



# Fall Prevention

for Older Adults with Alzheimer's Dementia

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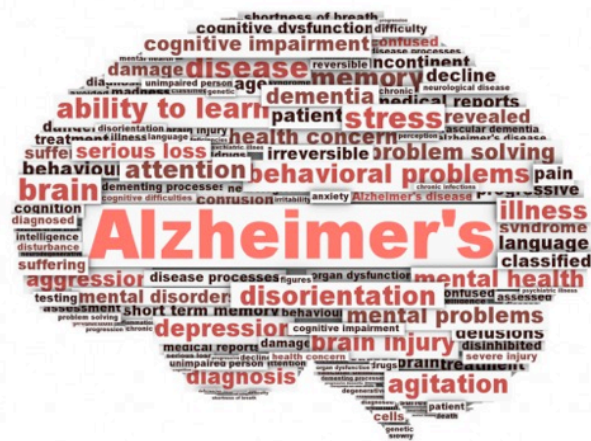
# Objectives

After presenting the presentation to the nursing staff will:

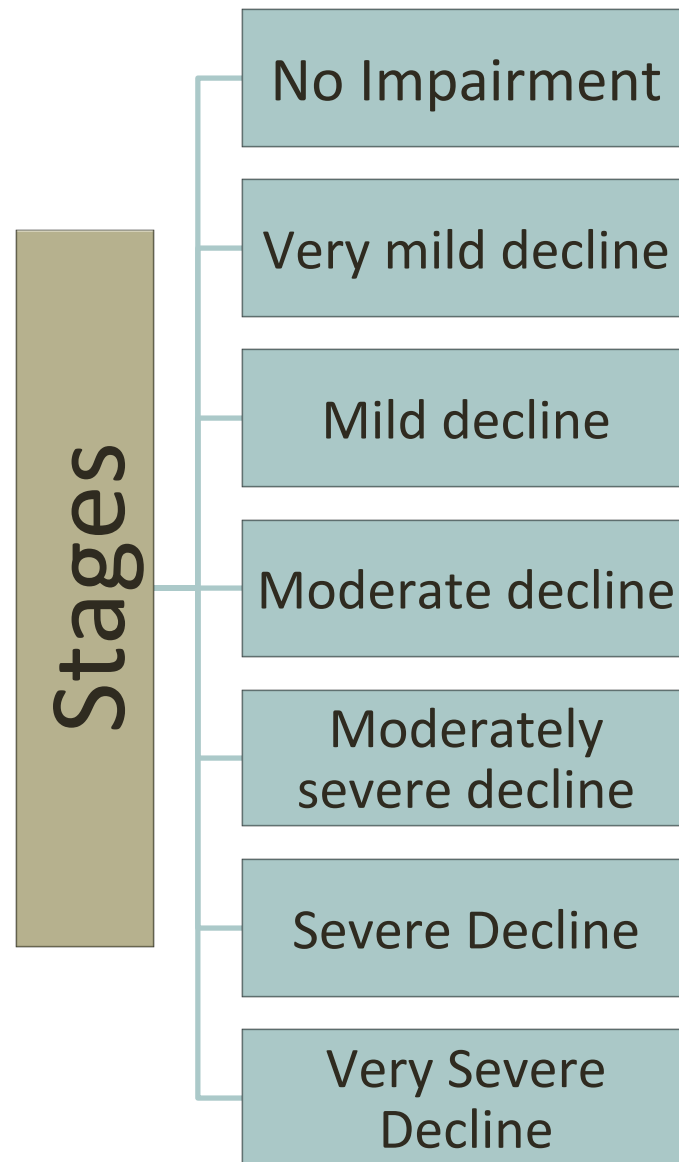
1. Understand the importance of physical activity for older adults with Alzheimer's dementia
2. Be educated on an evidence-based exercise program for their participants
3. Be able to implement the fall prevention exercise program for the residents at the facility

# Alzheimer's Disease<sup>1</sup>

- The most common type of dementia (60-80%)
- Affects ~5 million Americans
- Estimated that ~16 million people will have Alzheimer's Disease (AD) by 2050
- Cost of caring=226 **billion** dollars in 2015



# Alzheimer's Disease: Stages<sup>1</sup>



# The Truth About Falls

- General Facts<sup>2</sup>

- One-third of people >65 years old fall each year
- In 2013, ~ 25,500 older adults died from unintentional fall injuries
- Most older adults do not tell their doctor that they have fallen
- Every 29 minutes an older adult dies from a fall.

# The Truth About Falls

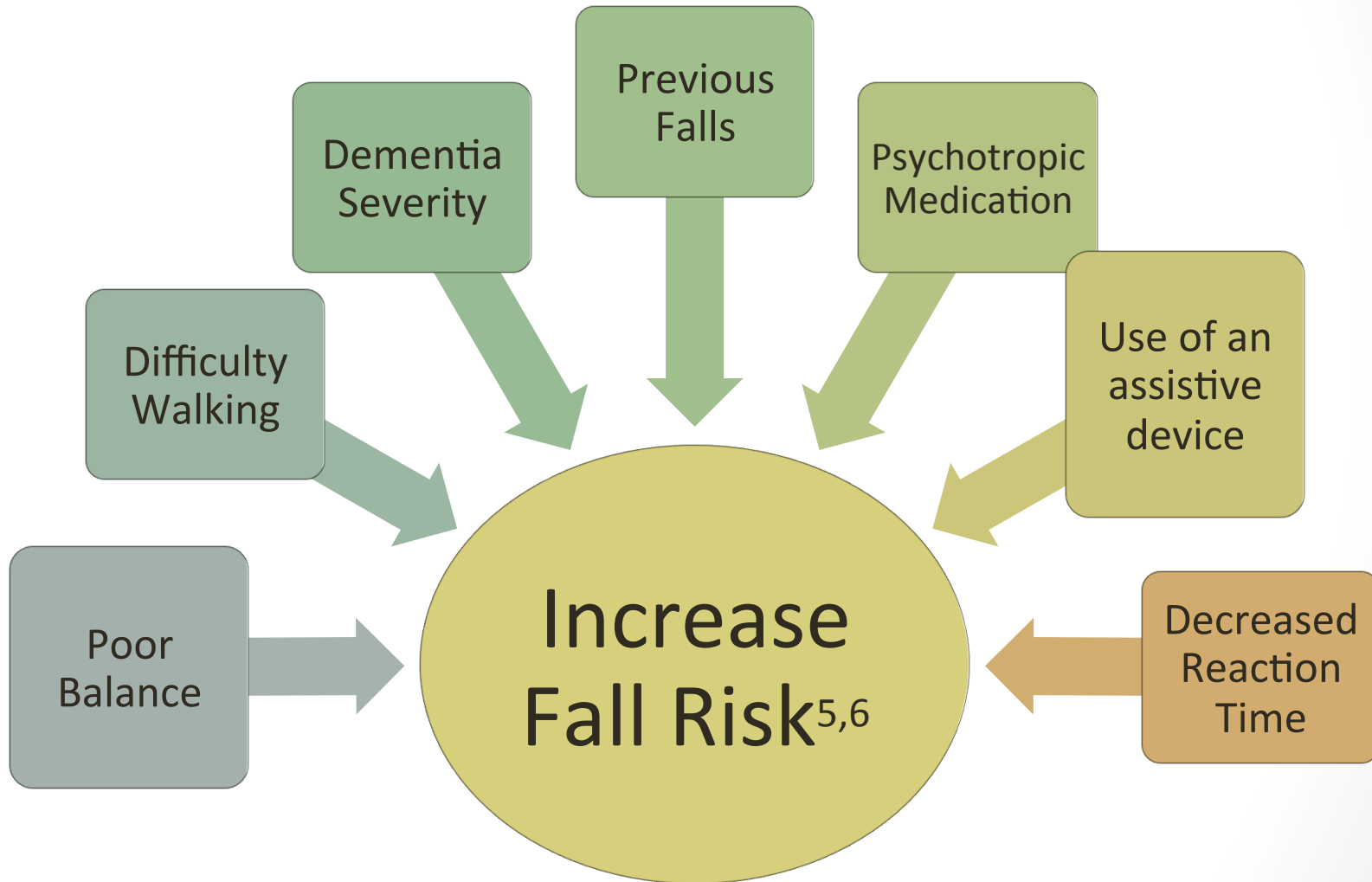
- General Facts<sup>2</sup>

- 1 out of 5 falls causes a serious injury such as a head trauma or fracture.
- Over 2 million older adults are treated in emergency departments for nonfatal fall injuries each year.
- Direct medical costs for fall injuries total over \$28 billion annually. Hospital costs account for two-thirds of the total.

# Falls & Alzheimer's Dementia

- People with AD are 2-3x more likely to fall<sup>3,4</sup>
- 47% of people living in the community with (AD) >65 yrs fall at least once every year<sup>3</sup>
- 60% of those injured after a fall sustain a fracture<sup>3</sup>
- Falls often lead to functional limitation, loss of independence, loss of confidence, associated illness and can lead to an early institutionalization<sup>3,4</sup>

# Falls & Alzheimer's: Common Factors





# How to Prevent Falls



## 1. Exercise to improve balance

## 2. Home Safety

- Caregivers can modify the home environment to reduce clutter and improve lighting

## 3. Medication Review

- The doctor or pharmacist should check *all* medications (including prescription and over-the-counter) for possible interactions and side effects -- like drowsiness, dizziness, and cognitive "slowing" -- that can increase falls risk.

## 4. Have Vision Checked

- Poor vision can lead to falls

# Benefits of Physical Activity for those with Alzheimer's Disease<sup>7,8</sup>

Decreases Fall risk

Decreases Restlessness

Related to decreased incidence of dementia  
& can delay the progression of the disease

Promotes functional independence

Helps prevent social isolation, loneliness and depression

# Balance Program for People with Alzheimer's Dementia



**OTAP**  
PREVENTION. CARE. RECOVERY.  
Te Kaitiaki Takekōwhiri Whānau

**Otago Exercise Programme**  
to prevent falls in older adults

A home-based, individually tailored strength and balance retraining programme

Balance Program was adapted for those with mild-moderate Alzheimer's dementia

Based on the Otago Exercise Program<sup>9</sup>

# Otago Program for Dementia

Program Schedule	Otago Program <sup>9</sup>	Otago Program for Alzheimer's Dementia <sup>4</sup>
Intensity	Moderate	Moderate
Frequency	3x/week with rest between each day	5x/week (can perform everyday)
Duration	30 minutes (not including walking) Exercises can be divided throughout the day	15 minutes (not including walking) Exercises can be divided throughout the day

\*\*\*Walk at least 2 times per week for 15-30 minutes<sup>9</sup>\*\*\*

# Who is Appropriate?<sup>13</sup>

- Need to be able to follow one step commands
- Walks without the physical assistance of another person (assistive device allowable)
- Has NOT had an orthopedic surgery (example: total knee replacement) within 3 months
- No recent cardiac surgeries within 6 months or unstable cardiac issues

# Simplify Communication

By providing....

Simple  
sentences

Yes/no  
questions

Verbal  
cues

Tactile  
cues

Demonstration

# Exercise Protocol

Duration	Activity
5 minutes	Warm-up Exercises
15 minutes	Balance Exercises
10-15 minutes	Walking

# Warm-Up Exercises

Head  
Movement

Neck  
Movement

Ankle  
Movement

Back  
Extensions

Trunk  
Extension





# Balance Exercises

Knee Bends with and without support

Backwards Walking

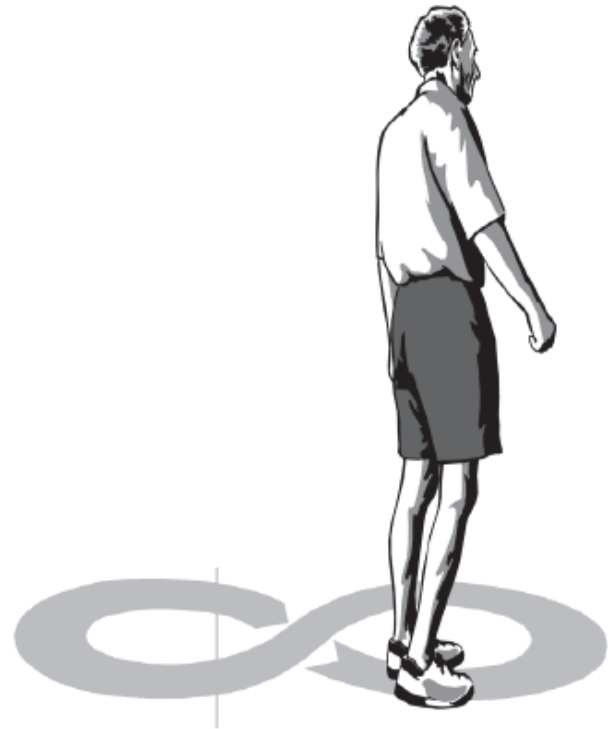
Sideways Walking

Heel-Toe Standing

Heel-Toe Walking

One leg stand

Sit-to-stand Two Hands

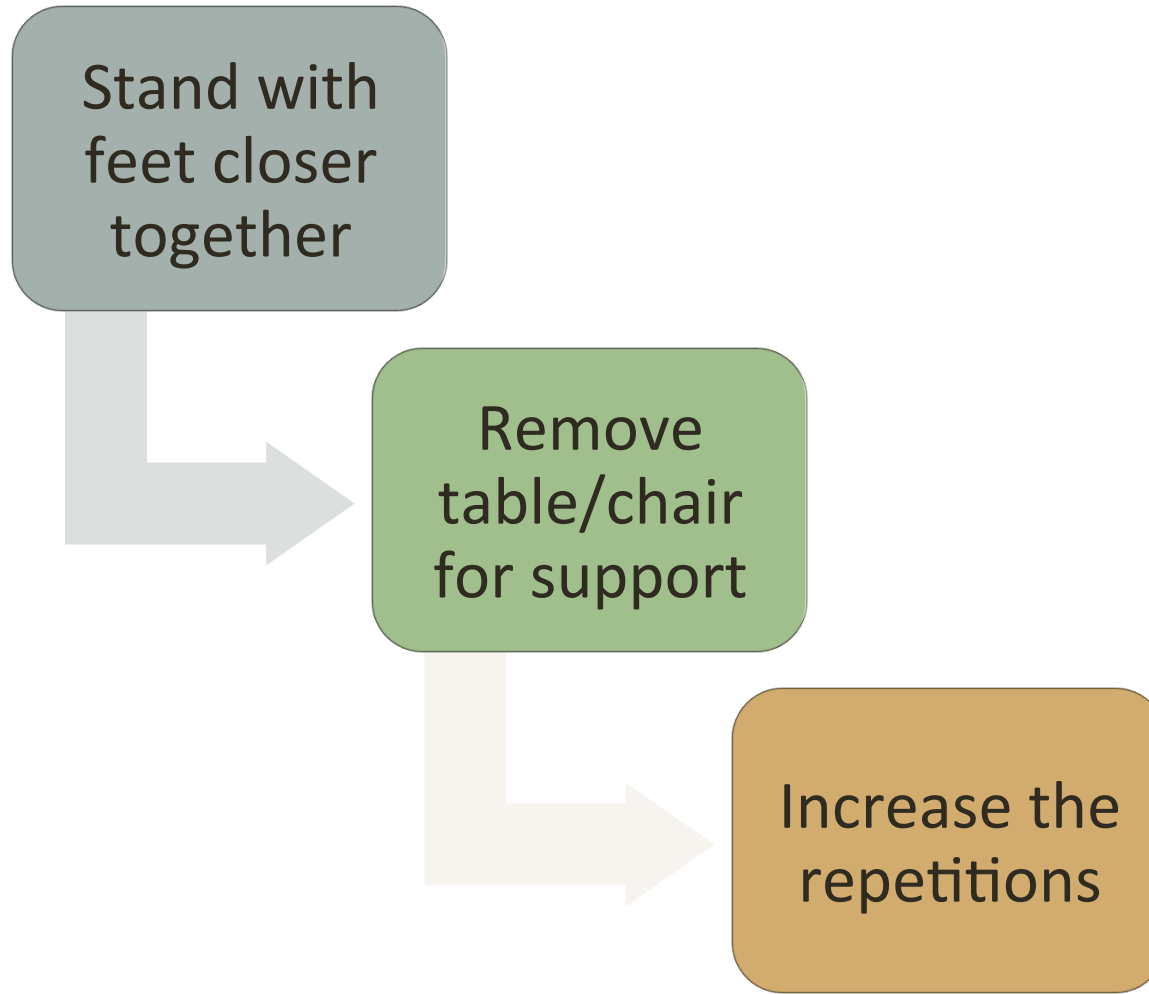


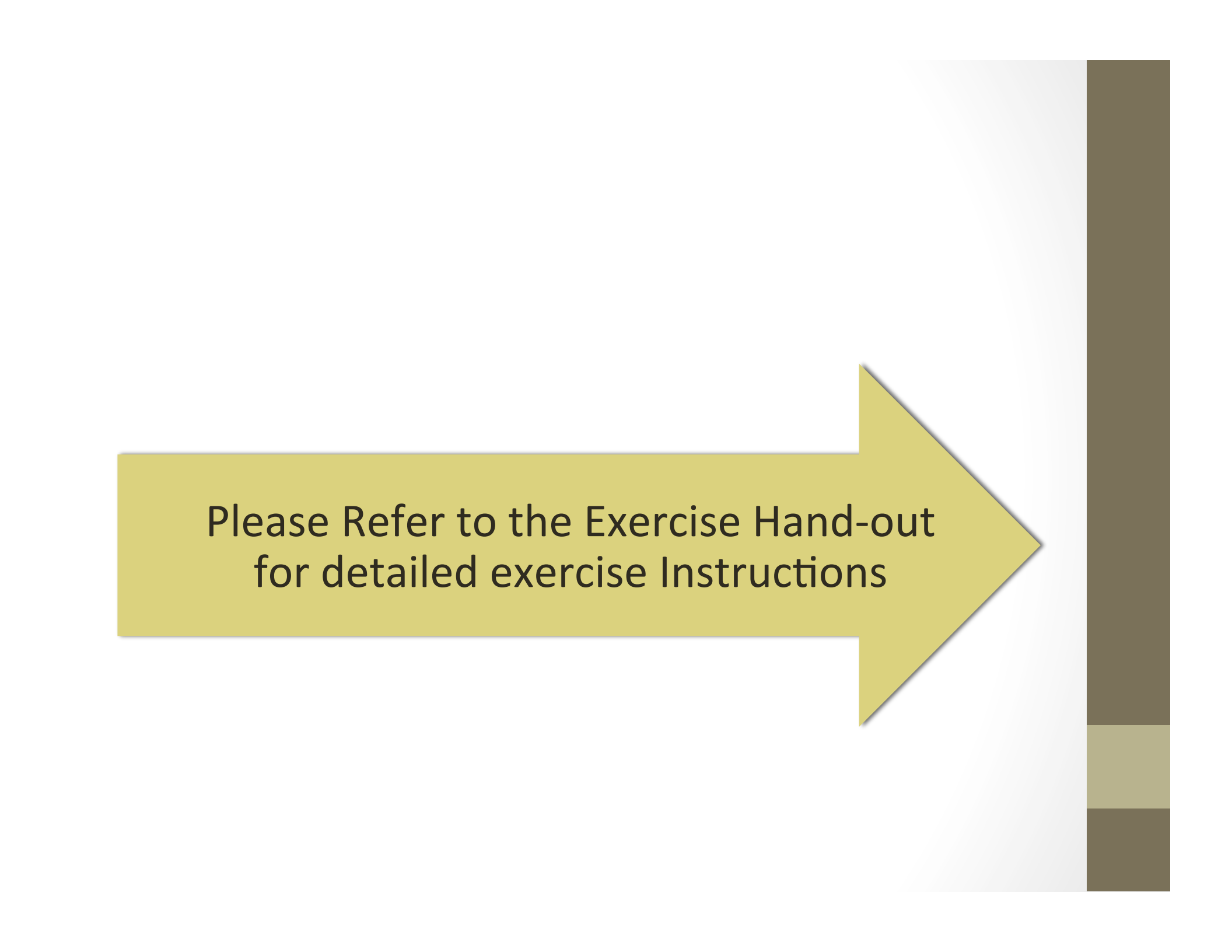
# Walking

Walk at least 2 times per week for  
15-30 minutes.



# How to Progress Exercises





Please Refer to the Exercise Hand-out  
for detailed exercise Instructions

# Online Resources

- Otago Resources:  
<http://www.med.unc.edu/aging/cgec/exercise-program/videos>
- Alzheimer's Association: <http://www.alz.org/>
- Center for Disease and Control: [www.cdc.gov](http://www.cdc.gov)
- National Institute of Aging: Alzheimer's Disease and Education Referral [www.nia.nih.gov](http://www.nia.nih.gov)

# References

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Thank You!  
Any Questions?

