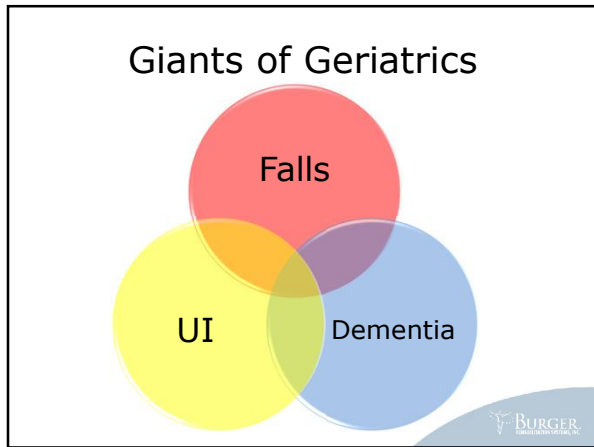



Incontinence and Falls: Giants of Geriatrics

Elizabeth Gomes, MS, OTR/L
Regional Director Burger Rehabilitation



Objectives

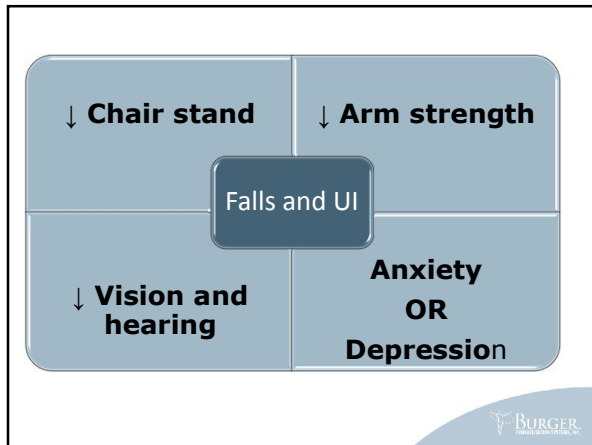
- Raise awareness of why OTs should treat this
- Understand the connection between falls and UI
- Understand types and causes of UI and causes of falls
- Know how to assess for each
- Know evidence based treatment techniques
- Be able to begin to implement programs



Why They're Important

- Falls – leading cause of death by injury among elderly
- 44-55% women over 65, 11-22% men
- Lawsuits
- UI – affects an estimated third of elderly
- UI – costs estimated at \$76.2 billion/year (2015)
- Falls and UI increase SNF placement





**Both
Require
Multi-factorial
Multi-disciplinary
Approach**



Muscles work synergistically for function

- Pelvis
- Trunk / Core
- Low back
- Lower extremities
- Weakness and muscle imbalance can increase risk of both

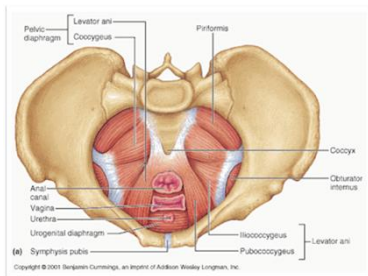


Why It's So Important to Treat UI

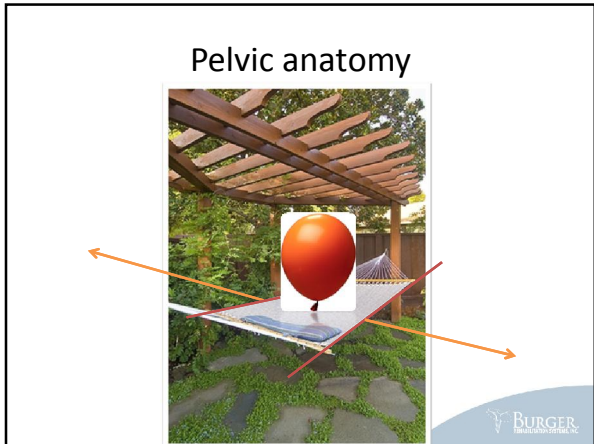
- Shame and embarrassment
- Depression
- Isolation
- INCONTINENCE IS NOT AN INEVITABLE PART OF AGING



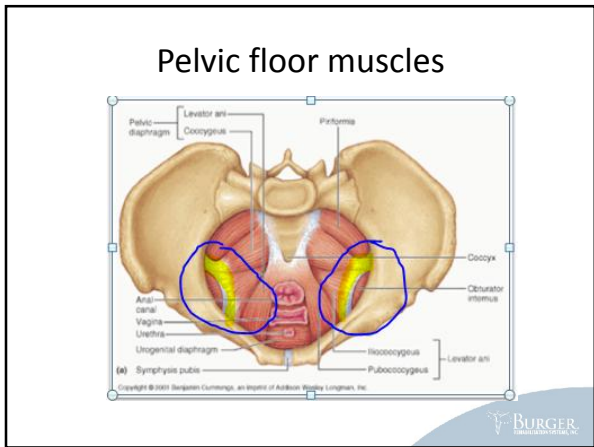
Pelvic floor muscles

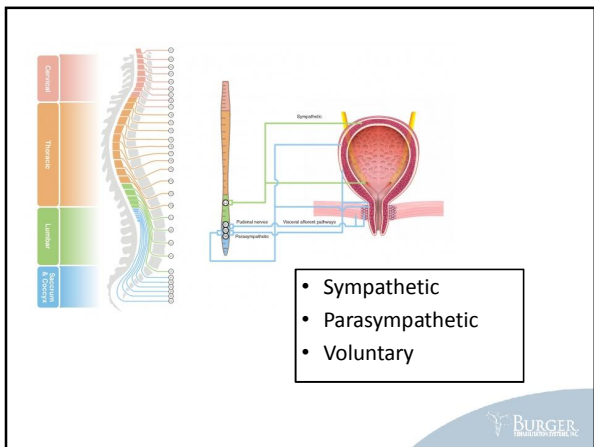


Pelvic anatomy



Pelvic floor muscles





Changes with Aging

- With aging proportion of muscle fibers to connective tissue decreases
- Less able to effectively locate and isolate muscles of pelvic floor
- Kegels become less effective as sole treatment for UI



Transient Causes

- Delirium**
- Infection**
- Atrophic vaginitis / urethritis**
- Pharmaceuticals**
- Excess output**
- Restricted Mobility**
- Stool impaction**





Chronic Causes

- Weakness**
- CNS imbalance**
- Functional deficits**
- Decreased sensation**
- Anatomical impairment**





Female / Male


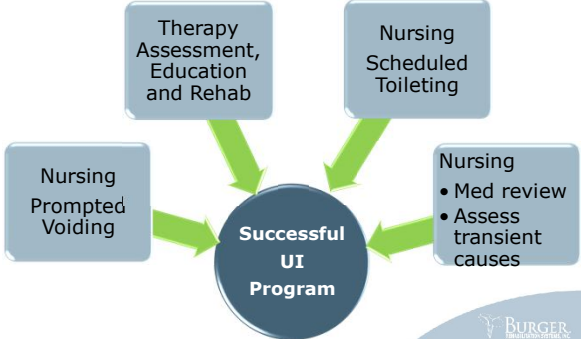
- Up to 85 women are 2x more likely to have UI
- After 85 occurrence is about equal




Team Effort



Protocol




Contributing Factors	Lifestyle Factors
<ul style="list-style-type: none">• Obesity• Constipation• Smoking• Certain medications	<ul style="list-style-type: none">• Inactivity• Decreased liquid intake• Bladder Irritants




Medications

Contribute to UI	Side effects of drugs used to tx
<ul style="list-style-type: none">• Diuretics**• Sedatives**• Muscle relaxants**• Narcotics• Antipsychotics**• Antidepressants**• Antihistamines	<ul style="list-style-type: none">• Blurred vision• Change in mental status• Dry mouth• Dry skin• Tachycardia• Weakness• Orthostatic hypotension




Bladder Irritants

- Caffeine – coffee, tea, colas
- Alcohol
- Acidic fruits
 - Citrus, grapes, berries, kiwis, etc..
- Chocolate
- Spicy food




Types of UI

- Stress
- Urge
- Mixed
- Overflow
- Functional




Stress Incontinence

- Loss of urine when abdominal pressure exceeds strength of pelvic muscles
 - Coughing
 - Sneezing
 - Laughing
 - Standing up
- Caused by weakness in pelvic muscles
- Key ? – “Do you ever lose small amounts of urine when you laugh, sneeze, etc..?”



Urge UI – Overactive Bladder

- Loss of large amount of urine with little warning
 - Frequent feeling of needing to toilet shortly after using bathroom
- Imbalance of ANS
- Key ? – “Do you ever lose large amounts of urine with little warning?” “Do you feel the need to urinate very frequently, even when you’ve recently used the toilet?”



Mixed Incontinence

Mixed Incontinence

- Combination of stress and urge incontinence
- Key ?s – same as for stress and urge

Overflow

- Obstruction of bladder outlet causes frequent “dribbling”
 - Enlarged prostate
 - Abdominal tumors



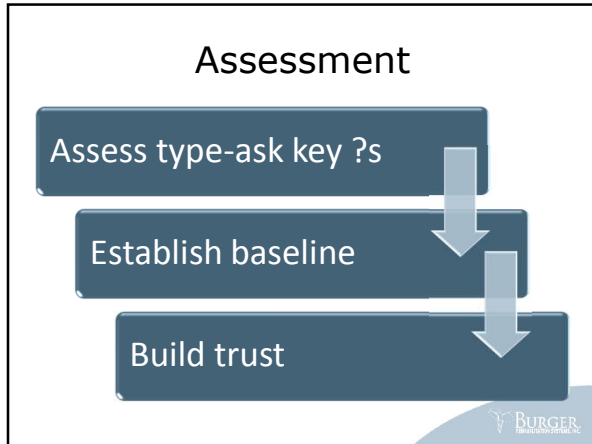
Functional UI

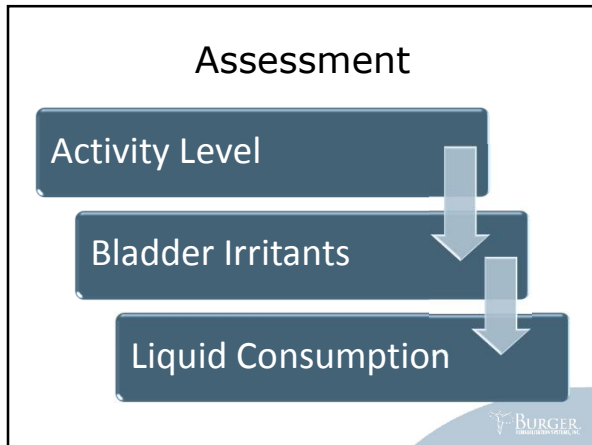
- Decreased transfers
- Mobility
- Hand function
- Balance

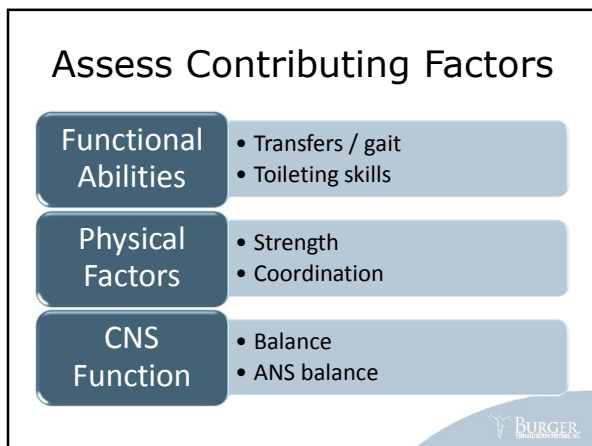


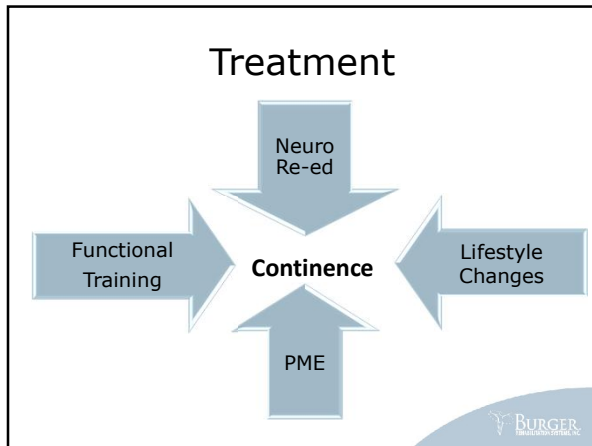
**The solution:
A Multi-factorial
Multi-disciplinary
Approach**












- ### Lifestyle Changes
- Increase activity
 - Normalize liquid intake
 - Reassess timing of drinking
 - Reduce use of bladder irritants
 - Change behaviors that contribute to UI
- BURGER

- ### Substitutes for Irritants
- Low acid fruits
 - Melons
 - Apricots
 - Peaches
 - Pears
 - Herbs instead of spice
 - Decaffeinated beverages
- BURGER


Treatment – Stress UI

- Lifestyle changes
- Strengthen pelvic floor and associated muscle groups




Associated Muscles

Obturator Internus	Transverse Abdominus
Adductors	Diaphragm




Exercise principles

Overload	• "Somewhat Hard" to "Hard"
Specificity	• Target correct muscles
Maintenance	• Continue strengthening to maintain gains




Treatment – Urge UI

- Lifestyle factors
- Reduce bladder irritants
- Correct toileting patterns that contribute to UI
- Strengthen pelvic floor etc.
- Add neuro re-balancing
- Double void
- Positional changes




Neuro Re-balancing

- Heel clicks
- Diaphragmatic breathing
- Contract / relax
- Progressive relaxation
- Hand warming



Documentation

“Relaxation”



Cognition May Not Be a Barrier

Scheduled Voiding

- Typically every 2 hours
- Schedule should be individualized

Prompted Voiding

- Recognize signs
- Prompt to toilet
- Praise whether actually voids or not
- Provide feedback



Goal Writing



- Incontinence episodes
- # of voids / day
- Amount of urine lost



- Ability to participate in valued activities
- Improved sleep



Objective Data

Prior Level of UI

of Episodes / day

of Sleep Disturbances

Pad type / # of changes



More Objective Measures

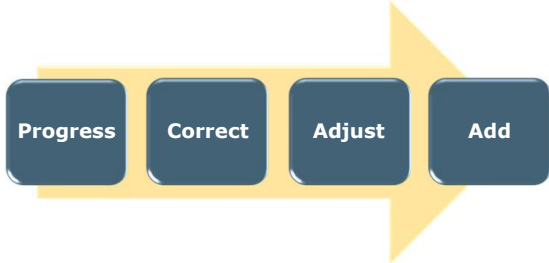
Functional Measures

Time to Delay Void

Falls Related to UI



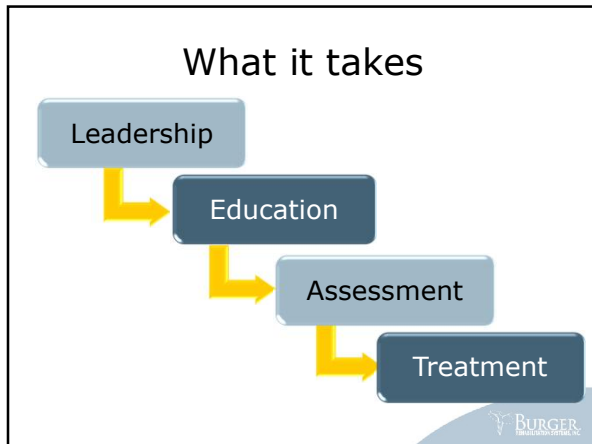
Documenting Ther Ex



Adaptations

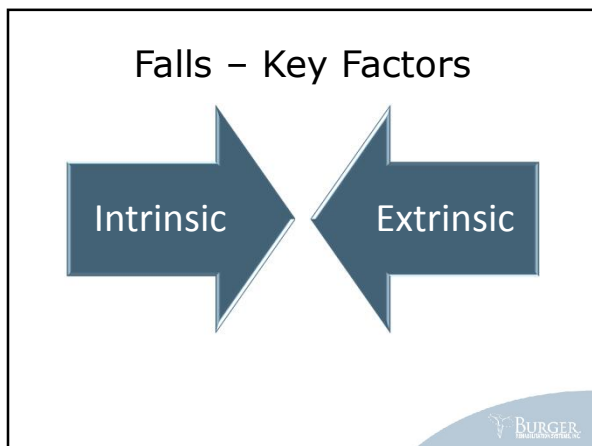
- Adapt clothing
- Urinal use for those who can't easily get out of bed
 - Male and female





- ### Keys to Success!
- Start with those most likely to succeed
 - New onset, intact cognition, very small numbers
 - Build team consensus
 - Reward cooperation
 - Celebrate success





Intrinsic – Normal Aging

- Decreased muscle mass / strength
- Vision changes and diseases
- Pathology
 - Cardiovascular
 - Cardiopulmonary
 - Arthritis
 - Neuropathy
 - Low vision



Blood Pressure

- Orthostatic hypotension
 - > 20 point decrease systolic
 - > 10 point decrease diastolic
- Post-prandial hypotension



Dementia

- Decreased safety awareness
- Perceptual changes with aging

Depression

- Decreased activity
- Decline in strength
- Internal preoccupation




Vitamin D

Vitamin B12




- Fear of falling again
- Decreased activity
- Decline in strength
- Greater risk of falling

When someone falls



Extrinsic Factors

- Environmental hazards
- Lighting
- 4 or more medications
- Footwear
- Multi-focal lens glasses




Predictors

- Previous fall
- 4 + Meds (benzodiazepines, sedatives)
- Lower extremity weakness / disability
- Vision impairment
- Urinary incontinence

More Risk Factors = More Falls

Many falls can be prevented




A Multi-factorial Multi-disciplinary Approach



Path to Fall Reduction

- Pre-falls assessment of risk factors
- Post fall assessment of same
- Reduce risk factors




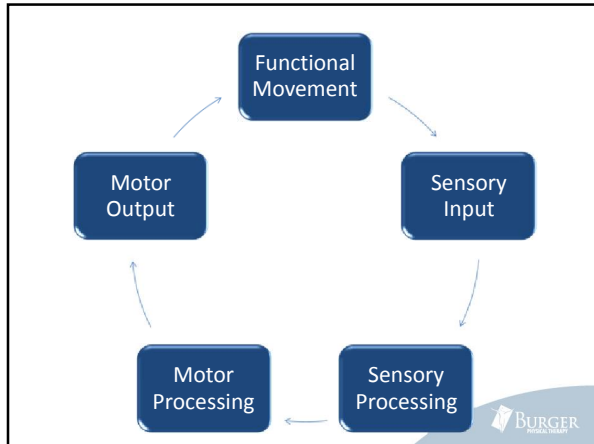
High Quality
Evidence-Based
Patient-Centered
Therapy

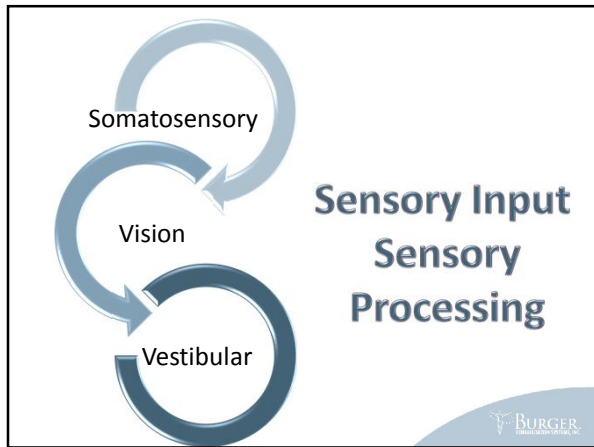


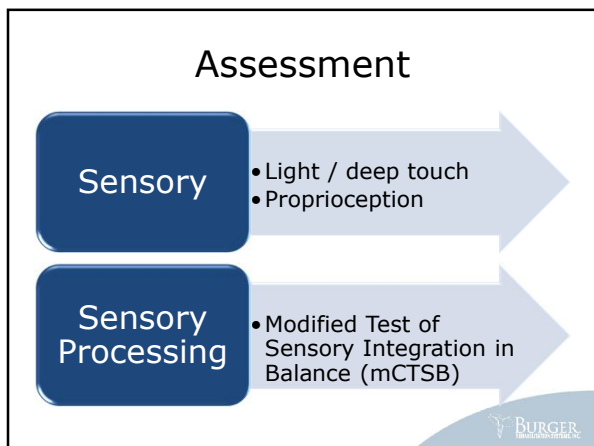
Assessment

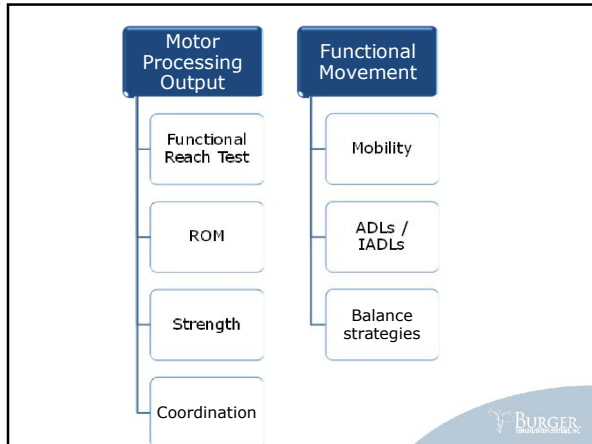
Extrinsic factors ← → Intrinsic factors













Assessment of Functional Movement

- Timed Up and Go
- Sitting Balance Scale
- Berg Balance Test
- Activities Specific Balance Confidence Scale (ABC)
- Dynamic Gait Index





Treatment

- Environmental modification
- Review of medications
- Vitamin D supplementation
- Footwear review
- Blood pressure checks
- Nutrition and hydration review
- And TREAT UI!




Meds - High Correlation

- Antidepressants**
- Sedatives**
- Anticonvulsants
- Type 1A Antiarrhythmic
- Digoxin**
- Diuretics**




Treatment - Sensory Processing

- Start where patient can succeed
 - Sitting firm surface
 - Sitting compliant surface
 - Standing firm surface
 - Standing compliant surface
- Add progressive challenges
 - Position / surface
 - Low light




Treatment - Motor Processing

- Challenge
 - Reach - multidirectional
 - Direction change during functional mobility
- Patient-centered therapeutic activities
- Increase speed
- Increase resistance
- MAKE IT FUNCTIONAL!!!



Treatment – Motor Output

- Improve
 - Core strength
 - ROM
 - Sit to stand



Thank you!

Elizabeth Gomes, MS, OTR/L
egomes@burgerrehab.com

