Fall Prevention- Staying Vertical

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FALLS and the Elderly

“STAGGERING STATISTICS”

- 30-50% community living elderly over 65 yrs old fall EVERY year (Hornbrook, 1994; Hausdorff, 2001)
- 54% of falls occur in & around the home (DeVito etal, 1988)
- Cost of falls is $10 Billion per year
- Leading cause of hospitalizations (69%) (Kent, 1994)
- 75% of ER visits by Elderly are due to a fall
- 50% of elders over 75 who have a fall-related hip fracture will die within 1 year of injury
More statistics

- 40-80% Never regain their previous level of functional mobility following a hip fx.
- Falls account for ½ of accidental deaths in Elderly
- 50% of those hosp. with fall-related injuries are discharged to a nursing home. (Sattin RW et al, 1990)
- The fear of falling discourage elders from being active which then increase the fall risk
- Of those who fx, 54% fall AGAIN within 6 months.
Balance What is it – Quick Review

Keeping the body upright in equilibrium whether it be static or moving.

Postural control and balance control both refer to keeping or returning the body to its equilibrium.

Keeping the body’s center of gravity (COG) within the borders of the base of support (BOS)
Balance Control

- Extrinsic Factors
- Intrinsic Factors
- Physical Abilities:
  - Posture and postural control strategies
  - Flexibility
  - Strength
  - Somatosensory integration
Extrinsic Risk Factors

- The floor: rugs, slippery floors, cords, wires, clutter, unrepaired surfaces
- Furniture: clutter, unstable, low chairs, low/high beds, low/high cabinets
- **Lighting**: glare, dimly lit, no night-lights
- Bathroom: low seats, no bars, unsafe bathing
- Home entry/exit
- Ground surfaces: wet leaves, snow, ice, rocks
Intrinsic Risk Factors

Age: > 80
Medical Conditions & Diseases:
- Postural hypotension
- Foot problems
- Parkinson & other neuromuscular diseases
- TIA, CVA
- Arthritis
- DM
- Urinary Incontinence
- Heart Disease
- Acute Illness
More Intrinsic Factors

- Visual impairments - need color differences between wall and floor,
- Mental impairments: depression, poor judgment or dementia
- Walking speed
- Sensation & impaired reflexes
- Functional abilities: use of walker, cane
- History of falls
- Strength and overall mobility
MEDICATIONS:

- Benzodiazepams (antianxiety including Xanax, Valium, Ativan, etc)
- Cardiac meds
- Diuretics
- Antihypertensives
- Alcohol
- Antiparkinson drugs
- Antipsychotics
- Sedatives (Restoril, Trazodone, Phenobarbital)
- Antidepressants (Elavil, Prozac, Paxil, Zoloft)
- Medications to control dizziness (Meclizine, Phenergan, Valium)
Physical Components of Balance

- Posture and maintaining upright position
  normal sway & static posture
- Postural control strategies:
  - Ankle
  - Hip
  - Step
- Flexibility & strength of ankles, knees, hips, spine
- Sensory systems
Sensory Systems

👀 Eyes- Vision
跛 Feet-Somatosensory: spatial location, touch, vibration, pain
耵 Inner Ear- Vestibular: movements of the head

These systems work together to tell us who is moving- us or the environment.
Sensory Systems

These systems are CRITICAL to successful balance training.
They are under-assessed.
Assess each individually & collectively.
Changes with Age

- All systems continue to operate –though not as “sharp” or quick
- Combined with medical conditions & side effects of medication(s) --- maintaining balance becomes much more difficult
Balance & Fall Screens

- Nursing performs fall risk assessment as part of admission
- Assessments are important whether part of assisted living, ICF, SNF, or in community.
- Those individuals at risk need further assessment to identify impairments & reduce fall risk.
Balance Tests

- Use different tools depending on the level of physical functioning.
- A complete listing of intrinsic risk factors should be included as well as a fall history.
- Thorough understanding of balance is the foundation for balance testing & successful rehabilitation.
- MUST include review of medications which are known to effect balance & dizziness
Therapy

For those impairments that can’t be “fixed”, training focuses on compensation and protection.

Thorough analysis will guide effective intervention.

Emphasis on prevention of future falls.

Modify environment.

Goal: Limit falls but when a fall occurs, bounce not break.
Restorative

- Keep active
- Pt to do as much for themselves as possible in a protective environment
- Every bit of activity from pushing own wheelchair to rolling self in bed helps
- Must be in fitness program to maintain bone health.
- If you don’t use it you lose it.
All staff

- Keep clutter clear
- Give patient time to do the task themselves
- Encourage more exercise
- Stand upright
- Flat shoes with firm soles
- Glider rockers are great to increase activity
Fall Prevention

- It is everyone’s responsibility
- Greatly impacts Quality of Life and Dignity issue
- Upright posture
- Every resident needs to be in Restorative (CNA need to instruct more - and do less for patient)