



Health Concerns of our Age-Gifted Seniors

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Objectives



- Strategies for Fall Prevention
- Diagnosing Dementia
- Addressing Polypharmacy
- Screening for Osteoporosis
- Addressing Incontinence
- Staging Pressure Ulcers
- Recognition of Common Sensory Disorders
- Define Hospice and Palliative Care



Gait Dysfunction and Falls

- ▶ According to the CDC, unintentional injuries, including falls, are now the fourth leading cause of Death in the US
- ▶ According to the AGS, at least 20% of community dwelling older adults admit to difficulty with walking or require assist with mobility
- ▶ Each year approximately 30% – 40% of community dwelling patients ≥ 65 experience a fall, while approximately 50% of long term care residents experience a fall*




Question # 1

- ▶ A 76 year old female presents to your office with her family. She reports a two week history of frequent falls, however, she denies any injury. Her past medical history includes T2DM, HTN, and Depression. She is currently on Metformin, Simvastatin, Aspirin, and was recently started on Lorazepam by her psychiatrist. She is not on any anti-hypertensive. Her family is concerned that this is a sign of Parkinson's disease. After a thorough and normal examination your first recommendation is:
 - a) Immediate Neurology consultation
 - b) Trial wean off of Lorazepam
 - c) Brain CT
 - d) Begin Midodrine
 - e) Discontinue Metformin



Gait Dysfunction and Falls

- ▶ Gait dysfunction is generally multifactorial with causes including; DJD, Dementia, Musculoskeletal deformities, Stroke, Orthostatic hypotension, and Fear of falling
 - ▶ Medications are frequently implicated as a causative factor in falls with common classes including; Benzodiazepines, Antipsychotics, Cardiac meds, Hypoglycemic meds, and Antidepressants
- 



Question # 2

- ▶ The most recent USPSTF recommendation for fall prevention in community-dwelling adults ≥ 65 who are at an increased risk for falls includes what interventions?
- a) The USPSTF found insufficient evidence to make any recommendation on interventions in fall prevention
- b) Exercise or Physical Therapy and/or Vitamin D Supplementation
- c) Exercise alone
- d) Physical Therapy and daily Aspirin
- e) Daily Multivitamin

Gait Dysfunction and Falls

Clinical Summary of U.S. Preventive Services Task Force Recommendation

Clinical Summary of U.S. Preventive Services Task Force Recommendation

Population	Community-dwelling adults aged 65 years and older who are at increased risk for falls	Community-dwelling adults aged 65 years and older
Recommendation	Provide intervention consisting of exercise or physical therapy and/or vitamin D supplementation to prevent falls. Grade: B	Do not automatically perform an in-depth multifactorial risk assessment with comprehensive management of identified risks to prevent falls. Grade: C
Risk Assessment	Primary care clinicians can consider the following factors to identify older adults at increased risk for falls: a history of falls, a history of mobility problems, and poor performance on the timed Get-Up-and-Go test.	

Gait Dysfunction and Falls

Interventions

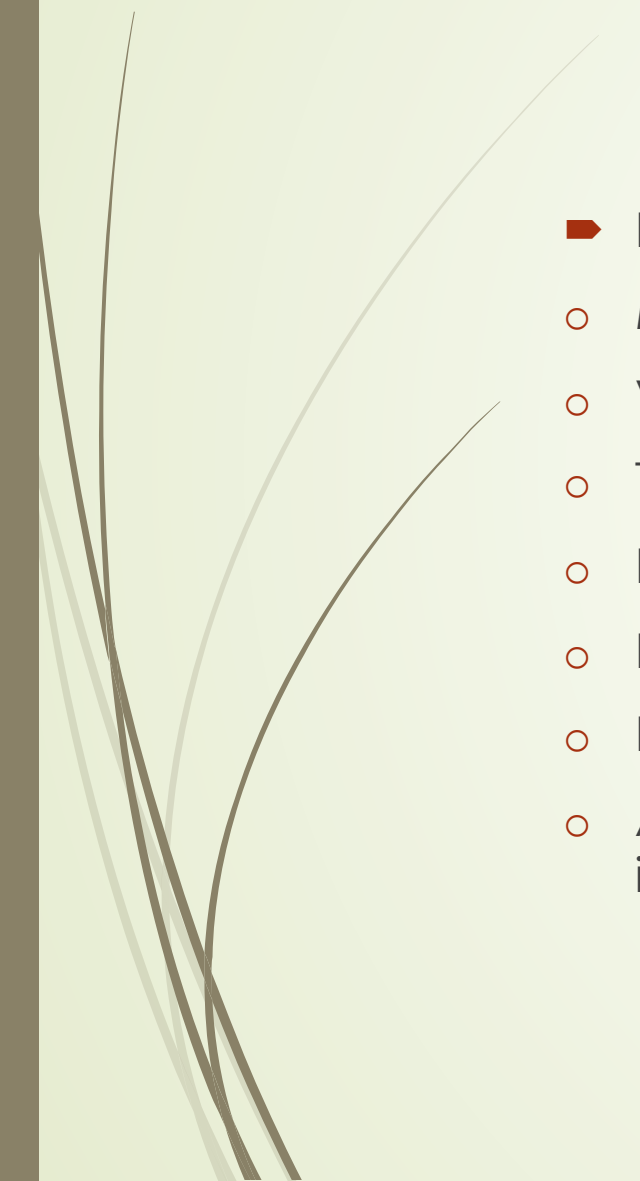
Effective exercise and physical therapy interventions include group classes and at-home physiotherapy strategies and range in intensity from very low (≤ 9 hours) to high (> 75 hours).

Benefit from vitamin D supplementation occurs by 12 months; the efficacy of treatment of shorter duration is unknown. The recommended daily allowance for vitamin D is 600 IU for adults aged 51 to 70 years and 800 IU for adults older than 70 years.

Comprehensive multifactorial assessment and management interventions include assessment of multiple risk factors for falls and providing medical and social care to address factors identified during the assessment. In determining whether this service is appropriate in individual cases, patients and clinicians should consider the balance of benefits and harms on the basis of the circumstances of prior falls, medical comorbid conditions, and patient values.



Gait Dysfunction and Falls

- Fall Prevention:
 - Medication Minimization
 - Vitamin D Supplementation
 - Treatment of Sensory Impairment
 - Environmental Modification
 - Podiatric care and appropriate footwear
 - Physical Therapy/Exercise Program
 - Appropriate management of orthostatic hypotension and other cardiac issues
- 



Dementia

- ▶ Types of Dementia
 - ❑ Alzheimer's
 - ❑ Vascular
 - ❑ Lewy Bodies
 - ❑ Frontotemporal
 - ❑ Mixed
- ❑ Less Frequent Dementias: Creutzfeldt-Jakob disease, Huntington's, Wernicke-Korsakof syndrome, and normal pressure hydrocephalus



Dementia



► Defining Dementia

- ❑ Historically the DSM has been frequently used to define Dementia
- ❑ The most current DSM, DSM V no longer lists Dementia separately but includes it in the broader category of Major Neurocognitive Disorders
- ❑ In order to meet criteria for a diagnosis of Major NCD a patient must show significant cognitive decline that interferes with their independence (ADL's/ IADL's) and is not due to delirium or other mental disorder
- ❑ In addition to a cognitive decline patients with Dementia have at least 1 of the following: Impaired Executive Function, Agnosia, Aphasia, and/or Apraxia



Dementia



➤ Alzheimer's

❑ Accounts for 50%-75% of Dementia Cases

❑ Insidious onset and gradual progression

❑ Risk Factors include advanced age and family history

➤ Vascular Dementia

❑ Accounts for 20%-30% of Dementia Cases

❑ Presentation depends on extent and location of cerebrovascular event

❑ Risk Factors Include smoking, advanced age, HTN, HLD, Diabetes, and male sex



Dementia

- Dementia with Lewy Bodies
 - ❑ Accounts for 10%-25% of Dementia Cases
 - ❑ Like Alzheimer's an insidious onset and gradual progression is typical
 - ❑ Detailed, recurrent visual hallucinations present early in the disease
 - ❑ Fluctuating cognition
 - ❑ Severe neuroleptic sensitivity common
 - ❑ Potential genetic risk factor but no family history in most cases



Dementia



- Frontotemporal Dementia
 - ❑ Accounts for 10%-15% of Dementia cases
 - ❑ Both a Behavioral variant and a Language variant have been identified, however, many patients present with both types
 - ❑ Up to 40% of cases are familial
- Mixed Dementia
 - ❑ Presence of greater than one neuropathology
 - ❑ Exact prevalence unknown



Question # 3

- ▶ A 76 year old Caucasian male presents to your office with his family. He states that he is doing well and denies any complaints, however, his family reports that he has progressive memory loss. Cognitive screening performed by you confirms that the patient has had a significant cognitive decline. In order, to confirm your suspected diagnosis of Dementia (Major Neurocognitive Disorder) what else must be present?
 - a) Atrophy on neuroimaging
 - b) A positive RPR
 - c) Impact on "independence" as indicated by an inability to perform one or more ADL/IADL
 - d) Impact on "mood" with a positive GDS
 - e) Atrophy on neuroimaging without any localized ischemic changes and a completely negative lab work-up



Dementia



- ▶ Diagnosing Dementia
- ❑ Complete History and Physical Exam
- ❑ Depression Assessment: GDS, PHQ-2, PHQ-9
- ❑ Brief Cognitive Screening Tests: MMSE, SLUMS, MOCA
- ❑ ADL, IADL Checklist
- ❑ Labs: CBC, CMP, RPR (if at risk), HIV (if at risk), B12, Folate, UA
- ❑ Imaging: Controversial. If appropriate non-contrast CT or MRI acceptable



Dementia

- ▶ Treatment
- ❑ Supportive care including modification of home environment for safety
- ❑ Remember to also screen for caretaker stress
- ❑ Removal of any unnecessary meds, especially anticholinergics and other sedating meds
- ❑ Optimization of other medical conditions
- ❑ Cholinesterase inhibitors (Donepezil, Rivastigmine) indicated in mild to moderate Alzheimer's disease may slow decline in function, questionably improve cognition
- ❑ N-methyl-D-aspartic acid (NMDA) antagonists (memantine, amantadine) may provide modest benefit in patients with moderate to severe Alzheimer's
- ❑ Remember behavioral symptoms are best managed by nonpharmacological means. Antipsychotics all have a black box warning for use in patient's with Dementia



Question # 4

- ▶ An 82 year old African American female presents to your office with her Daughter. The patient's past medical history includes Alzheimer's, HTN, CAD, and T2DM. She is on Donepezil, Metformin, Lisinopril, Metoprolol, Aspirin, and Atorvastatin. The patient's daughter reports that her mom has become increasingly incontinent of urine. She is due for routine labs which you go ahead and order. Her complete physical exam is unremarkable. The most appropriate next step would be?
 - a) Urology referral
 - b) Schedule the patient for in office pessary placement
 - c) Start Mirabegron
 - d) Discuss the risk vs benefits of discontinuing Donepezil
 - e) Start Oxybutynin



Polypharmacy



- Review all meds with your patients including OTC meds
- Utilize Beers Criteria for Potentially Inappropriate Medication Use in Older Adults
- Review meds for common drug-drug interactions
- Avoid Prescribing Cascades
- Eliminate all potential duplication of therapy
- Avoid complicated medication regimens

Polypharmacy

Examples of prescribing cascades

Initial drug therapy	Adverse drug event	Subsequent drug therapy
Antipsychotics	Extrapyramidal signs and symptoms	Antiparkinsonian therapy
Cholinesterase inhibitors	Urinary incontinence	Incontinence treatment
Thiazide diuretics	Hyperuricemia	Gout treatment
NSAIDs	Increased blood pressure	Antihypertensive therapy

Medication prescribing cascades occur when patients are prescribed medications to treat the adverse side effects of previously prescribed medications. This leads to polypharmacy and further increases the risk for adverse drug events. Periodic review of medication lists, especially in older adults, can minimize this risk.

NSAIDs: nonsteroidal antiinflammatory drugs.

Data from: Rochon PA, Gurwitz JH. Optimizing drug therapy for elderly people: the prescribing cascade. BMJ 1997; 315:1096 and Gill SS, Mamdani M, Naglie G, et al. A prescribing cascade involving cholinesterase inhibitors and anticholinergic drugs. Arch Intern Med 2005; 165:808.

Polypharmacy

► Common Drug-Drug Interactions

Combination	Risk
ACE inhibitor + diuretic	Hypotension, hyperkalemia
ACE inhibitor + potassium	Hyperkalemia
Antiarrhythmic + diuretic	Electrolyte imbalance, arrhythmias
Benzodiazepine + antidepressant, antipsychotic, or benzodiazepine	Confusion, sedation, falls
Calcium channel blocker + diuretic or nitrate	Hypotension
Digitalis + diuretic	Arrhythmias



Polypharmacy

- Adverse drug events (ADEs) are responsible for 5% to 28% of acute geriatric hospital admissions*
- Incidence of ADEs in hospitals: 26/1000 beds (2.6%)*
- ADEs occur in 35% of community-dwelling older adults*
- In nursing homes, \$1.33 is spent on ADEs for every \$1.00 spent on medications*



Osteoporosis



- Age-related decline in bone mass, subsequently leading to bone fragility and increased fracture risk
- Risk Factors: Female gender, Caucasian or Asian Race, Prolonged corticosteroid use, Tobacco use, Estrogen deficiency, Sedentary lifestyle, and Excessive Alcohol use
- Diagnosis: Dual-energy X-ray absorptiometry (DEXA) Scan remains the most accurate tool for diagnosis
- T-Scores compare patient's values with normal and healthy bones of young adults. A T score of ≤ 2.5 is considered positive for osteoporosis
- Z-Scores compare patient's values with that of age and sex matched controls

Osteoporosis

Clinical Summary of U.S. Preventive Services Task Force Recommendation


This document is a summary of the 2011 recommendation of the U.S. Preventive Services Task Force on screening for osteoporosis. It is intended for use by primary care clinicians. This summary was first published in *Annals of Internal Medicine* on January 18, 2011. (*Ann Intern Med* 2011 Jan 18. [Epub ahead of print])

Population	Women age ≥ 65 years without previous known fractures or secondary causes of osteoporosis	Women age < 65 years whose 10-year fracture risk is equal to or greater than that of a 65-year-old white woman without additional risk factors	Men without previous known fractures or secondary causes of osteoporosis
Recommendation	Screen		No recommendation
	Grade: B		Grade: I (insufficient evidence)



Osteoporosis

► Treatment:

- ❑ Weight Bearing Exercise
 - ❑ Smoking Cessation
 - ❑ Diet including calcium, protein, and vitamin D
 - ❑ Bisphosphonates (Alendronate, Risedronate)-1st line
 - ❑ Selective Estrogen Receptor Modulators (Raloxifene)- Less effective than bisphosphonates
 - ❑ PTH (Teriparatide)- Good for high risk patients who have failed other treatments
 - ❑ Calcitonin- 2nd line therapy only
- 



Incontinence



- Urge Incontinence- Due to detrusor over activity. This is the most common type of incontinence in age-gifted patients
- ❑ A bladder diary can be helpful in determining the severity of the problem
- ❑ Consider UA with C&S to rule out a UTI
- ❑ Consider checking a PSA in men
- ❑ If a post void residual is greater than 200ml further work-up recommended for urinary retention
- ❑ Treatment: Scheduled Voiding, Behavior modification, Neuromodulation, Anticholinergic medications (Review potential adverse effects)



Incontinence

- ▶ Stress Incontinence- loss of urine during coughing, sneezung, laughing, etc.
- ❑ More common in women
- ❑ Often associated with pelvic prolapse or post surgical trauma
- ❑ Kegel exercises and pessaries may help
- ❑ Surgery offers the highest cure rate



Incontinence

- ▶ Overflow Incontinence- due to underactive bladder and/or outlet obstruction
- ❑ 2nd most common cause of incontinence in age gifted men
- ❑ Review medications including anticholinergics and calcium channel blockers
- ❑ Consider UA and cytology
- ❑ Consider checking PSA
- ❑ Consider Urodynamic testing
- ❑ Treatment: If possible DC meds that can cause urinary retention, Consider trial of alpha blocker or 5-alpha reductase inhibitor
- ❑ Catheterization may be necessary



Question # 5

- ▶ A 92 year old female is evaluated by you in the nursing home. You note an ulcer on her right heel consisting of central eschar with surrounding erythematous border. The wound diameter is 4.4 cm's but you are unable to determine depth secondary to eschar. You correctly stage this pressure ulcer as?
 - a) Stage 1
 - b) Stage 2
 - c) Stage 3
 - d) Stage 4
 - e) Unstageable



Pressure Ulcers

- ▶ Secondary to prolonged pressure frequently in the setting of poor nutrition, poor circulation, and decreased subcutaneous tissue
- ▶ Prevention is Primary
- ▶ Stage 1: Nonblanchable erythema of intact skin
- ▶ Stage 2: Partial-thickness superficial skin loss up to subcutaneous tissue
- ▶ Stage 3: Full-thickness skin loss through subcutaneous tissue
- ▶ Stage 4: Tissue loss down to the level of muscle, tendon, or bone
- ▶ Unstageable: Full-thickness tissue loss with inability to determine the depth of the wound secondary to covering by slough and or eschar



Sensory Disorders



- Visual Impairment: Prevalence increases with age. Affects 20%-30% of those 75+ with the prevalence of blindness at 2% in the same age group*
- 50% of the blind population is 65 or over*
- Cataracts:
 - ❑ Symptoms include increased glare, decreased overall visual acuity and decreased contrast sensitivity
 - ❑ Risk factors include increased age, diabetes, smoking, and increased UV light exposure
 - ❑ Treatment is surgical extraction



Sensory Disorders



- ▶ Age-related Macular Degeneration:
 - ❑ Most common cause of irreversible blindness in age gifted patients
 - ❑ Dry form: Presence of drusen
 - ❑ Wet form: choroidal neovascularization
 - ❑ Treatment: Vitamin C, vitamin E, zinc, β -carotene. Intravitreal injections of vascular endothelial growth factor inhibitors and laser surgery



Sensory Disorders

- ▶ Glaucoma:
 - ❑ Defined as characteristic optic nerve head damage and visual field loss
 - ❑ Affects >2.25 million Americans >40 years old. Second most common cause of irreversible blindness worldwide; most common cause among African Americans*
 - ❑ Open-Angle Glaucoma-most common form, causes are multifactorial. Elevated intraocular pressure is a major risk factor
 - ❑ Acute Angle-Closure Glaucoma-Redness and pain with acute vision loss, often associated with nausea and vomiting. Emergent Ophthalmology referral
 - ❑ Treatment: Intraocular pressure lowering medications, Laser trabeculoplasty, drainage devices



Sensory Disorders

- ▶ Hearing Impairment:
 - ❑ Prevalence increases with age
 - ❑ Anywhere from 50%-100% of nursing home residents have some degree of hearing impairment*
 - ❑ Conductive hearing loss: Can be caused by cerumen, foreign body, or middle ear pathology
 - ❑ Sensorineural hearing loss: most often from age, noise damage (causing cochlear disease), or ototoxicity



Hospice and Palliative Care



- ▶ Palliative Care focuses on relief of distressing symptoms including pain, nausea, vomiting, dyspnea, and others
- ▶ Initiation of Palliative care is appropriate at anytime in the course of a serious illness. It is not limited to end of life
- ▶ Initiation of Palliative care at the onset of a serious illness, especially cancer, is becoming more common place
- ▶ Hospice is the gold standard of palliative care
- ▶ Hospice is a Medicare benefit, but requires the physician to certify that the patient's life expectancy (if their disease process was to follow the expected course) is 6 months or less



Answer Key

1. B
2. B
3. C
4. D
5. E

References

- Ward, Katherine T and Reuben, David B. Comprehensive Geriatric Assessment. Jan 21, 2016. Uptodate.com https://www.uptodate.com/contents/comprehensive-geriatric-assessment?source=search_result&search=geriatric+assessment&selectedTitle=1%7E64
- Le, Tao; Mendoza, Michael; Coffa, Diana (2012-07-20). First Aid for the Family Medicine Boards, Second Edition (FIRST AID Specialty Boards) McGraw-Hill. Kindle Edition.
- Clinical Summary: Falls Prevention in Older Adults: Counseling and Preventive Medication. USPSTF. October 2014. <http://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/falls-prevention-in-older-adults-counseling-and-preventive-medication>
- Rochon, Paula A. Drug Prescribing for Older Adults. May 23, 2016. Uptodate.com https://www.uptodate.com/contents/drug-prescribing-for-olderadults?source=search_result&search=geriatric+prescribing&selectedTitle=1%7E150
- *Clinical Summary: Osteoporosis: Screening*. U.S. Preventive Services Task Force. October 2014. <http://www.uspreventiveservicestaskforce.org/Page/Document/ClinicalSummaryFinal/osteoporosis-screening>
- GRS Teaching Slides. Gait Impairment and Falls. American Geriatrics Society © 2013.
- GRS Teaching Slides. Dementia. American Geriatrics Society © 2013.
- In brief for healthcare professional. Issue 7. Differentiating Dementias. Alzheimer's Association © 2016. https://www.alz.org/health-care-professionals/documents/InBrief_Issue7dd_Final.pdf
- GRS Teaching Slides. Visual Impairment. American Geriatrics Society © 2013.
- GRS Teaching Slides. Hearing Impairment. American Geriatrics Society © 2013.
- Ham, Richard J.; Sloane, Philip D.; Warshaw, Gregg A.; Potter, Jane F.; Flaherty, Ellen (2014-01-02). Ham's Primary Care Geriatrics: A Case-Based Approach (Ham, Primary Care Geriatrics). Elsevier Health Sciences. Kindle Edition.