

Falls prevention & physiotherapy



Working together to prevent falls



Education program developed by: Boroondara Primary Care Partnership

This is a detailed education program. There are four sessions, each developed to run for 2 ½ hours, to groups of up to 20 people. Sessions are conducted by multi-disciplinary staff and target seniors (and their families/carers) who have a moderate to high risk of falls. Sessions include:

- 1) general health and medication;
- 2) home safety and public safety;
- 3) exercise and fitness, and feet and footwear; and
- 4) vision and healthy diet.

The manual includes a program outline, sample letters, handouts (although it has also been designed for discipline specific handouts to be provided by the various disciplines presenting), evaluation forms and a participant falls risk check list. The program also includes discipline specific PowerPoint presentations.

(Downloadable)

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In 2005 the Department of Human Services funded the National Ageing Research Institute to review and recommend a set of falls prevention resources for general use. The materials used as the basis for this generic resource were developed by Boroondara Primary Care Partnership under a Service Agreement with the Department of Human Services. This and other falls prevention resources are available from the department's Aged Care website at: <http://www.health.vic.gov.au/agedcare>.

FALLS PREVENTION & PHYSIOTHERAPY



By: <name>

Physiotherapist

Balance systems

- The nervous system, including:
 - the brain
 - the brainstem
 - the neuromuscular system
- Vestibular systems
- Vision

Vision

- Visual acuity declines
- Contrast sensitivity diminishes
 - missing edges, gutters and uneven pavements resulting in trips and falls
- Dark adaptation time increases
- Depth perception and peripheral vision decreases

Peripheral sensation

- Vibration sense decreases with time after the age of 65
- The decline is more prominent in the legs than in the arms

Reaction time

- There is an average increase in reaction time of 26% from the age of 20 to 60
- Adequate reaction time allows for adjusted muscle activity to regain postural stability and to avoid falls

Muscles

- Muscle strength decreases after the age of 40. This decline commences earlier and at a greater rate in women
- Women have 60-70% of the strength of men of the same age
- Muscle weakness in the legs results in practical implications such as difficulties in climbing stairs and rising from chairs

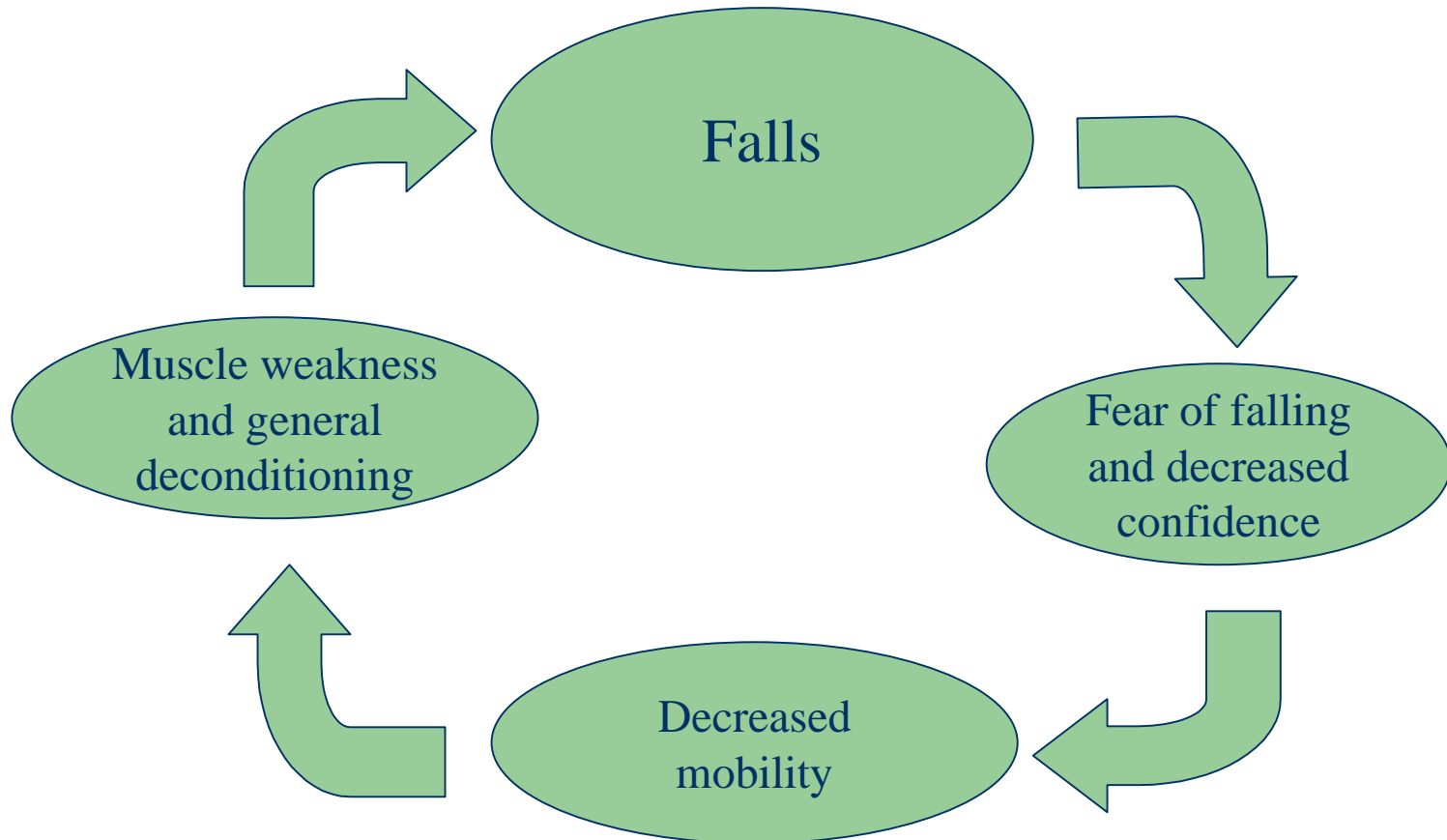
Bones

- Bone density decreases due to
 - decreased remodelling process
 - decreased physical activity
 - decreased muscle strength (pull of muscles puts beneficial stress on the bones, which stimulates bone formation)

General health

- Declining health due to illnesses such as stroke and Parkinson's disease can rapidly change and impair functional activities such as:
 - balance
 - walking

Falls flowchart



Successful falls prevention strategies

- Tai Chi
- Home exercise programs (incorporating balance and strength exercises)
- Group exercise programs (incorporating balance and strength exercises)
- Strength training

Benefits of physical activity & exercise

- Improves flexibility
- Improves joint range of movement
- Strengthens muscles
- Strengthen bones
- Improves circulation & function of heart and lungs
- Improves balance and coordination
- Increases energy and stamina
- Improves quality of sleep and promotes feeling of wellbeing

Guidelines for exercises

- Exercises should be tailored to the individuals needs (see a physiotherapist for advice and consult your doctor if you have any concerns or a medical condition which might restrict your physical activities)
- Start with 3-5 repetitions and gradually increase to 10
- Exercise slow and smoothly
- Don't hold your breath while exercising
- Don't exercise through pain
- Increase the effort of strength exercises by use of weights
- Challenge your balance by reducing the base of support

Application of walking aids

- Provide relief from arthritic pain by reducing weight bearing and supporting the joint
- Assist mobility while recovering from surgical procedures or recuperating from an illness, which has resulted in frailty and decreased mobility
- Provide stability when one's balance is impaired
- Improve posture and gait pattern
- Improve confidence and **INDEPENDENCE**

Acknowledgement



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