your home environment.





#### 42 SELF-REFLECTION: FALL PREPAREDNESS

# 43 EXERCISE & BALANCE

The key to successful aging is exercise.

# 45 GUIDELINES FOR EXERCISE

The key to exercise programs: challenge, safety, effectiveness.

# 47 HOW TO GET UP

There are safer ways to get up after a fall.

#### 49 HELP A LOVED ONE GET UP AFTER A FALL

Steps to help a loved one get up afer a fall.

#### **20 REASONS TO EXERCISE**

- Control your weight.
- 2 Increase your chances of living longer.
- 3 Lower your risk of heart disease.
- 4 Strengthen your immune system so you'll get sick less often.
- 5 Lower your risk for diabetes.
- 6 Improve your mood and decrease depression.

# Decrease your risk of falls.

- 8 Lower your risk of cancer, including breast cancer and colon cancer.
- 9 Increase your energy and endurance.
- 10 Reduce pain.
- 11 Improve your memory and reduce risk of Alzheimer's disease.

- 12 Strengthen your bones and muscles.
- 13 Decrease your medical costs and need for medications.
- 14 Help you to stay flexible and limber.
- 15 Decrease your bad cholesterol (LDL) and increase your good cholesterol (HDL).
- 16 Reduce inflammation.
- 17 Look better and younger.
- 18 Decrease your blood pressure.
- 19 Reduce stress.
- 20 Help you maintain independence.

#### SOURCE

Clark, F., Blanchard, J., Sleight, A., Cogan, A., Florindez, L, Gleason, S., Heymann, R., Hill, V., Holden, A., Murphy, M., Proffitt, R., Schepens Niemiec, S., Vigen, C. (2015). *Lifestyle redesign: The intervention tested in USC well elderly studies* (2nd Ed.). Bethesda, MD: AOTA Press.

#### BALANCE PROGRAM DATA



# BALANCE PROGRAM DOES WORK

The data continues to show the effectiveness of balance programs

Donald Tex Bryant, Bryant Healthcare Solutions

ou've heard of balance programs, but how do you know they actually work? Why put in the effort to improve balance and reduce risk of falls if it doesn't pay off? Well, we've been tracking the progress of our participants for several years, and we have results!

The primary tool used to measure the improvement of participants is the Berg Balance Scale. It is a qualitative measure that assesses balance by performing functional activities such as reaching, bending, transferring, and standing that incorporates most components of postural control: sitting and transferring safely between chairs; standing with feet apart, feet together, in single-leg stance, reaching and stooping down to pick something off the floor. Each item is scored along a 5-point scale, ranging from 0 to 4, each

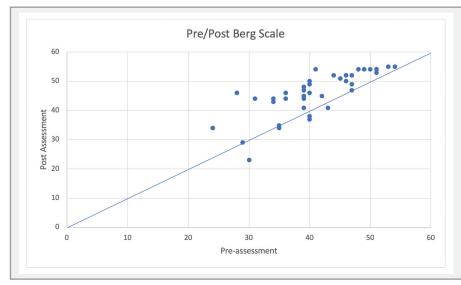
grade with well-established criteria. Zero indicates the lowest level of function and 4 the highest level of function. The total score ranges from 0 to 56. The total score is interpreted as follows:

- 41-56 = low fall risk
- 21-40 = medium fall risk
- 0-20 = high fall risk

The Berg Balance Scale assessment was given to each client before the 8 classes begin and again at the end of the 8 classes by a physical therapist. Thus, each client who participates in both assessments has a before and after score.

Analysis of the Berg Balance Scale at the pre- and postscreening indicated that most participants showed significant improvement.

Points above the line (y = x) indicate clients who made improvements; the further above the line the greater the improvement. Likewise, those below the line showed a decrease in Berg Balance score from pre assessment to post assessment. Points close to the line showed no significant change. Almost all of the scores were above the line. At most, one client could be judged to have made a significant decline.



## Most clients showed significant improvement.

Another result to note in the graph is clients with the lowest pre-assessment scores made some of the biggest gains. Those with pre-assessment scores of 50 or above did not make much gain as there was little room to improve their scores. However, all of those who scored 44 or above at pre-assessment maintained or slightly improved the Balance Score.

Using statistical tests, we could conclude that there was a significant improvement of the clients from preassessment to post assessment. Another way to look at results of the Berg Balance Score assessments is to look at the average (mean) of the 41 scores at pre-assessment and post assessment. If there was an improvement in the mean at post assessment, then we could conclude that the class overall improved. The average at pre-assessment was 41.15 and at post assessment 46.10. Using statistical tests we can conclude that there was a significant improvement of the clients from pre-assessment to post assessment.

What should one conclude from this data? The clients overall significantly reduced their risk of falling by following the exercises given by the physical therapist in each of the classes. This was achieved in an 8-week period. Thus, by following the exercises described in this booklet, you may experience similar results, and significantly reduce your risk of falling.

Many studies have shown that exercising 150 or more minutes a week reduces seniors' risk of falling as well as reducing the risk of other diseases, such as diabetes and coronary failure. Data was also collected at 6

Data was also collected at 6 months after the classes are finished. One of the questions asked then is if the client had continued with exercises. How many did? 78.6%. Thus, those who participated in the classes found the exercises very beneficial and continued them.

Clients also were asked in an anonymous survey at the completion of the 8 weeks of classes about their satisfaction with the exercises and in-class instruction. Some results are in the tables below. Note, there are more than the 41 who completed the Berg Balance Score

assessment because not all of the clients completed the Berg at both assessment periods but did fill out the satisfaction survey.

#### SATISFACTION SURVEY RESULTS

1. On a scale of 1 to 7, with 1 being 'Very Poor' and 7 being 'Very Good,' how would you rate the quality of the fall prevention program?

		Valid
	Frequency	Percent
2	0	0.0%
3	0	0.0%
4	0	0.0%
5	2	2.9%
6	6	8.6%
7	62	88.5%
Total	70	100.0%

Mean: 6.86

Standard deviation: 0.423

2. Would you recommend the Balance Program to others?

		Valid
	Frequency	Percent
Yes	70	97.2%
No	2	2.8%
Total	72	100.0%

is the gold standard of any business or enterprise. The vast majority would recommend this program, which is an excellent achievement.

Our data showed that the participants in the classes were very happy with the results and found that it improved the quality of their life by reducing their chance of falling. You, too, can achieve similar results by following the instructions in this magazine.

#### **BALANCE PROGRAM INTRODUCTION**

#### WHAT IS YOUR FALL RISK?

Know your risk for falls and why it is important to take action.

Every 20 minutes, an older adult dies from a fall.

Each year, 3 million older people are treated in emergency departments for fall injuries.





One of the biggest fears older adults have is the fear of falling. And with good reason - each year millions of older people suffer a fall. The Centers for Disease Control and Prevention (CDC) reports that one in four older people fall each year.

### FALLS ARE SERIOUS AND EXPENSIVE

Most older adults

understand that having a fall would not be good for their health and well-being, but do you know the following facts from the CDC?

- Every 20 minutes, an older adult dies from a fall.
- One out of five falls causes a serious injury such as broken bones or a head injury.
- Each year, 3 million older people are

- treated in emergency departments for fall injuries.
- Over 800,000 patients

   a year are hospitalized
   because of a fall injury.
- Each year at least
   300,000 older people
   are hospitalized for hip
   fractures. More than
   95% of hip fractures
   are caused by falling.
- In 2015, the total medical costs for falls

totaled more than \$50 billion.

#### **KNOW THE RISK**

Much research is available about factors that can contribute to the risk of falling. Those risk factors include:

- Age: adults over the age of 60 are at risk for falling. The risk increases with each decade of age.
- Fall history: having fallen previouly increases the risk of falling again.
- Incontinence: having to rush to the bathroom, especially at night, increases your chance of falling.
- Medications: side effects of certain

- medications increase the risk of falling (see Nursing article in this magazine on page 20).
- Lower body weakness: unsteadiness and
  needing support while
  walking or to stand are
  signs of poor balance
  that increase the
  chance of falling.

## WHAT YOU CAN DO TO PREVENT FALLS

Many of the strategies you can do to prevent falls are highlighted in this magazine.

Knowledge is power.

Know the risk factors so that you can be proactive about your health.

- 2 Make steps to improve your health. As you will find in this magazine, steps include health in body and strength, but also mental and spiritual health.
- 3 Make your home safer. In the occupational therapy section of this magazine, we will detail many ideas for home safety.
- 4 Talk with your health provider(s). Having open conversations about your risk factors can lead to solutions and also less fear and anxiety over falling and other health issues.

# RESOURCE HIGHLIGHT: CENTERS FOR DISEASE CONTROL AND PREVENTION STEADI PROGRAM WEBSITE

The CDC developed the **STEADI** (Stopping Elderly Accidents, Deaths & Injuries) initiative to encourage and educate for fall prevention for older adults. On the STEADI website you will find screening tools, educational materials and resources.

STEADI consists of three core elements:

- Screen patients for fall risk
- Assess modifiable risk factors, and
- Intervene to reduce risk by using effective clinical and community strategies.

Combined, these elements can have a

substantial impact on reducing falls, improving health outcomes, and reducing healthcare expenditures.

Recommended resources include:

- Stay Independent brochure
- What You Can Do to Prevent Falls brochure
- Postural Hypertension: What It Is and How to Manage It brochure
- Check for Safety brochure

Find out more about the STEADI program and free resources on their website: www.cdc.gov/steadi/index.html

#### **BALANCE PROGRAM ASSESSMENT**

# YOUR SAMPLE BALANCE ASSESSMENT

A snapshot of the initial assessment offered in our balance program

Initial Assessment day of the balance program was always a busy and exciting day that brought together a number of healthcare providers and therapists to offer health screenings to participants who were planning to take balance classes. Under the current circumstances, getting 40 participants together to do health screenings is not advisable, so a summary of all the assessments is included here. Please contact your healthcare provider to participate in any of these tests!

Personal Health & Ouality of Life Assessment: Two questionaires allow participants to gauge their own quality of life and risk of falling. One test is called the 36-Item Short Form Survey (SF-36) developed by RAND Health Care. Questions include a personal assessment of general health (excellent down to poor), whether certain activities like walking, lifting, or climbing stairs are limited due to one's physical condition, and finally, questions about emotional health. A second personal assessment is the Activities-Specific **Balance Confidence Scale** (ABC). The participant rates his or her confidence in performing certain tasks, such

as walking on an icy parking lot, bending over to pick something up, or placing something on a high shelf. Both of these assessments are readily available online; just search by test name!

Nursing Assessment: The initial assessment includes a consultation with a nurse. Because risk of falling increases with certain health conditions, the nurse does a basic health screening including blood pressure, glucose test, and reviewing medications. One test the nurse may use is called the Johns Hopkins Fall Risk Assessment Tool. It assesses the risk of falling using the following categories: age, fall history, elimination,

medications, patient care equipment, mobility, and cognition. To find out more about health factors contributing to the risk of falling, see the Nursing section of this magazine on pages 16-23 and discuss these factors with your doctor.

Occupational Therapy: At the occupational therapy station, using tests called the Patient-Reported
Outcomes Measurement
Information Systems
(PROMIS) Physical Function
Form and Fall Efficacy
Scale, participants review whether they have difficulty performing certain physical functions, such as vacuuming, dressing, or showering.
The Occupational Therapists

also test participants' hand **Grip Strength**, because weakness in this area can be an indicator of overall fragility and risk of falling. You can find out more about Occupational Therapy in that section on pages 39-42.

Cognition: During the initial balance assessment, speech pathologists administer the Montreal Cognitive Assessment (MoCA), which is a brief test used to detect cognitive impairments early on. Because walking and balance take a good amount of cognitive power, it is important to assess cognition when determining risk of falls. The Speech Therapy section on pages 28-38 gives an amazing amount of information about cognitive change and ways to exercise your brain. Doing so will not only help improve your risk

of falls, but open up other opportunites to improve quality of life.

Hearing Screening: A basic hearing screening is performed during a balance assessment. Hearing loss as well as other ear conditions (e.g. vertigo, inner ear conditions) can have an impact on balance and risk of falling. Find out more about hearing and balance on pages 13-14.

Vision Screening: It is important to have your vision checked annually. A good screening will test for pressure and acuity. Poor vision can increase your chance of falling and there are corrective measures that can be done to improve your vision. See your eye doctor for more information. Another great resource for vision help is the Association for the Blind

& Visually Impaired (www. abvimichigan.org).

Social Work: One of the hidden factors of balance and risk of falling is mental health. Research shows a connection between depression and fall risk. Using the Geriatric Depression Scale (GDS), social workers screen the participants for basic indicators of emotional health. They also use a test called the Caregiver Burden Scale to discuss the pressures associated with taking care of a loved one with Alzheimer's disease or related disorders. To find out more about the connection between mental health and fall risk, see the Social Work section on pages 24-27.

Physical Therapy: Physical therapists assess participants' physical risk of falling. One common test is the Berg Balance Scale. Using a ruler, 2 standard chairs, a footstool or step, and a stop watch, physical therapists measure the participants' ability to perform funtions such as standing with one foot in front of the other. retrieving an object from the floor, and turning 360 degrees. Participants' need for support and the amount of time the task takes can affect the BERG scale scores.





A second test physical therapists use to assess risk of falling is called **Timed Up** and **Go** (**TUG**). The TUG uses the time that a person takes to rise from a chair, walk three meters, turn around, walk back to the chair, and sit down to measure risk of falling. To find out more about Physical Therapy and how it can help improve balance, see pages 43-49.

Conclusion: There are many tests used to measure balance and risk of falling. If you are interested in learning more, contact your healthcare professionals. The more you know about your risk factors, the better you can prepare and minimize your risk for falling.

#### YOUR BALANCE ASSESSMENT CHECKLIST:

# Personal Health & Quality of Life Assessment

- 36-Item Short Form Survey (SF-36)
- Activities-Specific Balance Confidence Scale (ABC)

#### **Nursing Assessment**

- Basic Health
   Screening
- Medication Review
- Johns Hopkins Fall
   Risk Assessment Tool

#### Occupational Therapy

- · Falls Efficacy Scale
- Physical Function Form
- Grip Strength Test

#### Cognition

 Montreal Cognitive Assessment Test

#### **Hearing Screening**

 Get your hearing screened or a full hearing assessment from a certified audiologist

#### **Vision Screening**

 Vision Screening including pressure and acuity

#### Social Work

- Geriatric Depression
   Scale
- Caregiver Burden Scale

#### **Physical Therapy**

- BERG Balance Scale
- Timed Up and Go

# THE HEARING CONNECTION

Your hearing health is connected to balance & fall Risk

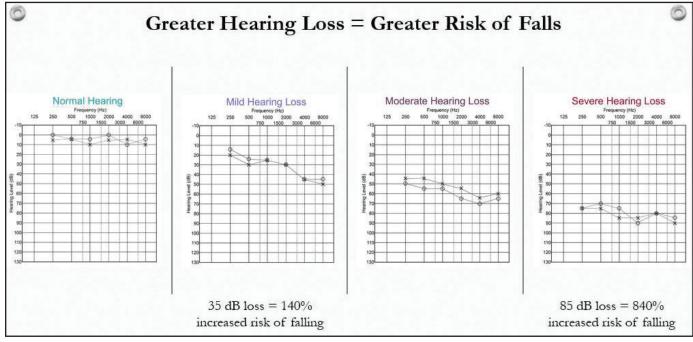
Cara Rasmussen, AuD, CCC-A

Did you know that your ears do more than just provide you with the ability to hear? Your ears also help control and maintain your sense of balance! It may seem crazy, but both of these things are related.

According to the World Health Organization (WHO) falls are the *second* leading cause of accidental injury deaths worldwide, and adults over the age of 65 suffer the greatest number of fatal falls. The Centers for Disease Control (CDC) puts hearing loss as the 3rd most chronic physical condition in people over the age of 65, with over 450 million people worldwide having some degree of hearing loss that is

considered "disabling".

Statistics consistently show that increases in age typically result in increased hearing loss. Statistics also show that as severity of hearing loss increases (as is common with an aging auditory system) so does the risk of losing balance and falling.



The above graphs are called audiograms. They are graphs audiologists use to chart a person's hearing from low pitches to high pitches (left to right on each graph) and from soft sounds to loud sounds (top to bottom of each graph). Hearing that is considered to be "within normal limits" where all speech sounds are audible and no hearing aids are needed is represented in the first graph (far left) with increasing hearing loss levels represented with each additional graph to the right of that first graph.

Let's find out why increased degrees of hearing loss are linked to increased risk of falls:

Compromised

Awareness: Difficulty
hearing reduces a person's
spatial and environmental
awareness – making tripping
and falling more likely.

Think about those grandchildren or children and animals

in that space (grocery carts at grocery store, cars or people approaching when out for a walk, appliance noises, garage or other house doors opening and closing, water running, etc).

Think about how reduced hearing reduces your ability to hear your own footsteps (clear intentional steps versus shuffling feet).

to difficulty maintaining balance.

2 Cognitive Load: People with unidentified, untreated, or under-treated hearing loss are forced to use more of their mental resources to hear and understand conversations as opposed to someone without hearing loss. We often forget just how cognitively demanding it is for the brain and body



# Hearing provides your brain with information. Your brain *loves* information! Your brain *needs* information!

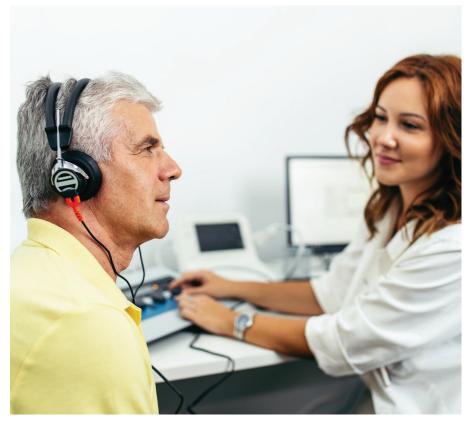
running around at your feet.

Think about all of those sounds within your environment that help to define your space and your position Without this important information it is more difficult to navigate life, particularly if you are tired, weak, or have other medical conditions that could potentially contribute

to maintain balance and coordinated gait. Something will give eventually – the brain quite simply cannot operate on overload for extended amounts of time, thereby putting people with hearing loss at increased risk of balance problems and falls.

3 Ear Anatomy: The part of the ear that helps the body to maintain balance is the vestibular system, which is housed in the same bony structure as the hearing end organ (cochlea).

The peripheral vestibular system and the cochlea share the same physical location in the body – all hearing and balance information is routed to the brain



by a SHARED cranial nerve, the vestibulocochlear nerve (cranial nerve VIII).

It is possible that a problem in one of those two systems (hearing or balance) can result in a problem in the other, which is why if you report a balance or vestibular problem a hearing test is nearly always completed to make sure the correct diagnosis is achieved and to help further define the plan of care for you. Although less common, sometimes if a hearing problem is diagnosed, balance testing will be completed.

#### 4 Social Isolation:

Another mechanism that may lead indirectly to falls is social isolation. Social isolation (or social withdrawal) is often driven by hearing loss. Due to difficulty hearing others and keeping up with conversations, older adults may decide it is easier to stay home and not engage with others anymore. This may cause decreased activity and deconditioning of the body. This deconditioning, where a person loses strength or muscle tone, may increase imbalance and fall risk.

# Protect yourself from the consequences of unaddressed hearing loss

# UNTREATED & UNDERTREATED HEARING LOSS: WHY DOES IT MATTER AND WHAT CAN YOU DO?

The WHO estimates that only 17% of people with hearing loss have an active hearing loss treatment plan in place and that unaddressed hearing loss has an economic impact of 750 billion dollars annually. These are not fabulous statistics considering that the following consequences of UN-treated and UNDER-treated hearing loss are well documented:

- · Walking/gait and balance problems
- · Decreased quality of life
- Impaired cognition and brain processing problems
- Functional decline difficulty communicating with others
- Social withdrawal/isolation
- Increased hospitalization and re-hospitalization rates

To best protect yourself from consequences of unaddressed hearing loss and to decrease your fall risk related to hearing loss, please consider the following recommendations:

- Have your hearing tested by a certified clinical audiologist.
- If you are diagnosed with hearing loss, seek treatment the earlier the better.
- Be consistent about using the recommended treatment! Eyes open – ears on, 7 days a week.
- If you are unsure about your current hearing loss treatment plan, get a second opinion...PLEASE!
- Be an advocate! Spread the word! Share this information with others!

#### **NURSING**



#### **HIDDEN FACTORS**

Health Conditions that Contribute to Falling

Dawn Frambes, PhD, RN

he risk for falling and sustaining an injury is real for older adults; most people know at least one story about someone who has fallen resulting in significant changes in their ability to be independent. Some of the factors that put older adults at risk for falling are easy to identify such as unsteady balance, dizziness or weakness. But there are some less obvious conditions and circumstances that can put people at risk for falling.

The good news is being aware of these risks allows older adults to take action to reduce the risk of falling. Let's look at some of these hidden factors and how to take action to reduce the related risks for falling.

#### Health Conditions Affect Balance

The first thing to consider are conditions and situations that make a person feel weak or off balance. Some of the more obvious examples of these conditions include

having experienced a stroke, injury to a leg, or neuro-muscular diseases like Multiple Sclerosis or Parkinson's Disease. Some less obvious conditions also exist that can affect balance or cause weakness. Consider the following conditions:

#### **Heart Conditions**

Changes in the way the heart circulates blood through the body can cause weakness or dizziness; sometimes this occurs quite suddenly.

What you can do: Take medications as prescribed by your health provider as close to the same time each day as possible. Report any new or changed experience of dizziness or weakness to your provider.



#### Dehydration

Not enough liquid in our circulating blood can cause dizziness and weakness.

Often when we feel thirsty, we are already becoming

dehydrated. Screening tests such as colonoscopies require preparations that cause dehydration through the use of laxatives and enemas as well as limiting food intake to liquids for a period of 24 hours or so.

What you can do: Drink liquids throughout the day - water is best! Liquids that

You will likely be weak and still dehydrated for a day or so after the test; consider having a friend or relative stay with you if you live alone to assist you if needed.

#### Inner ear infections and other ear conditions

The ear has a direct connection to our balance. When an infection or other

report any changes in balance or new dizziness.

Treatment of the inner ear condition may eliminate dizziness and restore balance reducing the risk for falling.

#### Pain

Any time we experience pain, our bodies attempt to protect us from feeling pain



There are some less obvious conditions and circumstances that can put people at risk for falling. The good news is being aware of these risks allows older adults to take action to reduce the risk.

contain caffeine actually lead to dehydration so limit coffee and caffeinated soft drinks. Unless your health provider has told you to limit the amount you drink, eight eight-ounce glasses of water per day is a good rule of thumb.

If you have a test scheduled that will require you to "prep" using laxatives, enemas or limiting food intake to liquids, be sure to eat plenty of protein-rich foods before you begin the liquid diet. Examples include eggs, meats, fish, dairy products and nuts. When you do the prep and begin the laxatives, be sure your path to the bathroom is clear so you won't trip on the way.

abnormality occurs deep in the ear, it affects balance. Often inner ear infections and other conditions cause little to no pain, so it can be difficult to know you have one.

What you can do: Contact your health provider and

by "guarding" the area that hurts. This often means we move differently in an effort to reduce pain. This guarding action can easily throw a person off balance as the body's normal posture and way of moving about is changed.



What you can do: Take pain medications as prescribed by your health provider to keep pain to a minimum. Perform stretching or gentle exercises to reduce pain as directed by your health provider. Talk with your health provider about your pain so a plan for reducing it can be established.

#### Diabetes

Diabetes is most wellknown for the way it affects the blood sugar (glucose) levels. But people with diabetes that is not wellcontrolled frequently develop damage to other parts of the body because of the high levels of glucose in the blood. The eyes can be damaged causing blurry vision; the kidneys can be damaged causing a need to urinate frequently; the nerves in hands and feet can be damaged causing numbness and pain. All of these problems can increase risk for falling due to not seeing well, hurrying to the bathroom, and not being able to feel the floor surface on the bottoms of the feet.

What you can do: Have your blood glucose checked periodically when you see your health provider. If you have diabetes, take medications and follow

diet instructions carefully to prevent damage to the body. Monitor your blood glucose levels as directed by your health provider and communicate with them often to report your levels. If you have numbness, tingling or pain in your feet, protect your feet from injury by always wearing shoes with good soles. Be aware of the floor/ground surface you are on by looking before you step.

#### Incontinence

Incontinence is something no one wants to talk about, but many people face it.

Hurrying to the bathroom to protect our dignity is a risk factor for falling.

What you can do: Talk to your health provider and describe your incontinence symptoms. An open discussion often leads to

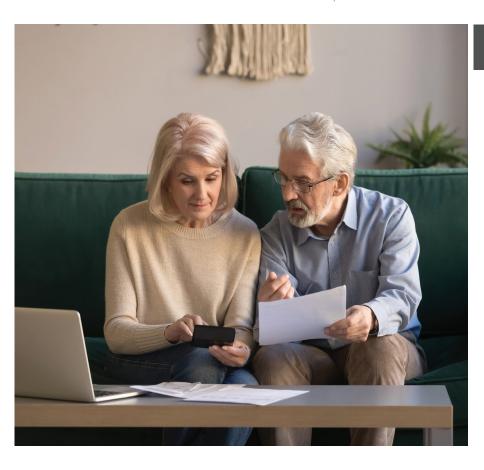
diagnosis of a problem that can be treated and reduce or stop the incontinence. If you experience incontinence, consider using products to protect your clothing if an accident does happen. There are many types available; many are not detectable under clothing. Knowing that a leak is not going to ruin your clothes can help you slow down and prevent a fall. Always make sure the pathways to bathrooms are clear, especially before going to bed at night. Grandchildren or pet toys can be trip hazards in the dark or when they are in places we don't expect them to be.

#### Illness or Hospitalization

Any time you are not up and moving about as usual, weakness can set in quickly. Mild illnesses like a cold or short bout of



# The most useful tool in preventing falls is awareness



loss of appetite can cause weakness. Hospitalizations put people at risk for falling for two reasons. First, it is a strange environment and sleep patterns are usually interrupted. Second, the beds are a different size and height than most people's home bed - usually higher from the floor and more narrow. When groggy from medications, illness or just being over tired, falling in the hospital is a possibility.

What you can do: If you are ill at home, take time to inspect your surroundings for fall hazards and remove them. Furniture that is out of place, a trash can that is too far from the bedside

for items such as used tissues. Take a moment to "get your bearings" before you stand and walk when you have been lying down resting or sleeping. If you are hospitalized, don't try to get up and move about by yourself; use the nurse-call to summons assistance.

You have probably noted that the strategies suggested are really "common sense," but many people experience falls because of risks addressed here. The most useful tool in preventing falls is awareness. Taking the time to intentionally look at your surroundings, take stock of how you are feeling, and having open

frequent communication with your health provider about changes you notice goes a long way to prevent a potentially devastating injury from falling. A number of good resources are available to help guide you in identifying fall risks in your home and related to your health. The Stopping Elderly Accidents, Deaths and Injuries (STEADI) program established by the Centers for Disease Control and Prevention is an excellent resource with a number of free guides available on line at www.cdc. gov/steadi/patient.html.

#### **NURSING**



#### THE MEDICATION QUESTION

75 percent of older adults take prescription medications. Find out if your medication is contributing to a risk of falls.

edications are part of life for many adults - it seems the older we get, the longer the list can be. The medications health providers prescribe are important in both treating existing conditions and preventing problems. Medications, especially prescription medications, do not come without the potential for creating effects that can be harmful - one being the increased risk for falls. Let's take a look at a few of the most commonly used medications and the associated possible side effects.

First are the medications that control high blood pressure (hypertension). These medications work in several different ways to control blood pressure by lowering it. It is important to keep blood pressure within a healthy range; high blood pressure is directly associated with stroke (also known as cerebral vascular

accident), heart disease, diabetes, kidney damage and poor circulation.

Medications that control high blood pressure work by doing one or a combination of the following:

- Reducing the amount of liquid in the circulating blood
- Increasing the size of the arteries that blood flows through from the heart
- Decreasing the rate of the heart's pumping action

Decreasing the amount

of force the heart exerts with each contraction
While each of these mechanisms for reducing blood pressure have the same result, the effects on the body's systems is different; this is the basis for different side effects people experience from these drugs. One of the most common side effects is a lower than normal blood pressure when a person

rises from lying down or sitting. The experience of dizziness when rising is known as postural/positional hypotension or orthostatic hypotension. This occurs because the medication's beneficial action of lowering blood pressure also causes a slower response by the body to raise blood pressure when needed to keep adequate blood and oxygen flowing to the brain. Gravity works on our circulation like it does with anything else; it "pulls" our blood to our feet when we sit or allows our blood to flow freely from head to toe when we lie down. But, when we stand up, gravity pulls blood toward our lower body and away from the brain because the medications don't allow the blood vessels to become smaller as quickly as normal. This causes a temporary reduction of blood flow to the brain which often results in dizziness or poor balance - a definite risk for falling! The good news is this effect

is usually temporary when a person first starts the medication or has a change in the dosage. After a few weeks of adjustment, it often goes away. Another positive point is that even if the effect of dizziness when rising does linger on or returns, simple actions can reduce the risk for falling. The first action is to **be aware** that if you take a medication to lower blood pressure, it is quite possible you will experience this side effect. Being aware of the potential for dizziness or poor balance allows us to take action. The best thing to do is take your time and intentionally rise slowly. When rising from a lying

position, sit up slowly then wait a few minutes before standing. Once standing, wait a few minutes before taking a step. This extra time does two things: 1) it allows your body to adjust to the upright position and increase the blood flow to your brain; and 2) it allows you to know whether you are experiencing dizziness or poor balance. If you know you are unsteady, you can sit back down and allow your body the time needed to adjust and the dizzy feeling to pass.

**Action:** If you take medication for controlling your

blood pressure, rise slowly and allow your body to adjust. If you feel dizzy, wait a few minutes before you walk. Keep any devices such as walkers or canes close by your bed or chair so they are within reach when you need them. Before going to bed, make sure your pathway to the bathroom or kitchen is clear and free from objects you could trip over.

Drugs to reduce the amount of swelling (fluid) in the legs and other parts of the body are diuretics. Similar to medications to control high blood pressure, diuretics can cause the same sensation of dizziness or weakness upon rising from sitting or lying down. Diuretics

"pull" water from our circulating blood by making the kidneys produce more urine. Not only can diuretics have the same effect as medications for controlling blood pressure (as a matter of fact, they are often used to help lower blood pressure), they also cause the need to urinate more often. This effect is directly related to falls when the urge to urinate is strong and we feel we need to "hurry" to get to the bathroom on time.

Action: If you take a diuretic drug, be aware it can cause dizziness when you rise. If you are able to, plan when you take the drug so you can be close to a restroom for a couple of hours. Keep



If you take any of these medications, be aware they could cause effects that make you at risk for falling.



pathways to restrooms clear. If you experience incontinence, talk to your health provider about it. There may be different medications that could be substituted or treatments for urinary urgency. Considering using an incontinence product to protect clothing is another option. As with dehydration (see article titled Hidden Factors: Health Conditions that Contribute to Falling on pg. 16), it is important to drink enough fluids. Unless you have been instructed to limit your fluid intake, drinking eight glasses of fluids per day is a

Opioid pain relief drugs are prescription medications used to control severe pain. These are the drugs we hear about in the media so much due to the number

good guideline.

of overdose deaths. Opioid drugs are most often used after a major injury or surgical procedure for short-term pain management. The way these drugs control pain is by altering the way the brain and nerves interpret pain signals. As a result, we can feel fuzzy, dizzy or drowsy when we have taken a dose. These drugs also have the potential to make us interpret our surroundings in an altered way. All of these effects can increase the risk for falling.

Action: As with the first categories of drugs we have examined, knowing the potential for side effects exists is the first action to reduce the risk for falling. Keeping pathways clear of obstacles, avoiding uneven surfaces, and keeping assistive devices (canes, walkers,

etc.) close by in easy reach all can reduce the risk for a fall. Ask your health provider when you can begin taking medications that are not from the opioid family (such as Tylenol or Motrin) to control pain or explore non-medication options for pain relief.

sleep, anxiety, depression or seizure prevention also can cause similar side effects to drugs used for severe pain.

These mediations act on the nervous system by changing the way the brain and nerves interpret signals from the body. Any time the nervous system is altered the poten-

tial for dizziness or changes

Medications to help with

**Action**: As with all of the previous groups of drugs reviewed, **awareness and** 

in balance exists.

planning are the best
defense for reducing the risk
of falling.

If you are wondering if any drugs are not connected with risk for falling the answer is YES! Read labels on over-the-counter medications - if it is common for dizziness to happen you will find a statement there. It is important to work with your health provider to promote the best health for you. Taking medications is a part of supporting optimum health for many adults. Be sure to talk to your provider any time a new medication is prescribed - ask what side effects to expect and what should be reported. Never be hesitant to report effects of your medications to your health provider. If a medication causes a side effect that is troubling to you or may increase your risk for falling, another medication may be available. Lastly, take a look at the list of medications provided here; if you take any of these medications be aware they could cause effects that could make you at risk for falling. This knowledge provides you with the power to make changes and take actions that will reduce risk for falling!

#### COMMON DRUGS THAT CAN INCREASE RISK OF FALLING

Blood Pressu	re Medication
<b>Brand Name</b>	<b>Generic Name</b>
Norvasc	Amlodipine
Tenormin	Atenolol
Lotensin	Benazepril
Zebeta	Bisoprolol
Caduet	
Capoten	Captopril
Coreg	Carvediolol
Cardizem	Diltiazem
Vasotec	Enalapril
Monopril	Fosinophil
Avapro	Irbesartan
Trandate	Labetolol
Zestril	Lisinopril
Cozaar	Losartan
Lotrel	
Lopressor/Toprol	
Corgard	Nadolol
Procardia	Nifedipine
Aceon	Perindopril
Inderal	Propanolol
Accupril	Quinapril
Micardis	Telmisartan
Mavik	Trandolapril
Diovan	Valsartan
Calan	Verapamil

# Diuretics ("water pills) Brand Name Bumex Bumetanide Chlorthalidone Dyazide Lasix Furosemide Hydrodiuril Hydrochlorothiazide

Metolazone

Torsemide

#### Laxatives

Zaroxolyn

Demadex

<b>Brand Name</b>	<b>Generic Name</b>	
Metamucil	Psyllium	
Citrucel	Methylcellulose	
Ducolax	Bisacodyl/	
Senocot	Senna	
Lactulose		
Miralax	Polyethylene glycol	

#### Sedatives

Sorbitol

<b>Brand Name</b>	<b>Generic Name</b>
Benadryl	Diphenhydramine
Vistaril	Hydroxyzine
Ativan	Lorazepam
Phenergan	Promethazine
Oleptro, Desyrel	Trazodone
Nembutal	Pentobarbital

#### Pain Medications (Opiods) **Brand Name Generic Name** Codeine Duragesic Fentanyl Hydrocodone & Lorcet, Lortab, Norco, Vicodin Acetaminophen Hydromorphone Dilaudid Demerol Meperidine Dolophine Methadone MS Contin Morphine Naloxone Oxycontin Oxycodone Oxycodone & Percocet Acetaminophen

#### Anticonvulsants/Siezure Medications

<b>Brand Name</b>	<b>Generic Name</b>	
Acetazolam	Acetazolamide	
Tegretol	Carbamazepine	
Valium	Diazepam	
Zarontin	Ethosuximide	
Neurontin	Gabapentin	
Lamictal	Lamotrigine	
Keppra	Levetiracetam	
Ativan	Lorazepam	
Dilantin	Phenytoin	
Lyrica	Pregabalin	
Topamax	Topiramate	

#### **Calming Drugs Brand Name Generic Name** Abilify Aripiprazole Thorazine Chlorpromazine Latuda Lurasidone Zyprexa Olanzapine Trilafon Perphenazine Compazine Prochlorperazine Seroquel Quetiapine Risperdal Risperidone

#### Hypnotic/Sleep Aids **Brand Name Generic Name** Benadryl Diphenhydramine Unisom Doxylamine Eszopiclone Lunesta Rozerem Ramelteon Secobarbital Seconal Restoril Temazepam Halcion Triazolam Sonata Zaleplon Ambien Zolpidem

#### PROCESSES AND PEOPLE



# DEPRESSION IN OLDER ADULTS

Depression may be a hidden fall risk

Stacia Hoeksma, LMSW

ost people would not automatically see a connection between emotional health and a risk of falling in older adults. Emotional health appears to be a psychological issue and falls seem to be a physical issue. And yet, the two are closely linked. Research has shown that the risk for falling increases exponentially with depression.

Despite the fact that depression is not talked about as openly, like falls it is

common in older adults.
Unfortunately, many fail to recognize the symptoms, or assume it is just a part of aging, and they don't get the help they need. Please know that depression is not a weakness and can happen to anyone at any age. There are steps that you can take to enjoy each stage of life, including the older years.

Addressing the issue of depression in the later years of life will not only help older adults with their mental health, but, as we

will see, it can help them confront yet another risk factor for falls.

#### How are Falls and Depression Linked?

There is a complex, yet clear relationship between depression and falls. Many times, it is actually a fall that triggers the start of depression. A sudden fall and the resulting change in independence and mobility can cause an older individual to become depressed. It is difficult to process the sudden onset of physical restrictions and the loss of one's independence. As a result, the continuing depression over time brings a fear of falling, slower cognitive performance, and decreased motor performance all factors increasing the risk of another fall. The cycle of depression and fear of falling

all factors increasing the risk of another fall. The cycle of depression and fear of falling can continue to spiral.
 The cycle may also start with depression. Depression is associated with several cognitive deficits, affecting

mainly attention, executive function, and processing speed. Walking is a complex process which uses all of those cognitive processes! The risk of falling continues to increase as the individual has difficulty paying attention, juggling several processes at once, or reacting quickly to a sudden change in the walking surfaces or encountering obstacles in the way.

Depression and falling are also indirectly linked by having similar risk factors. Functional decline, a history of falls, and poor physical health can contribute to both depression and risk of falls. These risk factors linked together may create a perfect storm of self-perpetuating depression, and fear of falling, resulting in reoc-

#### Depression in Older Adults

Given the close link between depression and falls, we need to know more about depression in older adults and what action steps can be taken to maintain healthy emotional health. This is important both for quality of life, but also to help prevent falling.

Some signs and symptoms of depression in older adults include:

- Persistent sadness or feelings of despair.
- Loss of interest in socializing or hobbies.
- Appetite changes (Weight loss/gain or decrease/ increase of appetite).
- Lack of motivation, loss of energy.
- Sleep disturbances
   (difficulty falling asleep, staying asleep,

conditions

- Caring for a loved one with illness or chronic health conditions
- Loneliness or isolation
- Reduced sense of purpose
- Fears and anxiety
- Recent bereavements
- Underlying medical conditions (e.g. Parkinson's Disease, cancer, heart attack, stroke, or thyroid disorders)
- Side-effects of medications

#### Help for Depression

If you think you may be experiencing symptoms of depression, please speak with your healthcare provider. There are many options for treatment, including medications, individual counseling and support groups, mindfulness,



Despite the fact that it is not talked about openly, depression is common in older adults. Please know that depression is not a weakness and can happen to anyone at any age. There are steps that you can take to enjoy each stage of life, including the older years.

curring falls and decreased motor function.

Given the shared risk factors, cognitive status, and similar physical health patterns, it is no surprise that depression is closely tied to a risk and fear of falling.

1 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4880473/

oversleeping).

- Increased use of alcohol or other drugs.
- Neglecting personal care or hygiene.

There can be many reasons for depression, but some of the common causes are:

One's own health

and spiritual practices such as prayer and medication.

#### Individual Counseling, Therapy and Treatment

When looking for a counselor, it may be helpful to ask around for recommendations from friends or other trusted health care

providers. You will also want to try to find a counselor who will take your insurance or Medicare, if at all possible. The "Psychology Today" website allows you to search for therapists with a variety of search filters. For example, you could search for a female therapist in Grand Rapids who accepts Medicare and treats depression.

It is important to find a "good fit" when looking for a therapist. Recognize that this may not happen with the first counselor you try. For Seniors who can't drive or are otherwise homebound, consider teletherapy as an option.

#### Social Connection and Support Ggroups

Look for ways to expand your social connections (though certainly more challenging in this season of social distancing). This can happen through volunteering, joining a church or community group, connecting with neighbors, signing up for a class, participating in an exercise group, etc. There are many support groups available in the Greater Grand Rapids area. Here is a link with several options: http:// www.caregiverresource.net/

#### support-groups.

There are also options for social connection during the coronavirus outbreak: <a href="https://www.eraliving.com/blog/4-ways-seniors-can-connect-with-others-during-the-coronavirus-outbreak/">https://www.eraliving.com/blog/4-ways-seniors-can-connect-with-others-during-the-coronavirus-outbreak/</a>

#### Mindfulness & Spiritual Practices

Prayer and meditation have positive physical and mental health outcomes for seniors. Lean into faith practices that have been meaningful to you throughout your life. It might also be a good idea to try some new practices such as some listed here: https://www.aplaceformom.com/resources/ mindfulness-activities. Remember that spiritual practices can be done individually as well as communally. Think about ways that you can connect with others around spiritual practices that are useful to you.

#### Reach Out

Reaching out to someone when you are feeling depressed is very important, even when it is the last thing you may feel like doing. Be aware of the serious nature of depression: the risk for suicide is high in the elderly population. Older adults make up 16% of the population but 18.8% of the of the

suicides in 2018.2 According to the Suicide Prevention Resource Center, suicide rates are particularly high among older men, with men ages 85 and older having the highest rate of any group in the United States. Suicide attempts by older adults are much more likely to result in death than among younger persons. If you or someone you know is having thoughts of suicide, please reach out to your health care provider or call 1-800-273-TALK.



#### The Whole Health Connection

Whole health wellness encompasses eight mutually interdependent dimensions: physical, social, spiritual, emotional, environmental, financial, intellectual and vocational. It is necessary to attend to all of the dimensions, as neglect of any one over time will adversely affect the others, and ultimately one's health, wellbeing, and quality of life.

# Wellness encompasses eight mutually interdependent dimensions. It is necessary to attend to all of the dimensions; neglect of any one over time will adversely affect others.

For example, healthy physical habits can have a great impact on your emotional/mental health. Eat to support your mood by minimizing sugar, focusing on healthy protein, complex carbs, and healthy fats, and eating small, regular meals. Moving your body can also improve your mood; in fact, research suggests it can be almost as effective as antidepressants. Anything that gets you up and moving helps. Finally, make sure you get adequate sleep by keeping a regular sleep schedule.

Despite how we may sometimes live, thinking that our emotional lives don't affect our physical, or thinking that social isolation



won't affect our intellectual life, that is in fact not the case. Taking care of all of our needs - the emotional, social, spiritual, and physical, will create a wholebody wellness that will support all the areas of our lives, improving our quality of life, our occupation and

finances, and decreasing our risk of falling. They are all interconnected.

Putting in the time to care for your mental health is as important as ever as you age. It can improve your mood, quality of life, and reduce your risk of falls.

#### **SOURCES**

A Wellness Tool: Developing and Keeping a Circle of Support. (2018) Wellness Recovery Action Plan. Retireved from https://mentalhealthrecovery.com/infocenter/a-wellness-tool-developing-and-keeping-a-circle-of-support/

laboni, A., and Flint, A.J. (2013). The complex interplay of depression and falls in older adults: a clinical review. *American Journal of Geriatric Psychiatry*, 21(5), 484-92. doi:10.1016/j.jagp.2013.01.008.

Moylan, S. (2014). *Depression increases risk of falls in elderly*. https://medicalxpress.com/news/2014-10-depression-falls-elderly.html.

Robinson, L., and Smith, M.A. & Segal, J. (2019). *Depression in Older Adults: Signs, Symptoms and Treatment*. https://www.helpguide.org/articles/depression/depression-in-older-adults.htm

Suicide Prevention Resource Center (2020) Retireved from: https://www.sprc.org/populations/:~:text=Suicide%20rates%20are%20particularly%20high,any%20group%20in%20the%20country.&text=Suicide%20attempts%20by%20older%20adults,and%20use%20more%20deadly%20methods.

The National Institute of Mental Health (2020). Retrieved from: https://www.nimh.nih.gov/health/publications/older-adults-and-depression/index.shtml

#### SPEECH THERAPY



# COGNITIVE CHANGES WITH AGE

Each area of cognition is impacted in different ways

Emily Champion, M.A., SLP-CCC

There is a normal amount of cognitive decline and preservation that occurs as you get older... While some areas stay intact or even improve, the function of other areas may wane



as the years pass.



The wise Greek philosopher Heraclitus once said "The only thing that is constant is change." This rings especially true as we look at the cognitive changes that occur with the aging brain.

There is a normal amount of cognitive decline and preservation that occurs as you get older. Each area of cognition is impacted in different ways. While some areas stay intact or even

improve, the function of other areas may wane as the years pass. The areas most impacted are intelligence, memory, attention, language, reasoning/problem solving and speed of processing.

Let's dive a little deeper into each area individually:

#### **INTELLIGENCE**

Crystallized intelligence, or rather the knowledge and

experience accumulated over time, actually remains stable with age.

Fluid intelligence, or the abilities not based on experience or education, tend to decline.

Good News: All of the time spent learning how to perfect your creme brûlée recipe over the last several decades will not be in vain.

Bad News: It may be a little trickier learning how to work

# Embrace the change and implement strategies to adapt and maintain

that new dishwasher or the deluxe vacuum you just purchased.

#### **MEMORY**

Remote memory, or recall of past events that have been stored over many years, remains relatively preserved in old age.

Recent memory, or the formation of new memories, however, is more vulnerable to aging.

Good News: The memories of your children's birthday parties, wonderful family vacations, and that perfect June day you got married will stay with you over time.

Bad News: Having to figure out where you placed your keys after your trip to the grocery store may prove problematic.

#### **ATTENTION**

Simple or focused attention, such as the ability to



concentrate on a single item, tends to be preserved in older age.

Divided attention, or the ability to do multiple things at one time, will be more difficult with age.

Good News: Being able to focus and watch the series finale of "This is Us" or the final game of the NCAA championship will be a breeze!

Bad News: Watching the series finale of "This is Us" or the championship basketball game on television while you are trying to cook dinner will be more difficult.

#### **LANGUAGE**

Verbal abilities including vocabulary, or your "word bank," are preserved, and may actually improve, as we age.

Word retrieval, or the process of finding those words and articulating them,

may take longer and be more difficult. This is especially prevalent in reference to names of people, places, or objects.

Good News: You will still be able to understand the meaning and use of the word tenebrous (dark and gloomy) and may even include the word legerdemain (an illusory feat) in your lexicon (the vocabulary of a person).

Bad News: You may want to walk the other direction when unexpectedly approached by an old high school classmate when he happily greets you by your name and you just can't think of his!

#### REASONING/PROBLEM SOLVING

Solving past problems, or the traditional ways of approaching solutions, are maintained in older persons.

Solving newly encountered

problems, such as those that you face without prior experience during your life, may take extra time.

Good News: The triedand-true way of fixing your lawnmower when it stops working right in the middle of cutting the grass will stay with you as time goes by, especially if you have done it many times over.

Bad News: It will take longer to figure out how to fix the garbage disposal that you have never had a problem with the 20 years you've lived in your home.

#### INFORMATION PROCESSING

Intaking information, and

the ability to process information as you age, is not lost.

Processing speed will decline as the brain ages. It will most likely take longer to understand the information than before.

Good News: You can still learn a new card game to play with the neighbors.

Bad News: It may take you two hours to learn a new card game to play with the neighbors.

#### IN CONCLUSION

Cognitive decline is a completely normal part of aging. This change will vary from person to person. It is important to emphasize

that decline can be slowed and cognition can be maintained for longer with a healthy amount of cognitive exercise on a daily/weekly basis.

Heraclitus is correct when he reminds us that change is constant. Although change is not always bad (such as being able to hear and see your granddaughter's first word during a video session on the computer), we need to embrace the inevitable changes - good or bad - and implement strategies within our life to successfully, and happily, adapt.



#### SPEECH THERAPY



\_\_\_\_\_

Emily Champion, M.A., SLP-CCC

o you may now be asking yourself "What can I do about all

these cognitive changes!?"

You are in luck! There are a number of strategies that can be implemented to help manage each obstacle you may be experiencing. I like to think of these as tools for your tool belt that you use to repair the parts of life that you may feel aren't working as well. Some tools you may use frequently while others may only be brought out for special

circumstances. Although this list is not exhaustive, it is my hope that you will find something that works for you to assist with remembering information, finding the right words to say, and planning/problem solving/reasoning tasks within your daily life.

#### **MEMORY**

Do you have trouble remembering information? Do you have trouble remembering if you have trouble remembering information? Thankfully

there are numerous strategies and aids that can help with recalling important information within your life! There are those things that you can do within yourself that we call *internal memory* strategies. There are also aids and supports that are used outside of yourself that we call external memory strategies. Both are equally important and are best used simultaneously for the greatest success. Memory strategies are not "one size fits all." Please try several and use those that feel most comfortable and effective for vour own life.



#### **Internal Memory Strategies**

**Rehearsal**: Repeat what you would like to remember several times.

Try this: If you are given a phone number to remember, try repeating it over and over in order to help you retain the information. If you are repeating your own

phone number because you can't recall it, then we may have a problem.

**Association**: Linking what you are trying to remember with something that is already known to you. Try this: If you are trying to learn a new name, try associating the newly introduced person's name with the name of someone you already know (i.e. good friend, relative, co-worker, celebrity). With that being said, it's easier to remember the names of people you like. "That neighbor that blares his music" every Friday night may always remain "that neighbor that blares his music," no matter how many times you hear his name.

**Visual Imagery**: Make a mental image/picture of what you need to remember. The stronger the image is, the more likely you are to remember it.

Try this: The next time you misplace your keys or glasses at home, try closing your eyes and make a visual picture to retrace your steps in order to find them - but please don't walk around your home with your eyes closed!

4 Categorization: Try to group items to be

remembered by category.

Try this: Before your next grocery trip, try to organize those needed items by placing them into various sections (categories) of the grocery store. This could include meats, canned goods, deli, produce, snacks, dairy etc. Although I cannot tell you what category SPAM would fall under. Is it a meat? Is it a canned good? Is it magically both? You decide!

4 Rhyming: Developing rhymes, songs, internal melodies, etc. can be a useful method for remembering many types of information in your daily life.

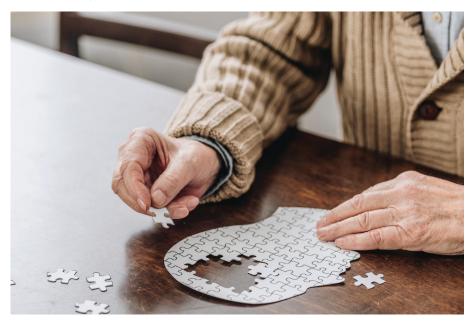
Try this: Bring yourself back to those days in grade school when you were taught all the fundamentals with a lovely song or jingle.

Who can forget the everpopular rhyme: "Thirty days has September
April, June, and November.
All the rest have thirty-one
Except for February, alone,
Which has twenty eight days clear
And twenty nine in each leap year."

#### **External Memory Strategies**

Calendar: Keep a large calendar in a central location of the house so that you can look at it frequently.

Try this: Write important things on the calendar and check it everyday at a set time so that it becomes a routine. Try not to fill in the calendar with too much information; otherwise it becomes difficult to read. If you find that you have difficulty keeping track of time, cross off the days as they are completed. You can place this calendar in a central location that works best for you. Perhaps the living room end table, on the kitchen



counter, or even hanging up in the bathroom!

Reminders: Post reminder notes or objects to be remembered where you will see them to assist in recalling important events or things to do.

Try this: Write down the day you have to take out the garbage or a change in an appointment time on a post-it note and place it on your refrigerator. You may even need to write down the date of your wedding anniversary which is one you would be in big trouble if you forget. Perhaps place that note in a place your husband or wife won't see!

Memory Journal: Keep a daily/weekly memory log or journal in which you record daily events, things to do, accomplishments, feelings, etc. This method tends to be very useful for those with more severe memory impairments (ex: Dementia or Alzheimer's).

Try this: Use a journal, or a pocket-sized notebook for those who are active, to write down a week's worth of information as a trial. Review the journal at the end of each week to assess your own recall of the information. Try to record everything, even those things you

would rather forget, such as the unexpected car repairs... we've all been there!

4 Personal Item "Special"

Spot: Put important things like keys, glasses, etc. in the same place at all times when you are not using them. This makes the items easier to find and they are less likely to be misplaced.

Try this: Look for an unused basket or box in your home (even a nightstand drawer) and make this your own personal item spot. Put any item that you need on a daily/weekly basis in this area. Perhaps this is a book you are currently reading or the glasses you need to read with as both are equally important!

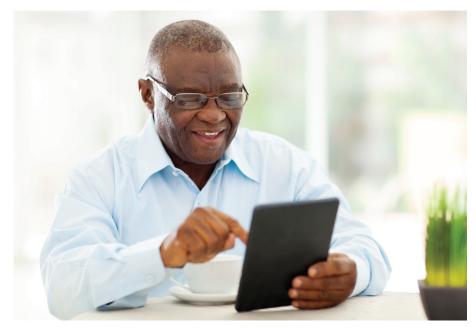
**5 Assistive Devices**: There are many items available on the market that are programmable and can assist

with your daily activities.
This can include pill containers, alarm clocks, watches, and your cell phone.

Try this: If you really want to watch a specific television program that you have been hearing about, then try setting the alarm on your phone to alert you 10 minutes prior to that program. It would truly be tragic to miss the finale of American Idol after you have watched all season!

#### **WORD FINDING**

Out of all the changes that you may be experiencing with age, this seems to be one that stands out among the rest. You are not alone if you have had trouble recalling the names of objects, people, or places and there are many who share in your frustration. If you recently used the phrase "The word is on the tip of my tongue but



I just can't think of it," then these strategies may be for you!

Associate: Try to think of words associated with the word that you cannot think of and say them out loud. What does this look like? If you cannot think of the word PEAR, try to say similar words such as ORANGE, BANANA, and APPLE.

2 Substitute: Try to use a synonym, or word with a similar meaning, instead of the word you cannot think of. You can also try the antonym, or word with an opposite meaning, to convey your message. This may also help you to produce the

target word you cannot think of since your mind is thinking of words circling around that specific word.

What does this look like? If you cannot think of the word kind, try using a synonym such as nice or say the opposite word, such as mean, to aid the listener in guessing.

**Describe**: Try to describe the physical attributes of the word you are having trouble recalling.

What does this look
like? If you cannot think
of the word oven, try to
describe it by saying "it

is hot," "you put food into it to bake," "most homes have one." This will give your listener the ability to guess or you may even think of the word before they have to!

**Gesture**: Try to use your arms, face, and entire body as much as possible to describe or gesture how to use the word you are having difficulty retrieving.

What does this look like? If you cannot think of the word whisk, you can pretend you are holding a bowl and make a circular motion using your other hand in an attempt to convey the word.

**5** Write/Draw: Draw a picture of the word you are

#### YOUR BRAIN WORKOUT

Along with regular exercise and maintaining a healthy diet on a daily basis, it is important to incorporate a daily dose of cognitive exercise to keep your thinking skills sharp. This could include doing 1-2 activities when you wake up in the morning and another 1-2 activities in the evening before bed. Or perhaps you feel your sharpest after eating lunch and would like to tackle it then. How you establish your brain workout routine is completely individualized to you and your own functioning. Challenge the areas you feel you are functioning the lowest. Before you know it, your brain workout will be an important part of your everyday routine and you will be one step closer to maintaining your thinking skills as you age!

#### Example of daily brain workout regimen: 8:30 a.m.

- Watch the morning news programming.
   Have a conversation with spouse or loved one about complex topics.
- Start the crossword puzzle in the newspaper or through an app on your tablet.
- Set a reminder to watch program on History Channel this evening about World War II.

#### 1:00 p.m.

Book club (in person or online) with the local library to discuss the chapters of the latest assigned book.

#### 8:00 p.m.

Watch program on the History Channel about World War II. Challenge yourself to recall specific details if you have prior knowledge; learn new details to share with friends/family.

trying to produce or attempt to write down as many letters as you can remember. Even just writing down the first sound/letter may be enough to trigger the word. What does this look like? Have a pad of paper and and pen handy if you frequently have trouble remembering words. If you cannot think of the word *planet*, you can try to draw a planet if you can visually what it looks like which can help you, or the listener, identify the name of word.

EXECUTIVE FUNCTIONING

Executive functioning is a term that refers to all those higher level thinking abilities that are used for problem solving, reasoning, flexible thinking, and selfcontrol. It is the basic functions that are used to learn, works and manage daily life. Creating an all-encompassing list of the many things that are available to better organize your life could be a book in itself - even a quick search of "closet organization" on Amazon can bring up a list of 1,000+ gadgets and gizmos! I am hopeful that the tips below can provide a framework to get you thinking of how to best arrange your time and space most efficiently for you and

your family.

**Managing Time**: As the saying goes, "time is precious." With that being said, it's in your best interest to learn how to manage yours to make the most out of each day.

#### Helpful tips:

 Create checklists and "to-do" lists and estimate how long each task will take. Try organizing them to be as efficient as possible (eg. placing errands that are logistically in the same area of town

- together on your list).
- Break longer tasks into chunks and assign times frames for completing each chunk.
- Use visual calendars to keep track of appointments, important events, chores, and activities.
- Use software management such as your
   Outlook calendar, Google
   calendar, or your iCalendar to assist with reminders and appointment
   times.
- Plan and structure transition times and shifts in

#### **EVALUATE YOUR PROGRESS**

Research indicates that it takes 30 days to establish a habit so it is important when beginning your brain workout routine that you commit to continue it on a consistent basis. Have a trusted partner (ex: family member, spouse, friend) as someone to "check in" with and give you honest feedback on your abilities. Be open to this feedback. Ask guestions such as "do you feel like I am able to find things more easily?" or "does it seem like I am remembering names of people/items/objects more frequently?"

Some apps and games will provide you objective feedback on your performance such as stats and other related indicators. Examples of such apps and websites include Lumosity and Peak.

Most importantly, ask yourself if you see improvement. Am I remembering my appointments? Am I able to use my strategies to improve my word finding ability? Does it seem like I am better organized and do I have the proper tools in place to be successful?



activities.

 Prepare visual schedules and review them several times a day, if needed.

#### 2 Managing Space:

Cleaning and organizing your home is a practice, not a project. Find a method that works for you to maintain organization in your work and living space.

#### Helpful tips:

Organize your space by categories. For example,

all your golf shirts hang together in the closet on one side, all your church shirts in one another area, and sweatshirts folded on the shelf. If you find yourself having to fix this the day after organizing, try buying a closet organizing tool, such a a hanging divided shelf, for assistance.

 Minimize clutter as much as possible. If you haven't used the item

- in the last 3 months, it may be time to consider donating it.
- Schedule a weekly time to clean and organize your space.

#### IN CONCLUSION

It can be helpful to connect with your spouse, loved one, or trusted friend on a regular basis to troubleshoot problems encountered and to hold yourself (and others) accountable.

#### SPEECH THERAPY



# DEVELOPING YOUR BRAIN WORKOUT

Suggestions to stimulate thinking skills

Emily Champion, M.A., SLP-CCC

We all know how important it is to exercise your arms, legs and other parts of the physical body but one very important part that often gets overlooked is the brain. Arguably the most important part of your body, we must not forget that the brain also needs a regular regimen of exercise to maintain healthy and optimal functioning. There are many things that can be incorporated into your very own "brain workout" including games/puzzles, reading and listening critically, watching news and educational programming, trying new apps and websites, or simply enjoying leisure activities in a new light.

Brain Workout/Activity	Explanation/Examples	Cognitive Area Addressed
Games & Puzzles	<ul> <li>Card Games - Bridge, Solitaire, Euchre</li> <li>Board Games - Trivial Pursuit, Monopoly, Headbandz</li> <li>Word Searches</li> <li>Sodoku Puzzles</li> <li>Electronic strategy games - Playstation, xBox, Wii</li> </ul>	<ul> <li>Problem Solving</li> <li>Reasoning</li> <li>Short-term memory</li> <li>Inferencing</li> <li>Attention</li> </ul>
Critical Reading & Listening	<ul> <li>Read an article or book and challenge yourself at a critical level.</li> <li>See if you can answer critical questions such as who, what, when, where, and why.</li> <li>Try to dive into more abstract questions and look at possible metaphors, and underlying meanings.</li> <li>Listen to an audiobook or podcast if you prefer audio versus written.</li> <li>Join a book club at your local library or church to engage with others.</li> </ul>	<ul> <li>Comprehension</li> <li>Short-term memory</li> <li>Reasoning</li> <li>Problem Solving</li> <li>Attention</li> </ul>

Brain Workout/Activity	Explanation/Examples	Cognitive Area Addressed
News, Educational Programs, and Game Shows	<ul> <li>Find channels that offer informative programs that challenge your thinking skills</li> <li>Channels: Discovery, National Geographic, History channel, PBS, and Smithsonian - just to name a few!</li> <li>TV Shows: Jeopardy, Wheel of Fortune, 20/20, Dateline, Shark Tank, and documentaries can offer many opportunities to think critically.</li> </ul>	<ul> <li>Attention</li> <li>Reasoning</li> <li>Word Finding</li> <li>Long-term memory</li> <li>Short-term memory</li> <li>Vocabulary</li> </ul>
Websites & Apps	Use your laptop, iPad, Kindle, or another electronic device to find apps and/or websites that will assist you with targeting specific areas you feel you need to pay extra attention to. Please read reviews and do your research to find those that are most beneficial to the user and have demonstrated success.	All levels of cognition depending upon the app and/or website selected.
Hobbies & Leisure	Continue your current hobbies and, if you do not have one, consider finding something of interest to you.  This may include:  Gardening  Antique Hunting  Sporting Events  Traveling	All levels of cognition depending upon the leisure activity selected.



## OCCUPATIONAL THERAPY

## SAFETY TIPS TO PREVENT FALLS

You can help prevent common causes of falls found in the environment around you.

there are some risk factors that you have less control over - maybe a health condition you are predisposed to or a diagnosis you received that you did nothing to cause. But there are some risk factors that are preventable, many of them found in the environment around you.

Where do most falls occur?

Many falls happen in the

bathroom or kitchen. Drips on the floor, slippery surfaces, and tight corners are all found in bathrooms and kitchens and increase your chance of falling.

Falls also occur in areas with poor lighting. Decreased vision and hidden obstacles make dim and dark places a challenge for walking and a risk for falls.

Steps and stairs are another

place that falls happen.
Using special caution and
being prepared can minimize
the risk.

#### How can you prevent falls?

These household and environmental risk factors can be minimized by identifying them early and preparing.

Some easy ways to minimize the risk include:

- wear supportive, rubber soled shoes to prevent slipping.
- Make your home safer with good lighting and minimal clutter.
- Use grab bars on bathroom walls and nonskid mats in the bathtub.
- Be certain that both sides of the stairways have handrails.
- Move cords and wires away from walkways.
- Keep outdoor steps and walkways in good repair.

#### SOURCE

Clark, F., Blanchard, J., Sleight, A., Cogan, A., Florindez, L, Gleason, S., Heymann, R., Hill, V., Holden, A., Murphy, M., Proffitt, R., Schepens Niemiec, S., Vigen, C. (2015). *Lifestyle redesign: The intervention tested in USC well elderly studies* (2nd Ed.). Bethesda, MD: AOTA Press

Above all, take your time; nothing is so important that you should risk falling.

## OCCUPATIONAL THERAPY



## SIMPLE SOLUTION TO PREVENT FALLS

Use the AARP's **HomeFit Guide** to Self-Evaluate Your Home Environment

he 2018 AARP Home and Community Preferences Survey found that 76% of older adults agree with this statement: "What I would really like to do is remain in my current residence as long as possible." Is this true for

Occupational therapists are healthcare professionals who work with individuals to ensure they are able to participate in their valued "occupations" or meaningful activities. These "occupations" are linked to important life roles and reflect

There are actions you can take today to reduce your risk of falls by taking a close look at your home, identifying potential fall risks and making changes to ensure a safer environment.

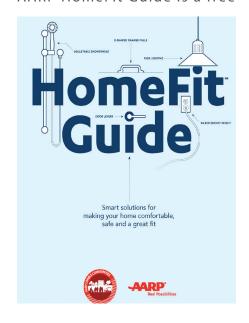
you? Are you also at risk of falls? Experiencing a fall with injury puts an individual at serious risk of being unable to remain in their home for as long as they wish.

Fortunately, there are actions you can take today to reduce your risk of falls by taking a close look at your home, identifying potential fall risks, and making changes to ensure a safer environment.

our values and identities. In relation to fall prevention, occupational therapists can provide education and resources to help individuals reduce potential environmental fall risk factors in their home. As an occupational therapist, I strongly recommend the use of the AARP HomeFit Guide to help individuals self-evaluate their home safety, and identify and eliminate potential environmental risk factors that may contribute to falls.

The AARP HomeFit Guide "was created to help people stay in the home they love by turning where they live into a 'lifelong home', suitable for themselves and anyone regardless of a person's age or physical ability." HomeFit residences incorporate universal design principles and products that are adaptable, safe and easy to use. Universal design allows homes to be accessible for young and old, healthy and ill/injured, while ensuring the physical appearance remains attractive. The AARP HomeFit Guide is a free

Holly Grieves, OTD, OTRL



and available to you online at <a href="https://www.aarp.org/content/dam/aarp/livable-communities/livable-doc-uments/documents-2015/HomeFit2015/AARP-HomeFit-Guide-2015.pdf">https://www.aarp.org/content/dam/aarp/livable-communities/livable-doc-uments/documents-2015/HomeFit2015/AARP-HomeFit-Guide-2015.pdf</a>.

The HomeFit Guide begins with a questionnaire to help you determine just how "HomeFit" your home is currently. Next, the guide walks you through the "Room-by-Room HomeFit Tour" to take a closer look at the environmental aspects of each space in your home. It helps you take a closer look at your entrances and exits, kitchen, steps and stairways, living room, bedroom, bathroom and other specified spaces.

Next, the "Home Fitness Specific Needs" section suggests simple home modifications that can be made to make vour home more accessible for all individuals. Then, the "Use This, Not That" section expands on the simple accessories and devices that further increases the comfort, safety, and overall fit of your home. A few of the most common recommendations I make to my clients include the use of motion-sensored night lights for hallways and bathrooms, grab bar installation in shower areas, and railings

on both sides of staircases.

The next part of The HomeFit

Guide provides you with a "Do-It-Yourself List" and a "Don't-Do-It-Yourself List." These recommendations will help you decide if you need to hire additional help to make your house fit or if there are projects you can do yourself.

## Here are some additional tips for you to consider:

- Keep a telephone within easy reach, in areas most often occupied in the home (i.e. bedroom, den, kitchen).
- Place a list of emergency phone numbers near every phone.
- Have a LifeLine® or other medical alert system installed near your bed, or worn around the neck or wrist in case of an emergency.
- Move frequently used items to easy-to-reach areas. If needing to retrieve something on a high shelf, use a longhandled reacher or a stool to step on, instead of stepping on a chair.
- Have a bench near the entrance to the house for resting and setting down packages.

The HomeFit Guide's "Getting the Right Fit" section expands on the role of the Occupational Therapist in helping you identify and eliminate housing features that may increase your fall risk. It also explains how a Certified Aging-In-Place Specialist (CAPS) can help identify potential fall risk factors in your home.

The HomeFit Guide wraps up with "Smart Ways to Spend Less" which offers valuable tips on ways to cut costs. There is significant benefit in using AARP's HomeFit Guide to evaluate your home environment and proactively prevent falls. It is a useful tool designed to help ensure that you and your loved ones can continue to participate safely in your valued occupations in an effort to remain in your current residence as long as possible.

Don't forget to download your **AARP HomeFit Guide** supplement at <a href="https://www.aarp.org/content/dam/aarp/livable-communities/livable-documents/documents-2015/HomeFit2015/AARP-HomeFit-Guide-2015.pdf">https://www.aarp.org/content/dam/aarp/livable-communities/livable-documents/documents-2015/HomeFit2015/AARP-HomeFit-Guide-2015.pdf</a>.

## OCCUPATIONAL THERAPY

## SELF-REFLECTION: FALL PREPAREDNESS

Becoming more knowledgeable about the risks of falling is the first step, but each individual needs to apply it to his or her lifestyle, home, and circumstances. Here are some questions to get you thinking about your own risks and fall preparedness.

RISK FACTORS The times of day that I would most likely fall are	The problems with my body that would most likely cause me tofall are	long-term goal?) Example: I will walk for 15 minutes at least 3 days a week
The social situations in which I would most likely fall are	The states of mind I'm in which would most likely cause me tofall are	1
The places in my house that I would most likely fall are	GOALS My long term goal(s) are:	for not accomplishing my goals are (these are situations you know cause you to feel unprepared or at risk, or have increased challenges with staying consistent):
The places outside my house that I would most likely fall are	These goals will be accomplished by the following steps (what shortterm goals will you establish to achieve your	Example: I don't like to walk when it's raining outside  1  2  3  4  5

#### SOURCE

Clark, F., Blanchard, J., Sleight, A., Cogan, A., Florindez, L, Gleason, S., Heymann, R., Hill, V., Holden, A., Murphy, M., Proffitt, R., Schepens Niemiec, S., Vigen, C. (2015). *Lifestyle redesign: The intervention tested in USC well elderly studies* (2nd Ed.). Bethesda, MD: AOTA Press.



## EXERCISE & BALANCE

The key to successful aging is exercise

Marie-Louise Merkx-Quinn, PT, DPT, OCS, Dip MDT, CEEAA

According to the Centers for Disease Control and World Health Organization, successful aging is "the process of developing and maintaining the functional ability that enables wellbeing in older age." A few of the predictors of successful aging are related to staying physically and

One of the predictors of successful aging is exercise! Exercising results in increased ability and independence with Activities of Daily Living (ADL), improved general health (blood pressure, heart disease, diabetes, etc), fewer functional limitations or pain due to arthritis, plus

the complications of a fall.
Additionally, having a fall decreases the confidence and ability to move freely around. Thus, it is important to start an effective fall prevention program.

The research is very clear that exercise improves balance and therefore



Successful aging is the process of developing and maintaining the functional ability that enables wellbeing in older age.

mentally active, for example by doing at-home exercises for seniors and keeping your brain active as well. It is important to respect that how we get older is different for each person, a work in progress, because everyone faces different circumstances and experiences, which can temporarily or permanently change one's path.

in general being physically more active!

About one in three people older than 65 years who live independently fall each year.<sup>2</sup> The frequency of these falls increases as people get older. Falling can cause a serious injury like a fracture or head trauma or even death; every 20 minutes an older adult dies from

2 Sherrington et al (2017), and Ng et al (2019)

prevents falls! Exercise is an effective way to decrease the risk of falling and limit the number of falls (up to 38%), especially in communitydwelling older people.

## What does the evidence show?

 Strength training alone has minimal to no effect, however when combined with balance training the positive

<sup>1</sup> Stevens & Burns, 2015



effects on preventing and decreasing falls are very clear.

Participation in a balance program does not have to be done in a group setting, performing the program alone will have the same positive results. The point is, participation in a fall prevention program in the key to success - by yourself or in a group.

3. Last but not least, exercise has other health benefits like increasing confidence to

move around, improved mood, controlling blood pressure, heart disease, diabetes, etc.

#### **SOURCES**

Sherrington, C., Michaleff, Z. A., Fairhall, N., Paul, S. S., Tiedemann, A., Whitney, J., Cumming, R. G., Herbert, R. D., Close, J. C. T., & Lord, S. R. (2017). Exercise to prevent falls in older adults: an updated systematic review and meta-analysis. *British Journal of Sports Medicine*, 24, 1750.

Ng, C. A. C. M., Fairhall, N., Wallbank, G., Tiedemann, A., Michaleff, Z. A., & Sherrington, C. (2019). Exercise for falls prevention in community-dwelling older adults: Trial and participant characteristics, interventions and bias in clinical trials from a systematic review." British Medical Journal Open: Sport & Exercise Medicine, 5(1). Retrieved from https://bmjopensem.bmj.com/content/5/1/e000663

Stevens, J. A., & Burns, E. (2015). A CDC compendium of effective fall interventions: What works for community-dwelling older adults. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control



## GUIDELINES FOR EXERCISE

Exercise programs should challenge a person's balance while allowing the individual to perform the exercises safely and effectively.

Marie-Louise Merkx-Quinn, PT, DPT, OCS, Dip MDT, CEEAA

- Choose exercises that include a challenge to your balance:
- decrease the base of support (stand with two legs shoulder width, stand with two legs close together, stand with one foot directly in front of the other, stand on one leg)
- move the center of gravity while controlling your body while standing (e.g., reaching, transfer body weight from one leg to another, step up onto a higher surface)
- stand without holding onto anything, or, if this is not possible, try to decrease dependence on the arms (e.g., hold onto a surface with one hand rather than two, or with one finger instead of the whole hand)
- At least 3 hours of balance exercise should be done each week in order to experience the improvements (e.g three times a week for one hour; preferably not on consecutive days).

- Continuous participation in the balance program is needed, otherwise the benefits will not be maintained.
- 4 A fall prevention exercise program is appropriate for anyone with an increased fall risk.
- 5 A fall prevention exercise program can be done at home or in a group setting.
- 6 Strength training may be added to the balance training.
- A walking program can be added to the balance program. If new to a walking program, start with 20-30 minutes per session. Brisk walking programs should be implemented with caution.
- 8 If other risk factors are present (like an underlying diagnosis), a doctor's approval will be needed prior to starting a balance program.





## WALKING: AN EXERCISE FOR LIFE

Walking is popular because of its overall health benefits and increased physical activity level. It is a deeply practical exercise since walking is a mode of transportation we all need to use. It is also an exercise that offers variety - one can walk indoors, on a treadmill, and outdoors in many settings!

Though some of the most current research shows that walking as the sole form of exercise doesn't affect balance, we believe the benefit of increasing one's endurance makes walking a valuable exercise. Because falls are more likely to

occur when a person is tired, it is fair to assume that better endurance through a walking exercise program can help with preventing falls. Adding a walking program to effective fall prevention exercises has shown value in improving balance and decreasing falls.

Therefore, a walking program with a balance training program is appropriate for older people who live independently and are allowed by their doctor to exercise. It is recommended to perform the walking and balance program 3-5 times per week. A walking routine

can be developed by initially focusing on frequency and duration, and later on add walking intensity.

Additionally, we recommend a supervised (versus independent) walking program for people who have two or more of the following: use of a cane or walker, use four or more medications, have knee pain, and a history of two or more falls in the previous year.

Lace up your shoes, grab a friend, and start walking as a way to increase endurance and physical fitness!



## HOW TO GET UP FROM A FALL

The goal is always to lower the risk and prevent the chance of a fall, but in the event that it happens, there are safer ways to get up after falling

Marie-Louise Merkx-Quinn, PT, DPT, OCS, Dip MDT, CEEAA

Try not to panic!! Wait a few minutes until you feel calmer, then assess the situation.

If you find that you are injured or unable to get up, alert someone, by using your personal alarm, crawling to the phone, or banging on the wall to alert someone. While you wait for help, stay calm and try to keep warm. If you have fallen onto a hard floor, move to a softer surface. Try to crawl or shuffle onto a carpeted area (will be more comfortable plus helps to protect your skin).

Keep moving, as lying too long in one position may make you cold or cause pressure sore. If possible, roll from side to side or keep your arms and legs moving as much as possible.

If you feel confident you are able to get up, look for a firm piece of furniture that is close to you or the bottom of a staircase can also be used.

- 1 Gradually roll onto your side; turn your head first in the direction you want to roll, then move your shoulder, arm, hip and leg in the same direction. Lie still for a moment to let your blood pressure adjust.
- Push your body up slowly, lift your head, and gently get onto your hands and knees.
- Crawl (or drag) yourself over to that stable piece of furniture; again take a moment to rest and take a slow, deep breath.
- 4 Put your hands on the stable piece of furniture (e.g. the seat of a chair/couch), so you get into a kneeling position
- 5 Choose the strongest leg and slide that foot forward so it's flat on the floor. Your

other leg stays bent with the knee on the floor (plus the hands remain on the furniture!!).

- 6 Push through this foot and both hands yourself slowly up, and gradually bring your other foot forward so both feet are on the ground.
- 7 Turn yourself around so you can sit in the chair/couch
- Sit for a few minutes and assess how you feel. Let someone know what happened, you might not know if you've had a serious injury.
- Once you feel confident to move around without hurting yourself or falling again, keep an eye out for emerging pains or signs of an injury.

See page 49 for ways to help a loved one get up after a fall.

## FALLS SHOULD NEVER REMAIN A SECRET

Even though one in every four adults aged 65 and older experience a fall each year, fewer than half of these individuals tell their physician about it, according to the Centers for Disease Control and Prevention. These accidents are often seen as embarrassing indicators of a senior's decline and their impending reliance on others for assistance. It's natural to want to keep

these incidents a secret but doing so may limit a senior's independence in the long run because they do not receive proper support and learn about fall prevention measures.

Awareness of this problem can help family members work together to devise solutions and make a injuries were sustained and senior's home a safer place. This is crucial if falls are becoming more frequent. Small modifications like

reducing clutter, installing grab bars and purchasing a medical alert system can make all the difference.

Regardless of whether it is you or your aging loved one who experiences a fall, it's essential to notify a doctor about the event. He or she can make sure no suggest ways to prevent future tumbles.

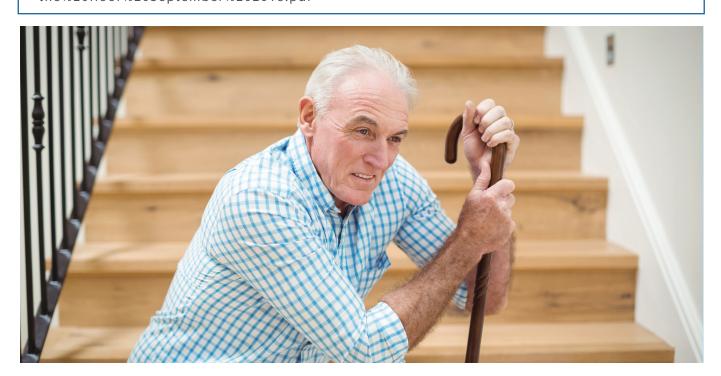
#### **SOURCES**

Bohannon R.W., & Lusardi M.M. (2004). Getting up from the floor: Determinants and techniques among healthy older adults. Physiotherapy Theory & Practice, 20(4), 233-241. Healthwise Staff. (2019, August 6).

Healthwise Staff. (2019, August 6). How to Get Up Safely After a Fall. Michigan Medicine, University of Michigan. Retrieved from https://www.uofmhealth.org/health-library/abl3081

Dean, S. G., Leon, P., Warmoth, K., Goodwin, V. A., Stiles, V. H., & Taylor, R. S. (2019). Independently getting off the floor: a feasibility study of teaching people with stroke to get up after a fall. International Journal of Therapy & Rehabilitation, 26(2), 1-17.

Getting Up From The Floor. (2018). NHS Cambridgeshire and Peterborough Falls Prevention Services. Retrieved from https://www.cpft.nhs.uk/Documents/Falls Getting%20up%20from%20 the%20floor%20September%202018.pdf



# HELP A LOVED ONE GET UP AFTER A FALL

- 1 Stay calm and encourage the person who fell to stay calm and take slow, deep breaths.
- 2 Scan for injuries like bruises, bleeding, possible sprains or broken bones.
- If a serious injury is present (like a broken bone or a head gash), encourage the person to stay still and calm. Call 911, and keep the person warm, comfortable, and as still as possible until help arrives.
- 4 If the person is not badly hurt, and would like to get up, proceed slowly. Keep in mind that the fallen person needs to be able to do the physical work required of getting up themselves. Your role is to guide them through the steps and keep them steady. If this is not possible, call 911.
- 5 Stop at any point in the process of getting them up from the floor when needed (when pain, fatigue, dizziness, or shortness of breath is experienced).

- 6 Find two sturdy pieces of furniture (couch, chair, stair), and place one next to the person's head and the other one down by their feet.
- Assist the person to roll over onto their side, starting with the head, and guide them in getting onto their hands and knees.

  If needed, put a towel or pillow under the knees to make kneeling more comfortable.
- 8 Ask the person to put both hands on the seat/couch/stair, and to put the strongest leg forward while placing that foot flat on the floor (senior should look as

being in a kneeling lunge).

- Move the second chair directly behind the person; ask her/him to use both arms and legs to push themselves up and sit back into the chair you have ready. You can use your hands to assist with stability, but make sure the senior does the physical work themselves.
- 10 Ask the senior to stay seated until she/he feels confident and calm enough to stand up and move around without hurting themselves or falling again.





CALVIN UNIVERSITY 3201 BURTON ST SE GRAND RAPIDS, MI 49546-4301