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GERIATRIC
EVALUATION
MNEMONICS AND
SCREENING **T**OOLS

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Department of
Veterans Affairs

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Introduction

Mnemonics have long been used as memory aids (especially to assist people in passing examinations). The mnemonics here have been developed because of the often complex and multifactorial nature of illnesses and syndromes in the elderly and the time constraints of the present health care environment.

These mnemonics are intended to assist the clinician in developing differential diagnoses, risk assessments, or evaluation and management plans for common geriatric problems. These mnemonics will also enable the clinician to do this in a quick, yet comprehensive manner.

The screening tools have been chosen to complement the problems, syndromes, and illnesses that are covered by the mnemonics.

Saint Louis University Division of Geriatrics

Passport to Aging Successfully*

Please complete this questionnaire before seeing your physician and take it with you when you go.

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NAME _____ **AGE** _____

BLOOD PRESSURE laying down: _____ standing: _____

WEIGHT now: _____ 6 months ago: _____ change: _____

HEIGHT at age 20: _____ now: _____

CHOLESTEROL LDL: _____ HDL: _____

VACCINATIONS ☐Influenza (yearly) ☐Pneumococcal ☐Tetanus (every 10 years)

TSH Date: _____ **FASTING GLUCOSE** Date: _____

Do you SMOKE? _____

How much ALCOHOL do you drink? _____ per day

Do you use your SEATBELT? _____

Do you chew TOBACCO? _____

EXERCISE: How often do you...

do endurance exercises (walk briskly 20 to 30 minutes/day or climb 10 flights of stairs) _____/week

do resistance exercises? _____ /week do balance exercises? _____/week

do posture exercises? _____ /week do flexibility exercises? _____/week

Can you SEE ADEQUATELY in poor light? _____

Can you HEAR in a noisy environment? _____

Are you INCONTINENT? _____

Have you a LIVING WILL or durable POWER OF ATTORNEY FOR HEALTH? _____

Do you take ASPIRIN daily (only if you have had a heart attack or have diabetes)?_____

Do you have any concerns about your PERSONAL SAFETY? _____

When did you last have your STOOL TESTED for blood? _____

When were you last screened for OSTEOPOROSIS? _____

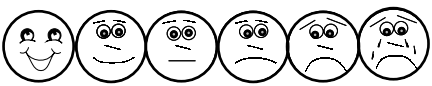
Are you having trouble REMEMBERING THINGS? _____

Do you have enough FOOD? _____

Are you SAD? _____

Do you have PAIN? _____

If so, which face best describes your pain?



MALES

Do you have trouble passing urine?_____

Have you discussed PSA testing with your doctor? _____

What is your ADAM score?_____

FEMALES

When was your last pap smear? _____

When was your last mammogram?_____

Do you check your breasts monthly?_____

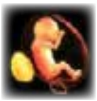
Are you satisfied with your sex life?_____

Now, please answer the four questionnaires on the next page.

* This questionnaire is based on the health promotion and prevention guidelines developed by Gerimed® and Saint Louis University Division of Geriatric Medicine.

Aging Suc

A Guide to Health Prom



Prior to birth

1. Choose long-lived parents

2. Have your mother get regular check-ups during pregnancy

3. Have your mother not smoke or drink alcohol

4. Have your mother take pre-natal vitamins including folate.

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0-20 years

1. Exercise regularly

2. Avoid obesity

3. Ingest adequate calcium

4. Eat nutritious foods

5. Wear your seatbelt

6. Do not smoke or drink

7. Get your vaccinations

8. Avoid violence and illicit drugs

20-40 years

1. Exercise regularly

2. Avoid obesity

3. Ingest adequate calcium

4. Eat fish

5. Wear your seatbelt

5. Drink in moderation and do not smoke

6. Drive at a safe speed

7. Avoid violence and illicit drugs

8. Check your breasts regularly (females)

CCESSFULLY

IOTION OVER THE LIFESPAN

40-60 YEARS

1. Exercise regularly
2. Avoid obesity
3. Ingest adequate calcium and vitamin D

4. Eat fish
5. Wear your seatbelt
6. Drink in moderation and do not smoke
7. Have your blood pressure checked

8. Get your cholesterol and glucose checked

9. Screen for breast and colon cancer, high blood pressure, and diabetes
10. Have Pap smears (females)
11. Have regular mental activity and socialize!
12. Avoid taking too many medicines
13. Consider hormone replacement (men)

60-80 YEARS

1. Exercise regularly, including balance and resistance exercises
2. Avoid weight loss
3. Ingest adequate calcium and vitamin D
4. Eat fish

5. Wear your seatbelt
6. Drink in moderation and do not smoke
7. Screen for breast and colon cancer, high blood pressure, osteoporosis, and diabetes
8. Get your cholesterol checked

9. Have flu and pneumococcal vaccinations
10. Have Pap smears (females)
11. Have regular mental activity and socialize!
12. Avoid taking too many medicines

80+

1. Exercise regularly, including balance and resistance exercises

2. Avoid weight loss
3. Ingest adequate calcium and vitamin D
4. Be screened for osteoporosis
5. Wear your seatbelt
6. Drink in moderation and do not smoke

7. Have your blood pressure checked
8. Do monthly breast self-exams
9. Have flu and pneumococcal vaccinations
10. Safety-proof your home to prevent falls. If you are unsteady, use a cane and consider hip protectors
11. Have regular mental activity. Socialize, and avoid being depressed.

12. Avoid taking too many medicines
13. Keep doing what you are doing. Remember, most of your physicians won't reach your age!

Alcohol

Cage Questionnaire For Alcoholism*

Ever felt the need to cut down on your drinking?

Yes/No

Ever felt annoyed by criticism of your drinking?

Yes/No

Ever felt guilty about your drinking?

Yes/No

Ever take a morning drink (eye-opener)?

Yes/No

*Two affirmative answers may be suggestive of alcoholism.

Ewing, *J Am Med Assoc* 252:1905-1907, 1984.

HEMORR$_2$HAGES

H epatic or renal disease	1
E thanol abuse	1
M alignancy	1
O lder (age >75 years)	1
R educed platelet count or function	1
R e-bleeding **R**isk	2
H ypertension (uncontrolled)	1
A nemia	1
G enetic factors	1
E xcessive fall risk	1
S troke	1
TOTAL SCORE	

Scoring:
Risk of Hemorrhage: With each additional point, the rate of bleeding per 100 patient-years of warfarin increases:

1.9 (0.6-4.4) for 0
2.5 (1.3-4.3) for 1
5.3 (3.4-8.1) for 2
8.4 (4.9-13.6) for 3
10.4 (5.1-18.9) for 4
12.3 (5.8-23.1) for ≥ 5

Gage BF, *et al*. *Am Heart J* 151(3):713-9, 2006.

Anticoagulation

$CHADS_2$

Risk of Stroke for People with Atrial Fibrillation if Warfarin* Not Used

C ongestive heart failure	1
H ypertension	1
A ge 75 or older	1
D iabetes	1
S troke or TIA in the past	2
TOTAL SCORE	☐

Risk of stroke: With each additional point, the rate of stroke per 100 patient-years without antithrombotic therapy (*i.e.*, the use of aspirin instead of warfarin) increases:

1.9 (95% CI, 1.2-3.0) for a score of 0;
2.8 (95% CI, 2.0-3.8) for 1;
4.0 (95% CI, 3.1-5.1) for 2;
5.9 (95% CI, 4.6-7.3) for 3;
8.5 (95% CI, 6.3-11.1) for 4;
12.5 (95% CI, 8.2-17.5) for 5;
18.2 (95% CI, 10.5-27.4) for 6.

Gage BF, *et al.* Validation of clinical classification schemes for predicting stroke: results from the National Registry of Atrial Fibrillation. *J Am Med Assoc* 285(22):2864-70, 2001.
*For calculating warfarin dosing, see www.warfarindosing.org.

CAUTION
Cancer Warning Signs

C hange in bowel or bladder habits

A sore that does not heal

U nusual bleeding or discharge

T hickening or lump in breast or elsewhere

I ndigestion or difficulty in swallowing

O bvious change in wart or mole

N agging cough or hoarseness

Dehydration

Simple Screen for Dehydration

D rugs, *e.g.*, diuretics

E nd of life

H igh fever

Y ellow urine turns dark

D izziness (orthostasis)

R educed oral intake

A xilla dry

T achycardia

I ncontinence (fear of)

O ral problems/sippers

N eurological impairment (confusion)

S unken eyes

Thomas DR, *et al*. *J Am Med Dir Assoc*, June 2008.

Acute Change in MS

Medications that can Cause or have been Reported to Cause an Acute Change in Mental Status

A ntiparkinson's drugs
C orticosteroids
U rinary incontinence drugs
T heophylline
E mptying drugs[1]

C ardiovascular drugs[2]
H_2 blockers[3]
A ntibiotics[4]
N SAIDs[5]
G eropsychiatry drugs[6]
E NT drugs[7]

I nsomnia drugs[8]
N arcotics[9]

M uscle relaxants[10]
S eizure drugs

1 *E.g.*, metoclopramide, compazine.
2 In particular, centrally-acting drugs (*e.g.*, clonidine), digoxin, some antiarrhythmics.
3 Particularly for patients with renal insufficiency because these drugs are renally excreted.
4 Although not a common cause of mental status change, several antibiotics have been reported in the literature in the form of case reports.
5 Also not common, but case reports exist.
6 A large category because, in general, most of these are centrally-acting.
7 Some are worse than others. In general, non-sedating antihistamines are probably safe, but combination drugs are risky.
8 Beware of over-the-counter sleeping agents. Most contain diphenhydramine.
9 Usually only seen with acute use, not chronic. Meperidine (Demerol) not recommended in the elderly.
10 These are centrally-acting, not locally at muscles.

Flaherty JH. Commonly prescribed and over-the-counter medications: Causes of confusion. *Clin Geriatr Med* 14:101-127, 1998.

Mental Status: DELIRIUM

CAM

The Confusion Assessment Method Diagnostic Algorithm

Feature 1: **Acute Onset and Fluctuating Course**

This feature is usually obtained from a family member or nurse and is shown by positive responses to the following questions: Is there evidence of an acute change in mental status from the patient's baseline? Did the (abnormal) behavior fluctuate during the day, that is, tend to come and go, or increase and decrease in severity?

Feature 2: Inattention

This feature is shown by a positive response to the following question: Did the patient have difficulty focusing attention, for example, being easily distractible, or having difficulty keeping track of what was being said?

Feature 3: Disorganized thinking

This feature is shown by a positive response to the following question: Was the patient's thinking disorganized or incoherent, such as rambling or irrelevant conversation, unclear or illogical flow of ideas, or unpredictable switching from subject to subject?

Feature 4: Altered Level of Consciousness

This feature is shown by any answer other than "alert" to the following question: Overall, how would you rate this patient's level of consciousness? (Alert [normal], Vigilant [hyperalert], Lethargic [drowsy, easily aroused], Stupor [difficult to arouse], or Coma [unarousable]).

The diagnosis of delirium by CAM requires the presence of features 1 and 2 and either 3 or 4.

CAM Instrument and Algorithm adapted from Inouye S, van Dyck E, Alessi C, Balkin S, Siegal A, Horwitz R. (1990). Clarifying confusion: the confusion assessment method. *Ann Intern Med* 113(12), 941-8. Reprinted with permission.

Mental Status: DELIRIUM

COCOA PHSS

Differentiating Delirium from Dementia

	Delirium	Dementia
C onsciousness	Decreased or hyperalert, "clouded"	Alert
O rientation	Disorganized	Disoriented
C ourse	Fluctuating	Steady slow decline
O nset	Acute or subacute	Chronic
A ttention	Impaired	Usually normal
P sychomotor	Agitated or lethargic	Usually normal
H allucinations	Perceptual disturbances, may have hallucinations	Usually not present
S leep-wake cycle	Abnormal	Usually normal
S peech	Slow, incoherent	Aphasic, anomic, difficulty finding words

Mental Status: DELIRIUM

DELIRIUM(S)

Differential Diagnosis for Patients with Delirium
(Remember, delirium usually has more than one cause)

D rugs[1]

E yes, ears[2]

L ow O_2 states (MI, stroke, PE)[3]

I nfection

R etention (of urine or stool)

I ctal

U nderhydration/Undernutrition

M etabolic

(**S**)ubdural

1 See mnemonic ACUTE CHANGE IN MS (page 11)
2 Poor vision and hearing are considered more risk factors than true cause, but should be "fixed" or improved, if possible. Cerumen is common cause of hearing impairment.
3 Low O_2 state does NOT necessarily mean hypoxia, rather it is a reminder that patients with a hypoxic insult (*e.g.*, MI, stroke, PE) may present with mental status changes with or without other typical symptoms/signs of these diagnoses.

Be Aware Prevent

Risk Factors for Delirium (B-E A-W-A-R-E) and Targeted Interventions (P-R-E-V-E-N-T) Based on Intervention Trial to Prevent Delirium.*

B aseline dementia?

E ye problems?

A ltered sleep/wake cycle?

W ater or dehydration problems?

A dding >3 medications, especially sedating and psychoactive ones?

R estricted mobility?

E ar problems?

P rotocol for sleep (back massage, relaxation music, decreased noise, warm milk or caffeine-free herbal tea)

R eplenish fluids and recognize volume depletion

E ar aids (amplifier or patient's own hearing aid)

V isual aids (patient's own glasses, magnifying lens)

E xercise or ambulation as soon as possible

N ame person, place and time frequently for reorientation

T aper or discontinue unnecessary medications. Use alternative and less harmful medications.

* Inouye SK, Bogardus ST Jr, Charpentier PA, *et al*. A multicomponent intervention to prevent delirium in hospitalized older patients. *N Engl J Med* 340:669-76, 1999.

Mental Status: DELIRIUM

Avoid Restraints

Non-Pharmacological Approaches to Patients with Behavioral Problems (Associated with Dementia or Delirium)

A void exacerbating factors

V ague complaints? May represent delirium or other medical illness

O ut of room; out of bed

I nsomnia protocol (*e.g.*, warm milk, back rub/massage)

D istraction techniques

R elatives or friends to sit with/visit patient

E nvironmental adaptations

S cheduled acetaminophen for possible pain

T herapies (RT, PT, OT)

R eview medications as cause of problems

A larm on bed; low beds

I Vs or other tubes, monitors bothering patients? Discontinue if possible or "hide" them

N urses' station (bring patient out to station to sit)

T oilet frequently

S ensory impairments? Get glasses, hearing aides

Mental Status: DEMENTIA

VAMC
SLUMS Examination

Questions about this assessment tool? E-mail aging@slu.edu.

Name_____ Age _____

Is patient alert?_____ Level of education _____

__/1 1. What day of the week is it?

__/1 2. What is the year?

__/1 3. What state are we in?

4. Please remember these five objects. I will ask you what they are later.
Apple Pen Tie House Car

5. You have $100 and you go to the store and buy a dozen apples for $3 and a tricycle for $20.
1 How much did you spend?
__/3 2 How much do you have left?

6. Please name as many animals as you can in one minute.
__/3 0 0-4 animals 1 5-9 animals 2 10-14 animals 3 15+ animals

__/5 7. What were the five objects I asked you to remember? 1 point for each one correct.

8. I am going to give you a series of numbers and I would like you to give them to me backwards. For example, if I say 42, you would say 24.
__/2 0 87 1 649 2 8537

9. This is a clock face. Please put in the hour markers and the time at ten minutes to eleven o'clock.
2 Hour markers okay
__/4 2 Time correct
__/2 1 10. Please place an X in the triangle.

1 Which of the above figures is largest?

11. I am going to tell you a story. Please listen carefully because afterwards, I'm going to ask you some questions about it.
Jill was a very successful stockbroker. She made a lot of money on the stock market. She then met Jack, a devastatingly handsome man. She married him and had three children. They lived in Chicago. She then stopped work and stayed at home to bring up her children. When they were teenagers, she went back to work. She and Jack lived happily ever after.
2 What was the female's name? 2 What work did she do?
__/8 2 When did she go back to work? 2 What state did she live in?

_____ TOTAL SCORE

Department of Veterans Affairs

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SCORING

High School Education		Less than High School Education
27-30	Normal	25-30
21-26	MNCD*	20-24
1-20	Dementia	1-19

* Mild Neurocognitive Disorder

SH Tariq, N Tumosa, JT Chibnall, HM Perry III, and JE Morley. The Saint Louis University Mental Status (SLUMS) Examination for Detecting Mild Cognitive Impairment and Dementia is more sensitive than the Mini-Mental Status Examination (MMSE) - A pilot study. Am Geriatr Psychiatry 14:900-910, 2006.

Mental Status: DEMENTIA

DEMENTIA

Potential Reversible Causes of Dementia

D rugs

E yes, ears

M etabolic (*e.g.*, thyroid, calcium)

E motion (*i.e.*, depression)

N ormal pressure hydrocephalus (Wacky, Wobbly, and Wet)

T umor (or other space-occupying lesion)

I nfection (*e.g.*, neurosyphilis)

A nemia (*i.e.*, B_{12} deficiency)

The Caring Guide

Management Guidelines for Caregivers of Persons with Dementia

T ime[1]
H ome Health[2]
E yes, Ears[3]

C ar[4]
A dvance Directive
R estraints[5]
I ncontinence
N o $$$
G roup Support[6]

G ait[7]
U ndernutrition/Underhydration
I dentification (ID bracelet)[8]
D rugs[9]
E motions[10]

1 Evaluate amount of time caregiver (CG) is spending with patient; consider respite.
2 Does CG need help in the home (*e.g.*, choreworker, nursing aide)?
3 Impaired communication can be stressful and burdensome for CG. Cerumen is common cause of hearing deficit.
4 Is patient still driving?
5 Restraints (especially physical) can be associated with increased agitation.
6 The Alzheimer's Association (AA) is a good source of support groups for CGs. Visit www.alz.org.
7 Dementia may be a risk factor for falls.
8 Check with the AA for details about their Safe Return program (web or call).
9 See mnemonic ACUTE CHANGE IN MS on page 11.
10 Both patient and CG are at increased risk for depression.

Mental Status: DEPRESSION

GDS

Geriatric Depression Scale (Short Form)

1. Are you basically satisfied with your life?	YES	**NO**
2. Have you dropped many of your activities and interests?	**YES**	NO
3. Do you feel that your life is empty?	**YES**	NO
4. Do you often get bored?	**YES**	NO
5. Are you in good spirits most of the time?	YES	**NO**
6. Are you afraid that something bad is going to happen to you?	**YES**	NO
7. Do you feel happy most of the time?	YES	**NO**
8. Do you often feel helpless?	**YES**	NO
9. Do you prefer to stay at home rather than going out and doing new things?	**YES**	NO
10. Do you feel you have more problems with memory than most?	**YES**	NO
11. Do you think it is wonderful to be alive now?	YES	**NO**
12. Do you feel pretty worthless the way you are now?	**YES**	NO
13. Do you feel full of energy?	YES	**NO**
14. Do you feel your situation is hopeless?	**YES**	NO
15. Do you think that most persons are better off than you?	**YES**	NO

Scoring: Score one point for each "depressed" answer (in box).
Score of >5 suggests probable depression.

For other languages, see http://www.stanford.edu/~yesavage/GDS.html
Sheikh JL, Yesavage JA. *Clin Gerontol* 5:165-72, 1986. Yesavage JA, *et al*. *J Psychiatr Res* 17:27, 1983.

SIG E CAPS

Signs and Symptoms of Depression

S leep problems
I nterest (lack of) (Anhedonia)
G uilt/"Worthlessness"

E nergy (lack of)

C oncentration problems
A ppetite problems
P sychomotor retardation
S uicide ideations

Mental Status: DEPRESSION

Cornell Scale for Depression in Dementia

Name_____ Age___ Sex___ Date_____

Inpatient Nursing Home Resident Outpatient

Person performing evaluation: Clinician Nurse Family Member Other

Scoring System

A=unable to evaluate 0=absent 1=mild or intermittent 2= severe

Base ratings on symptoms and signs occurring during the week prior to interview. No score should be given in symptoms resulting from physical disability or illness.

A. Mood-Related Signs

1. Anxiety: anxious expression, ruminations, worrying	a	0	1	2
2. Sadness: sad expression, sad voice, tearfulness	a	0	1	2
3. Lack of reactivity to pleasant events	a	0	1	2
4. Irritability: easily annoyed, short-tempered	a	0	1	2

B. Behavioral Disturbance

5. Agitation: restlessness, handwringing, hairpulling	a	0	1	2
6. Retardation: slow movement, slow speech, slow reactions	a	0	1	2
7. Multiple physical complaints (score 0 if GI symptoms only)	a	0	1	2
8. Loss of interest: less involved in usual activities	a	0	1	2
(score only if change occurred acutely, i.e., in less than one month)				

C. Physical Signs

9. Appetite loss: eating less than usual	a	0	1	2
10. Weight loss (score 2 if greater than 5 lbs. in one month)	a	0	1	2
11. Lack of energy: fatigues easily, unable to sustain activities	a	0	1	2
(score only if change occurred acutely, i.e., in less than one month)				

D. Cyclic Functions

12. Diurnal variation of mood: symptoms worse in morning	a	0	1	2
13. Difficulty falling asleep: later than usual for this individual	a	0	1	2
14. Multiple awakenings during sleep	a	0	1	2
15. Early morning awakening: earlier than usual for this individual	a	0	1	2

E. Ideational Disturbance

16. Suicide: feels life is not worth living, has suicidal wishes or makes suicide attempt	a	0	1	2
17. Poor self-esteem: self-blame, self-deprecation, feelings of failure	a	0	1	2
18. Pessimism: anticipation of the worst	a	0	1	2
19. Mood congruent delusions: delusions of poverty, illness, loss	a	0	1	2

A score of ≥8 suggests significant depressive symptoms.

Alexopoulos G, Abrams R, Young R, *et al*. Cornell Scale for Depression in Dementia. *Biol Psych* 23, 271-84, 1988.

Benign Paroxysmal Positional Vertigo (BPPV)

BPPV is one of the most common causes of dizziness. It is often characterized by vertigo that occurs a few seconds after specific head movements, such as rolling over in bed, bending over, or looking upward. The vertigo usually lasts no more than a minute. The symptoms are most often experienced when patients lie down, which distinguishes BPPV from orthostatic hypotension. BPPV may be recurrent.

The Dix-Hallpike test is specific for the diagnosis of BPPV.

While sitting on an examining table, the patient's head is turned either to the right or to the left by about 45°. The patient is then moved rapidly from a sitting position to a supine position with the head hanging off of the back of the examining table while the head continues to be in the same 45° position. The patient is instructed to keep his/her eyes open so that the examiner can see eye movement during the entire procedure. If BPPV is present, vertigo will begin after a latency of 5 to 10 seconds and usually will last 30 seconds to a minute. Rotary nystagmus will occur and the patient will complain of dizziness.

After the nystagmus and the vertigo subside, the patient is returned to the sitting position. The rotary nystagmus may reverse in direction and the patient may again experience vertigo. If a positive response occurs, the same maneuver is repeated. Usually, the severity of the vertigo and the rotary nystagmus are reduced during the repeat maneuver. This reduction is termed "fatigue." The opposite ear is then tested in a similar fashion. The offending ear is the one that is toward the ground when BPPV occurs during the Dix-Hallpike maneuver.

Sloane PD. Evaluation and Management of Dizziness in the Older Patient. *Clin Geriatr Med* 12:785-801, 1996. http://www.earaces.com/BPPV.htm. Parts of this are reprinted from http://www.earaces.com/bppv.html with permission from Atlantic Coast Ear Specialists, P.C.

Classification of Dizziness

Primary Symptom	Features	Duration	Diagnosis	Management
Dizziness	Lightheadedness 1-30 min after standing	Seconds to minutes (E)	Orthostatic hypotension	Treat underlying cause; stop or decrease offending medications. Use medications for postural hypotension.
	Impairment in >1 of the following: vision, vestibular function, spinal proprioception, cerebellum, lower-extremity peripheral nerves	Occurs with ambulation (C)	Multiple sensory impairments	Correct or maximize sensory deficits; PT for balance and strength training.
	Unsteady gait with short steps; ↑ reflexes and/or tone.	Occurs with ambulation (C)	Ischemic cerebral disease	Aspirin; modification of vascular risk factors; PT
	Provoked by head or neck movement; reduced neck range of motion	Seconds to minutes (E)	Cervical spondylosis	Behavior modification; reduce cervical spasm and inflammation

Drop attacks	Provoked by head or neck movement, reduced vertebral artery flow seen on Doppler or angiography	Seconds to minutes (E)	Postural impingement of vertebral artery	Behavior modification
Vertigo	Brought on by position change, positive Dix-Hallpike test (See BPPV on page 49)	Seconds to minutes (E)	Benign paroxysmal positional vertigo	Epley maneuver to reposition crystalline debris (see www.audiometrics.com/bppv.htm); exercises provoking symptoms may be of help.
	Acute onset, non-positional	Days	Labyrinthitis (vestibular neuronitis)	Consider methylprednisone, 100mg/d po x 3d with subsequent gradual taper over 3 wks to improve vestibular function recovery. Consider meclizine for acute symptom relief.
	Low-frequency sensorineural hearing loss and tinnitus	Minutes to hours (E)	Meniere's disease	Consider meclizine for acute symptom relief; diuretics and/or salt restriction for prophylaxis.
	Vascular disease risk factors, cranial nerve abnormalities	10 min to several hours (E)	TIAs	Aspirin; modification of vascular risk factors

Note: C=chronic; E=episodic.
Reuben DB, *et al*. Geriatrics At Your Fingertips: 2007-2008, 9th edition. New York: The American Geriatrics Society; 2007.

Dizziness

V_2ERTIGO PM

V ision problem, hyper**V**entilation
E quilibrium disorders
Dep **R** ession
T ransient ischemic attacks, heart disease
I nfarction (cerebral)
G rowths (tumors)
O rthostatic dysregulation

P aroxymal positioning vertigo
M edications

Elder Neglect or Abuse

Neglect Abuse

Risk Factors and Clues for Possibility* of Neglect or Abuse**

N o money or low income
E motion (depression) of either patient or caregiver
G rave illness (cancer, Alzheimer's)
L oss of weight or dehydration
E arlier evidence of neglect or abuse
C ognitive or physical impairment
T oo many or too few doctor/emergency department visits

A lcohol or drug use
B ehavioral problems
U nkempt or poor hygiene
S kin tears, bruises or sores
E asily frightened

*Caution should be used before labeling someone neglectful or abusive without complete information.

**Neglect and abuse are combined in this mnemonic because it is often difficult to differentiate between the two, and both may be a consequence of the patient's or caregiver's circumstances. They may not be intentional.

Snellen Chart
Near Vision Assessment

Hold in good light, 14 inches from eye.

The Hearing Handicap Inventory for the Elderly (HHIE) Screening Version

(4 points for each positive answer)

Note: One of the most common causes of impaired hearing is cerumen. **ALWAYS examine ear canals when hearing is abnormal.**

1. Does a hearing problem cause you to feel embarrassed when you meet new people?
2. Does a hearing problem cause you to feel frustrated when talking to members of your family?
3. Do you have difficulty hearing when someone speaks in a whisper?
4. Do you feel handicapped by a hearing problem?
5. Does a hearing problem cause you difficulty when visiting friends, relatives, or neighbors?
6. Does a hearing problem cause you to attend religious services less often than you would like?
7. Does a hearing problem cause you to have arguments with family members?
8. Does a hearing problem cause you difficulty when listening to television or radio?
9. Do you feel that any difficulty with your hearing limits or hampers your personal or social life?
10. Does a hearing problem cause you difficulty when in a restaurant with relatives or friends?

Probability of hearing impairment given an HHIE score:	Score	Likelihood ratio (95% CI)
	0-8	0.36 (0.19-0.68)
	10-24	2.30 (1.22-4.32)
	26-40	12.00 (2.62-55.0)

Lichtenstein MJ, *et al*. Validation of screening tools for identifying hearing-impaired elderly in primary care. *J Am Med Assoc* 259(19);2875-8, 1988.

Dual Tasking

Determining Fall Risk

Good balance requires an interaction of both the central and peripheral nervous systems. In older adults, cognitive ability plays a key role in maintaining that good balance. With aging, there is a decline in the ability to perform these two tasks (thinking and moving) at the same time (**dual tasking**). This is a major reason for increasing rates of falls with aging. Persons who are identified as having trouble dual tasking can be treated with physical therapy to reduce their fall risks.

Testing a person's ability to dual task, to maintain postural control in the concurrent performance of cognitive tasks, allows healthcare providers to predict a person's risk of falling. Cognitive function and basic balance can be tested together with some basic paradigms. These include:

I. WALKING SPEED

a. Determine average walking speed
b. Determine average walking speed while counting backward from 100 by sevens
c. If dual tasking doubles the average walking speed then the patient should be referred to physical therapy.

II. GET-UP-AND-GO TEST

a. Determine the time required to perform the Get-Up-And-Go test
b. Determine the time required to perform the Get-Up-And-Go test while holding a full glass of water
c. If dual tasking results in doubling the time the person requires to perform the Get-Up-And-Go task, then the person should be referred to physical therapy.

III. DANCING

a. Determine how well a patient can dance a simple waltz
b. Determine how well a patient can execute an unexpected turn while waltzing
c. If dual tasking results in the patient stumbling during the turn, then the person should be referred to physical therapy.

IV. ONE-LEG STAND

a. Determine how long a patient can stand on one leg without falling
b. Determine how long a patient can stand on one leg with eyes closed without falling
c. If shutting the eyes results in the patient falling in less than half the time they can stand on one leg without falling when their eyes are closed, then the person should be referred to physical therapy.

Falls

Again I've Fallen

Evaluation/Causes/Risk Factors for Falls

A gain[1]
G ait and balance
A DL loss
I mpaired cognition
N umber and type of drugs[2]

I llness[3]
V estibular function
E yes, ears

F eet
A lcohol
L ow blood pressure[4]
L ower extremity weakness
E nvironment
N eurological

1 Those who have fallen before are at higher risk to fall again compared to non-fallers.
2 At least 4 types of drugs according to one meta-analysis (40 studies) are associated with increased risk for falls: antipsychotics, antidepressants, anxiolytics, sedative/hypnotics (Leipzig RM. *J Am Geriatr Soc* 47:40-50, 1999). Both SSRIs and TCAs (secondary amines) increase risk according to case control study (n=8,239). (Liu B, *et al. Lancet* 351:1303-7, 1998).
3 Look for new illness. Up to one-third of hospital visits for falls may be associated with an acute illness. A fall also may be considered a DELIRIUM equivalent.
4 Including orthostatic or postural hypotension.

Timed "Up and Go" Test

Patients who require >10 seconds for this test have limited physical mobility and may be at risk for falls.

Instructions: Have the patient
-rise from the chair
-walk 10 feet (or 3 meters) forward
-turn around
-walk back to the chair
-and sit down

Normal time to complete the test = 7-10 seconds.
Also, observe gait and balance for abnormalities during the test.

Podsiadlo & Richardson, *J Am Geriatr Soc* 39:142, 1991.

Falls

Safe and Sound
Home Assessment for Falls

S trength problems
A lcohol
F ood associated hypotension
E nvironmental factors

A therosclerotic disease (syncope)
N o freedom (restraints)
D rugs

S ight problems
O rthostatic hypotension
U nsteady balance
N octuria
D elirium or dementia

One-Leg Standing
Standing on One Foot

Purpose:
Improve balance.

Starting position:
Stand close to a wall, chair, or table for balance.

Action:
- Shift your weight onto one leg. Stand on that foot and stretch the other leg out in front of you, a few inches off the floor.
- Stand on one leg for eight counts.
- For an extra workout, flex and point your lifted foot. That is, bend the ankle so your toes point away from you, then flex the ankle to bring the toes back towards you. Flex and point eight times.
- Slowly return your leg to the starting position. Repeat with the other leg.

Repeat 6 to 8 times.

Falls

The 5 Chair-Stands*

Instructions:

Have patient sit in a chair (preferably without armrests). Cross arms at chest. Stand and sit 5 times (keeping arms crossed). Can the patient complete the task? Yes/No Amount of time to complete: _____

Scoring:

Lower extremity weakness is one of the most important risk factors for falls. In one guideline/review of studies on falls, this was the risk factor (out of 11) most consistently found to be associated with falls. On average, lower extremity weakness (measured in various ways) had an odds ratio or relative risk associated with falls of 4.4 (range was 1.5 to 10.3) compared to people without lower extremity weakness.**

Since this is a proxy measure of lower extremity strength,*** scoring does not have specific cut off points, but should be used to determine degree of abnormality based on healthy elderly and risk for falls.

The average time it takes healthy sexagenarians to complete the test is 11.34±2.44 seconds.****

If unable to do within 30 seconds, the risk of ≥1 falls in next 6 months increases (OR 2.5, CI 1.5-4.1) compared to those who can do this, and the risk of recurrent falls (≥2) in the next 6 months increases (OR 4.8, CI 2.5-9.3). All patients in this study were over 70 years of age. *****

*Also called: Sit-to-stand performance; Repeating 5 chair-stands; 5 Up-and-down.

** Guideline for the prevention of falls in older persons. American Geriatrics Society, British Geriatrics Society, and American Academy of Orthopaedic Surgeons Panel on Falls Prevention. *J Am Geriatr Soc* 49(5):664-72, 2001.

*** It is a dynamic measure, and is better than the traditional neurological exam for lower limb strength based on the 0-5 scale.

****McCarthy EK, Horvat MA, Holtsberg PA, *et al.* Repeated Chair Stands as a Measure of Lower Limb Strength in Sexagenarian Women. *J Gerontol Series A: Bio Sci Med Sci* 59:1207-1212; 2004

*****Graafmans WC, Ooms ME, Hofstee HM, *et al.* Falls in the elderly: a prospective study of risk factors and risk profiles. *Am J Epid* 143(11):1129-36, 1996

Frail

F atigue

R esistance (ability to climb one flight of stairs)

A mbulation (ability to walking one block)

I llnesses (more than five)

L oss of weight (more than five percent in one year)

van Kan, GA, Rolland YM, Morley JE, Vellas B. Frailty: Toward a clinical definition. *J Am Med Dir Assoc* 9:71-2, 2008.

FRAILTY
Preventive Strategies to Slow the Onset of Frailty

F ood intake maintenance

R esistance exercises

A therosclerosis prevention

I solation avoidance (*i.e.*, depression)

L imit pain

T ai Chi and other balance exercises

Y early check for testosterone deficiency (see ADAM on page 58)

ADLs
Activities of Daily Living

BASIC ADLS
Bathing
Dressing
Toileting
Transfers
Continence
Feeding

ADL Score: ___/6

INSTRUMENTAL ADLS (IADLS)
Using the telephone
Shopping
Food preparation
Housekeeping
Laundry
Transportation
Taking medicine
Managing money

IADL Score: ___/8

GRECC 1998
Supported by the Office of Geriatrics and Extended Care. Department of Veterans Affairs, Washington, DC, 3rd Edition.

Function

Indicators for Patients Needing Physical Therapy

A – Range of Motion and Strength.
Patient unable to do actively or passively:

- •Flex shoulder 90°
- •Bring hand to mouth
- •Bring hand to overhead
- •Bring hand to low back
- •Flex hip 90°
- •Bend knee 90°
- •Dorsiflex foot (foot drop)
- •Arm/leg shakes

B – Bed Mobility
Patient requires more than minimal assist for:

- •Rolling in bed
- •Sitting up
- •Getting up from chair/bed

C – Balance and Gait

- •Patients who drop a level in ambulation on the activity section of the nursing admission assessment.
- •Any patient admitted due to fall or with history (Hx) of falling.
- •Patients unable to stand in one spot with both feet on the ground for 30 seconds without holding on.
- •Patients unable to walk straight forward, need hand hold assist, or need assistive device to walk. Patients afraid to walk, hesitates.
- •Patients who need reassessment on equipment currently being used with walker, cane.
- •Patients unable to go up/down stairs safely.

Indicators for Patients Needing Occupational Therapy

A – Patients having difficulty in self-care, homemaking, leisure, or working skills.

B – Patients who display a decrease in cognitive, perceptual, or sensorial awareness of their surroundings.

C – Patients who have positioning problems with arms or legs due to recent onset of trauma or illness (a splint or orthotic device may improve positioning, *i.e.*, resting hand or drop foot splint).

Indicators for Patients Needing Speech Therapy

A – Patients who demonstrate swallowing difficulty such as pocketing within mouth, drooling, excessive chewing, decreased attempts at food intake, significant weight loss, significant increased time required for mealtime intake.

B – Patients who demonstrate decreased communication abilities, expressively and/or receptively.

C – Patients who demonstrate difficulty with organizing/processing thoughts, memory, sequencing, problem-solving, and judgment.

Hospitalization

Dr Iatros

Potential Areas for Iatrogenesis Related to Hospitalization

The following can be used as a daily checklist to prevent iatrogenesis.

D rug use[1]

R estraints[2]

I nfection[3]

A ltered mental status (delirium)[4]

T herapy (immobility)

R etention (of urine or feces)

O verzealous labeling

S tarvation[5]

1 Risk of adverse drug event increases with number of medications. Risk approaches 100% at 10 medications.
2 Physical restraints do not prevent falls; may cause harm.
3 Most common nosocomial infection is UTI, associated with an indwelling urinary catheter. Risk of infection from straight catheterization is far less than from an indwelling catheter.
4 Develops during hospitalization, not just on admission.
5 Restricted diets (*e.g.*, "heart healthy," "1800 calorie ADA") not indicated for older hospitalized patients who are malnourished (see pages 32-33).

Bed Rest is Bad

B ed sores

E motion (depression risk)

D VT risk

R etention of stool or urine

E at less

S leep-wake cycle disruptions

T akes longer to recover

I nfection risk (pneumonia)

S tool or urinary incontinence

B one loss

A trophy of muscle

D rop in blood pressure after getting up (orthostatic hypotension)

Hospitalization

DC Plan
Discharge Planning Check List

D rugs are all appropriate

C alled family

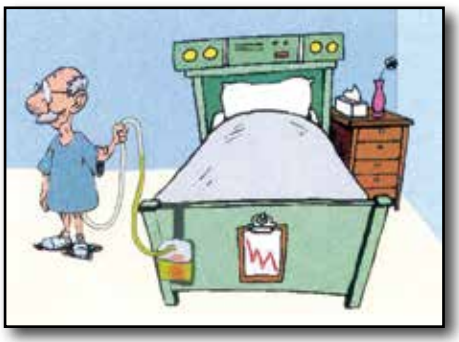
P CP notified or is aware of plan

L ow income or money issues addressed (*e.g.*, paying for meds)

A ppointments made and appropriate

N ote for transfer (dictation) done if going to another facility

A Foley Catheter is a One-Point Restraint!



Use of an indwelling urinary catheter (Foley catheter) is associated with bacteruria, urinary tract infections, bacteremia, even death. Other associations include nephrolithiasis, bladder stones, epididymis, chronic renal inflammation, and pyelonephritis. It can also be considered a one-point restraint.

Thus, use of Foley catheters should be reserved for the following:

- Short-term decompression of acute urinary retention
- Chronic retention not manageable by intermittent catheterization
- To aid in urologic surgery or other surgery on contiguous structures
- Very ill patients who cannot tolerate garment changes or are at end-of-life
- Patients who request catheterization despite informed consent regarding risks

Incontinence and risk of pressure ulcers are not indications for a urinary catheter.

Hypogonadism

ADAM
Androgen Deficiency in Aging Males

1. Do you have a decrease in libido (sex drive)?
2. Do you have a lack of energy?
3. Do you have a decrease in strength and/or endurance?
4. Have you lost height?
5. Have you noticed a decreased enjoyment of life?
6. Are you sad and/or grumpy?
7. Are your erections less strong?
8. During sexual intercourse, has it been difficult to maintain your erection to completion of intercourse?
9. Are you falling asleep after dinner?
10. Has there been a recent deterioration in your work performance?

Scoring: Yes to #1 and #7, or any 3 others is a positive screen for possible hypogonadism.

Morley JE, *et al*. *Metabolism* 49(9):1239-42, 2000.

DRIP² OR DOUSE
Urinary Incontinence

DRIP: Acute causes of urinary incontinence

Drugs, **D**elirium
Retention of urine, **R**estraints
Infection, **I**mpaction of stool
Polyuria, **P**rostatitis

DOUSE: Chronic causes of urinary incontinence

DHIC*
Overflow (Lower Urinary Tract Symptomatology)+
Urge
Stress
External causes (*e.g.*, functional)

*Detrussor hyperactivity, impaired contractility
+Includes BPH but also dysynchrony of bladder contractions in both women and men.

Incontinence

International Prostate Symptom Score (IPSS)

1. Incomplete emptying Over the last month, how often have you had a sensation of not emptying your bladder completely after you finished urinating?	**0 points = not at all** **1 point = less than 1 time in 5** **2 points = less than half the time** **3 points = about half the time** **4 points = more than half the time** **5 points = almost always**
2. Frequency Over the past month, how often have you had the urge to urinate again less than two hours after you finished urinating?	**0 points = not at all** **1 point = less than 1 time in 5** **2 points = less than half the time** **3 points = about half the time** **4 points = more than half the time** **5 points = almost always**
3. Intermittency Over the past month, how often have you found you stopped and started again several times when you urinated?	**0 points = not at all** **1 point = less than 1 time in 5** **2 points = less than half the time** **3 points = about half the time** **4 points = more than half the time** **5 points = almost always**
4. Urgency Over the past month, how often have you found it difficult to postpone urination?	**0 points = not at all** **1 point = less than 1 time in 5** **2 points = less than half the time** **3 points = about half the time** **4 points = more than half the time** **5 points = almost always**

For more information, see www.patient.co/uk/showdoc/40002437.

5. Weak stream Over the past month, how often have you had a weak urinary stream?	**0 points = not at all** **1 point = less than 1 time in 5** **2 points = less than half the time** **3 points = about half the time** **4 points = more than half the time** **5 points = almost always**
6. Straining Over the past month, how often have you had to push or strain to begin urination?	**0 points = not at all** **1 point = less than 1 time in 5** **2 points = less than half the time** **3 points = about half the time** **4 points = more than half the time** **5 points = almost always**
7. Nocturia Over the past month, how many times did you most typically get up to urinate from the time you went to bed at night until the time you got up in the morning?	**0 points = not at all** **1 point = less than 1 time in 5** **2 points = less than half the time** **3 points = about half the time** **4 points = more than half the time** **5 points = almost always**
Total I-PSS Score (max 35): **(mild = less than 6; Moderate = 6-19; Severe = 20-35.)**	☐
Quality of life due to urinary symptoms If you were to spend the rest of your life with your urinary condition the way it is now, how would you feel about that?	**0 points = delighted** **1 point = pleased** **2 points = mostly satisfied** **3 points = mised - about half and half** **4 points = mostly dissatisfied** **5 points = unhappy** **6 points = terrible**

Incontinence

OAB-V8

Overactive Bladder – Validated 8 Question Awareness Tool[1]

RESPONSE CHOICES	POINTS
Not at all	0
A little bit	1
Somewhat	2
Quite a bit	3
A great deal	4
A very great deal	5

How bothered have you been by…
1. Frequent urination during the daytime hours?
2. An uncomfortable urge to urinate?
3. A sudden urge to urinate with little or no warning?
4. Accidental loss of small amounts of urine?
5. Nighttime urination?
6. Waking up at night because you had to urinate?
7. An uncontrollable urge to urinate?
8. Urine loss associated with a strong desire to urinate?

Add 2 points to your score if you are male.

Add points for your responses to the questions above.
If your score is 8 or greater, you may have overactive bladder.

[1]Coyne KS, Zyczynski T, Margolis MK, Elinoff V, Roberts RG. Validation of an overactive bladder awareness tool for use in a primary care setting. *Adv Ther* 2204;381-94, 2005.

Help Me Sleep

Checklist for Evaluation of and Interventions for Insomnia

H erbal tea or warm milk
E valuate medication list for causes of insomnia
L imit nighttime interruptions (*e.g.*, vital signs)*
P ostpone morning labs*

M assage
E valuate daytime activity

S ound reduction
L ight reduction at night
E nvironment changes (*e.g.*, temperature of room, single room)
E asy listening music or white sound
P ain relief

*only pertains to hospitalized persons

Medication

Potentially Inappropriate Medications for Older Adults Independent of Diagnosis (partial list)*

DRUG	CONCERN
Propoxyphene (Darvon) and combinations (Darvon with ASA, Darvon-N, Darvocet-N)[1]	Offers few analgesic advantages over acetaminophen, yet has the adverse effects of other narcotics
Indomethacin	Of all available NSAIDs, this drug produces most CNS adverse effects
Muscle relaxants and antispasmodics: methocarbamol (Robaxin), carisoprodol (Soma), Chlorzoxazone (Paraflex), metaxalone (Skelaxin), cyclobenzaprine (Flexeril)	Most muscle relaxants and antispasmodics are poorly tolerated by elderly patients, since these cause anticholinergic adverse effects, sedation, and weakness. Additionally, their effectiveness at doses tolerated by elderly is questionable.
Amitriptyline(Elavil), Imipramine, Chlordiazepoxide-amitriptyline (Limbitrol), and perphenazine-amitriptyline (Triavil)	Because of its strong anticholinergic and sedation properties, amitriptyline is rarely the antidepressant of choice for elderly.
Doses of short-acting benzodiazepines (BDZ): doses greater than lorazepam (Ativan), 3 mg; oxazepam (Serax), 60 mg; alprazolam (Xanax), 2 mg; temazepam (Restoril), 15 mg; triazolam (Halcion), 0.25 mg	Because of increased sensitivity to benzodiazepines in elderly patients, smaller doses may be effective as well as safer. Total daily doses should rarely exceed the suggested maximums.
Long-acting benzodiazepines: chlordiazepoxide (Librium), diazepam (Valium), chlorazepate (Tranxene)	These drugs have a long half-life in elderly patients, producing sedation and increasing risk of falls and fractures.

[1]While this drug has high-addicting potential and in most patients less pain control, it inhibits NMDA which plays a role in perpetuating chronic pain. However. some persons get better relief of pain with propoxyphene and this should be documented.

Potentially Inappropriate Medications for Older Adults Independent of Diagnosis (partial list)* *(continued)*

DRUG	CONCERN
Digoxin (Lanoxin) (should not exceed >.125 mg/day except when treating atrial arrhythmias)	Decreased renal clearance may lead to increased risk of toxic effects.
Meperidine (Demerol)	Not an effective oral analgesic in doses commonly used, may cause confusion and has many disadvantages to other narcotics
Ketorolac (Toradol)	Immediate and long-term use should be avoided.
Daily fluoxetine (Prozac)	Long half-life and risk of producing excessive side effects, sleep disturbance, and increasing agitation. Safer antidepressants available.
Short acting nifedipine (Procardia, Adalat)	Potential for hypotension
Clonidine (Catapres)	Potential for CNS adverse effects.
Diphenhydramine (Benadryl)	May cause confusion and sedations. Should not be used as a hypnotic, and when used to treat emergency allergic reactions, it should be used in smallest possible doses.

*For full list and details, see reference: Fick DM, Cooper JW, Wade WE, *et al.* Updating the Beers Criteria for potentially inappropriate medication use in older adults: Results of a US consensus panel of experts. *Arch Intern Med* 163(22):2716-24, 2003.

Medication

Avoid Too Many

Guidelines for Proper Medication Prescribing, Prevention of Polypharmacy, and Medication Reduction

A lternatives[1]
V ague history or symptoms[2]
O TC[3]
I nteractions (drug-drug, drug-disease)
D uration[4]

T herapeutic *vs*. preventive[5]
O nce a day *vs*. BID, TID, QID[6]
O ther MDs

M oney issues
A dverse drug effects of other drugs[7]
N eed[8]
Y es/No[9]

1 Use non-pharmacological therapies whenever possible (*e.g*., warm milk instead of a sleeping agent).
2 Do not treat vague symptoms with drugs (*e.g*., vague gastrointestinal "upset" with H_2 blocker).
3 Over-the-counter drugs do count as drugs.
4 If possible (*e.g*., symptomatic drugs), decide on duration of therapy. If no positive effect after trial period, stop before adding another medication.
5 Depending on life expectancy, preventive drug therapy may not benefit patient. In general, therapeutic drugs should have priority over preventive drugs.
6 In general, once a day improves compliance, but may be more expensive than TID or QID drugs.
7 Do not treat adverse drug effects with a different drug if offending agent can be stopped or changed.
8 Does the person really need a medication now?
9 Refers to compliance. Is the person taking the current medication?

Meals on Wheels

Common causes of malnutrition in older persons

M edications[1]
E motion (*i.e.*, depression)
A norexia (nervosa or tardive), Alcoholism, Abuse (elder)
L ate-life paranoia or alcoholism
S wallowing disorders

O ral factors (see DENTAL on page 36)
N o money, Nosocomial infections

W andering and other dementia-related behaviors
H yperthyroidism, Hyperparathyroidism, Hypoadrenalism, Hyperglycemia
E ntry problems/Malabsorption
E ating problems[2]
L ow-salt or low-cholesterol diet
S hopping and food prep problems, Stores

1 Digoxin, theophylline, psychotropic drugs.
2 Severe tremor, stroke, weakness.

SNAQ

Simplified Nutritional Assessment Questionnaire

Name:_____ Sex: M F

Age:_____ Height:_____ Weight:_____ Date:_____

My appetite is
a. very poor
b. poor
c. average
d. good
e. very good

Food tastes
a. very bad
b. bad
c. average
d. good
e. very good

When I eat
a. I feel full after eating only a few mouthfuls.
b. I feel full after eating about a third of a meal.
c. I feel full after eating over half a meal.
d. I feel full after eating most of the meal.
e. I hardly ever feel full.

Normally I eat
a. less than one meal a day.
b. one meal a day.
c. two meals a day.
d. three meals a day.
e. more than three meals a day.

Tally the results based on the following numerical scale: a=1; b=2, c=3, d=4, e=5. The sum of the scores for the individual items constitutes the SNAQ score. A SNAQ score of ≤ 14 indicates significant risk of at least 5% weight loss within six months.

Wilson, *et al. Am J Clin Nutr* 82:1074-81, 2005.

Body Mass Index Table

	Normal						Overweight					Obese										Extreme Obesity																
BMI	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**	**50**	**51**	**52**	**53**	**54**
Height (inches)	**Body Weight (pounds)**																																			
58	91	96	100	105	110	115	119	124	129	134	138	143	148	153	158	162	167	172	177	181	186	191	196	201	205	210	215	220	224	229	234	239	244	248	253	258
59	94	99	104	109	114	119	124	128	133	138	143	148	153	158	163	168	173	178	183	188	193	198	203	208	212	217	222	227	232	237	242	247	252	257	262	267
60	97	102	107	112	118	123	128	133	138	143	148	153	158	163	168	174	179	184	189	194	199	204	209	215	220	225	230	235	240	245	250	255	261	266	271	276
61	100	106	111	116	122	127	132	137	143	148	153	158	164	169	174	180	185	190	195	201	206	211	217	222	227	232	238	243	248	254	259	264	269	275	280	285
62	104	109	115	120	126	131	136	142	147	153	158	164	169	175	180	186	191	196	202	207	213	218	224	229	235	240	246	251	256	262	267	273	278	284	289	295
63	107	113	118	124	130	135	141	146	152	158	163	169	175	180	186	191	197	203	208	214	220	225	231	237	242	248	254	259	265	270	278	282	287	293	299	304
64	110	116	122	128	134	140	145	151	157	163	169	174	180	186	192	197	204	209	215	221	227	232	238	244	250	256	262	267	273	279	285	291	296	302	308	314
65	114	120	126	132	138	144	150	156	162	168	174	180	186	192	198	204	210	216	222	228	234	240	246	252	258	264	270	276	282	288	294	300	306	312	318	324
66	118	124	130	136	142	148	155	161	167	173	179	186	192	198	204	210	216	223	229	235	241	247	253	260	266	272	278	284	291	297	303	309	315	322	328	334
67	121	127	134	140	146	153	159	166	172	178	185	191	198	204	211	217	223	230	236	242	249	255	261	268	274	280	287	293	299	306	312	319	325	331	338	344
68	125	131	138	144	151	158	164	171	177	184	190	197	203	210	216	223	230	236	243	249	256	262	269	276	282	289	295	302	308	315	322	328	335	341	348	354
69	128	135	142	149	155	162	169	176	182	189	196	203	209	216	223	230	236	243	250	257	263	270	277	284	291	297	304	311	318	324	331	338	345	351	358	365
70	132	139	146	153	160	167	174	181	188	195	202	209	216	222	229	236	243	250	257	264	271	278	285	292	299	306	313	320	327	334	341	348	355	362	369	376
71	136	143	150	157	165	172	179	186	193	200	208	215	222	229	236	243	250	257	265	272	279	286	293	301	308	315	322	329	338	343	351	358	365	372	379	386
72	140	147	154	162	169	177	184	191	199	206	213	221	228	235	242	250	258	265	272	279	287	294	302	309	316	324	331	338	346	353	361	368	375	383	390	397
73	144	151	159	166	174	182	189	197	204	212	219	227	235	242	250	257	265	272	280	288	295	302	310	318	325	333	340	348	355	363	371	378	386	393	401	408
74	148	155	163	171	179	186	194	202	210	218	225	233	241	249	256	264	272	280	287	295	303	311	319	326	334	342	350	358	365	373	381	389	396	404	412	420
75	152	160	168	176	184	192	200	208	216	224	232	240	248	256	264	272	279	287	295	303	311	319	327	335	343	351	359	367	375	383	391	399	407	415	423	431
76	156	164	172	180	189	197	205	213	221	230	238	246	254	263	271	279	287	295	304	312	320	328	336	344	353	361	369	377	385	394	402	410	418	426	435	443

Source: Adapted from *Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report.*

Nestlé Nutrition INSTITUTE

Mini Nutritional Assessment MNA®

Last name: First name: Sex: Date:

Age: Weight, kg: Height, cm: I.D. Number:

Complete the screen by filling in the boxes with the appropriate numbers.
Add the numbers for the screen. If score is 11 or less, continue with the assessment to gain a Malnutrition Indicator Score.

Screening

A Has food intake declined over the past 3 months due to loss of appetite, digestive problems, chewing or swallowing difficulties?
0 = severe loss of appetite
1 = moderate loss of appetite
2 = no loss of appetite ☐

B Weight loss during the last 3 months
0 = weight loss greater than 3 kg (6.6 lbs)
1 = does not know
2 = weight loss between 1 and 3 kg (2.2 and 6.6 lbs)
3 = no weight loss ☐

C Mobility
0 = bed or chair bound
1 = able to get out of bed/chair but does not go out
2 = goes out ☐

D Has suffered psychological stress or acute disease in the past 3 months
0 = yes 2 = no ☐

J How many full meals does the patient eat daily?
0 = 1 meal
1 = 2 meals
2 = 3 meals ☐

K Selected consumption markers for protein intake
- At least one serving of dairy products (milk, cheese, yogurt) per day yes ☐ no ☐
- Two or more servings of legumes or eggs per week yes ☐ no ☐
- Meat, fish or poultry every day yes ☐ no ☐

0.0 = if 0 or 1 yes
0.5 = if 2 yes
1.0 = if 3 yes ☐ ☐

L Consumes two or more servings of fruits or vegetables per day?
0 = no 1 = yes ☐

M How much fluid (water, juice, coffee, tea, milk...) is consumed per day?
0.0 = less than 3 cups
0.5 = 3 to 5 cups
1.0 = more than 5 cups ☐ ☐

E Neuropsychological problems
0 = severe dementia or depression
1 = mild dementia
2 = no psychological problems

F Body Mass Index (BMI) (weight in kg) / (height in m²)
0 = BMI less than 19
1 = BMI 19 to less than 21
2 = BMI 21 to less than 23
3 = BMI 23 or greater

Screening score (subtotal max. 14 points)

12 points or greater Normal – not at risk – no need to complete assessment
11 points or below Possible malnutrition – continue assessment

Assessment

G Lives independently (not in a nursing home or hospital)
0 = no 1 = yes

H Takes more than 3 prescription drugs per day
0 = yes 1 = no

I Pressure sores or skin ulcers
0 = yes 1 = no

Ref. Vellas B, Villars H, Abellan G et al. Overview of the MNA® - Its History and Challenges. J Nutr Health Aging 2006;10:456-465.
Rubenstein LZ, Harker JO, Salva A, Guigoz Y, Vellas B. Screening for Undernutrition in Geriatric Practice: Developing the Short-Form Mini-Nutritional Assessment (MNA-SF). J Gerontol 2001;56A: M366-377.
Guigoz Y. The Mini-Nutritional Assessment (MNA®) Review of the Literature - What does it tell us? J Nutr Health Aging 2006; 10:466-487.

For more information : www.mna-elderly.com

N Mode of feeding
0 = unable to eat without assistance
1 = self-fed with some difficulty
2 = self-fed without any problem

O Self view of nutritional status
0 = views self as being malnourished
1 = is uncertain of nutritional state
2 = views self as having no nutritional problem

P In comparison with other people of the same age, how does the patient consider his/her health status?
0.0 = not as good
0.5 = does not know
1.0 = as good
2.0 = better

Q Mid-arm circumference (MAC) in cm
0.0 = MAC less than 21
0.5 = MAC 21 to 22
1.0 = MAC 22 or greater

R Calf circumference (CC) in cm
0 = CC less than 31 1 = CC 31 or greater

Assessment (max. 16 points)

Screening score

Total Assessment (max. 30 points)

Malnutrition Indicator Score

17 to 23.5 points at risk of malnutrition

Less than 17 points malnourished

Nutrition

Scales

Protocol for Evaluating Risk of Malnutrition in the Elderly

S adness: GDS of 10-14 = 1 point
GDS of ≥ 15 = 2 points

C holesterol: <160 mg/dl = 1 point

A lbumin: 3.5-4 mg/dl = 1 point
< 3.5 mg/dl = 2 points

L oss of weight: 1 kg / 1 month = 1 point
3 kg / 6 months = 2 points

E at: Does person need assistance? Yes = 1 point

S hopping: Does person need assistance? Yes = 1 point

Scoring: ≥ 3 points indicates patient is at risk.

Morley JE. *J Am Geriatr Soc* 39:1139-40, 1991.

Dental

Screening Assessment Tool for Dental Conditions that may Interfere with Proper Nutritional Intake and Possibly Dispose a Person to Involuntary Weight Loss

D ry mouth (2 points)

E ating difficulty (1 point)

N o recent dental care[1] (1 point)

T ooth or mouth pain (2 points)

A lterations or change in food selection (1 point)

L esions, sores, or lumps in mouth (2 points)

Scoring: A score of ≥ 3 points could indicate a dental problem. Patient may need evaluation by dentist.

[1] within 2 years

Osteoporosis

Risk Factors for Osteoporosis

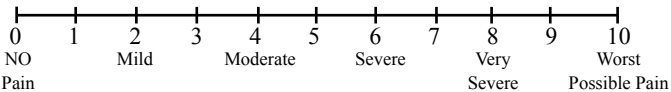
L **O** w calcium intake
S eizure medications (anticonvulsants)
T hin build
E thanol (excess alcohol)
Hyp **O** gonadism
P rior fracture
Thyr **O** id excess
R ace (Caucasian/Asian)
O ther relatives with osteoporosis/fractures
S teroids
I nactivity
S moking

Pain Assessment Tool

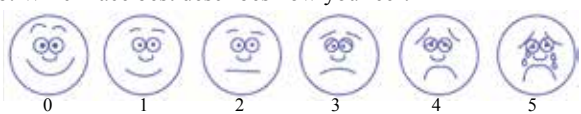
Name _____

1. Do you have any pain? YES ☐ NO ☐

1a. How much pain do you have? Circle 0 if no pain.



1b. Which face best describes how you feel?



2. Are you sad/blue/unhappy? YES ☐ NO ☐

3. What would you say your overall quality of health has been over the past month?

4. What would you say your overall quality of life has been over the past month?

IF YOU HAVE PAIN OR ARE SAD, TELL YOUR HEALTH PROVIDER. THEY CAN HELP YOU.

Pain

PAINS
Evaluation of the Different Characteristics of Pain

P rovocative factors[1]

A ggravating factors[2]

I s the pain aching, gnawing, knife-like, burning, cramping?

N ame where the pain is/where it goes

S everity[3]

[1]What brings on the pain?
[2]What makes it worse?
[3]Rate on a scale of 1-10.

Pain Wisdom

Ten Potential Problems that Occur in a Terminally Ill Person

P ain

A nxiety

I mpaction of stool

N utrition problems

W ater (hydration problems)

I nfection

S ocial and spiritual issues

D epressed mood

O xygen (dyspnea vs. hypoxia)

M outh, skin, eyes which are dry

Palliative Care and End-of-Life

Management of End-of-Life Symptoms

	Non-Pharmacological	Pharmacological
Fatigue	Consider medication effect. Provide help at home. Provide emotional support. Use energy conservation strategies. Check sleeping patterns. Utilize PT/OT. Exercise.	Treat depression. If anemic, use Erythropoietin or Darbopoietin X. Testosterone. Dexamethosone (4-6 week benefit). Methylphenidate.
Depression	Provide psychological support and regular visitors/outings.	Trazodone if associated with poor sleep. Mirtazapine if associated with anorexia. Desipramine/Nortriptyline. Selective Serotonin Reuptake Inhibitors (SSRIs).
Anorexia/ Cachexia	Provide emotional support. Encourage small, frequent meals with calorie supplements between meals. Consider multivitamin. Consider glass of wine/beer.	Megestrol acetate (if anorexic use new formulation to enhance absorption). Dronabinol (causes munchies, use only when weight gain is not a major concern). Testosterone (effectiveness uncertain).
Dyspnea	Sit upright (may need armchair). Reduce room temperature. Maintain humidity. Avoid activities that increase dyspnea. Avoid irritants, *e.g.*, smoke. Raise head of bed. Use O_2 when wanted. (Remember, cannula/mask can be irritating). Use a fan.	Treat anxiety with benzodiazepines (Lorazepam). Dronabinol for CO_2 retainers. Opiates. Low dose nebulized morphine. Steroids. Scopolomine/atropine/glycopyrollate (dries secretions, prevents death rattle).
Constipation	Consider drugs as cause. Increase fluid intake. Exclude fecal impaction. Toilet after meals with gastrocolic reflex.	Use mainly osmotic laxatives: Sorbitol, Lactulose, Polyethylene glycol.
Diarrhea	Check to make sure diarrhea is not due to osmotic laxative. Rehydrate.	Use Kaopectate, Loperamide, Prostaglandin inhibitors, or Octreotide (somatostatin analog)

Palliative Care and End-of-Life

Management of End-of-Life Symptoms

	Non-Pharmacological	Pharmacological
NAUSEA/ VOMITING	Check to make sure it is not due to drugs.	Dopamine antagonist. H_2 blockers. Serotonin antagonists. Prokinetic agents. Low-dose Dronabinol.
INSOMNIA	Avoid sleeping all day. Increase daytime activity. Control pain. Indulge in warm milk before sleeping. Get out of bed during the daytime. No reading or television in bed.	Treat depression. Treat anxiety. Treat pain. Ambien®. Sonata®. Lunesta®. Trazodone.
ANXIETY	Try supportive therapy and/or relaxation therapy. Consider various causes such as pulmonary embolus or myocardial infarction.	Lorazepam. Buspirone. Trazodone.
DELIRIUM	Supportive nursing. Consider drugs as possible cause. Ensure adequately lighted room. Avoid illusional objects. Have someone in room (*e.g.*, use delirium ICU).	Avoid drugs. If essential: Trazodone (25-50mg 2-4 times per day), for agitation. Haloperidol (0.5-1mg q d). Respiridol (1-2mg q d) for paranoia., hallucinations, rarely for agitation. IV Lorazepam (0.25-1mg) for sedation to allow for medical procedures.
PAIN	Make use of massage therapy. Try heat/cold, Transcutaneous Electrical Nerve Stimulation (TENS), lidocaine patch, and activity/distraction therapy.	Use WHO Analgesic Ladder. Try acetominophen, NSAIDS, weak opioids, strong opioids, adjuvant drugs, *e.g.*, Neurontin®, (Gabapentin). All drugs scheduled by the clock and use PRNs for breakthrough pain. DO NOT USE MEPERIDINE due to seizure potential.
END-OF-LIFE ISSUES	Provide psychological support, help with social issues, and spiritual support. Limit loneliness. Increase activities within patient's limitations. Keep out of bed.	Treat depression & anxiety. Consider dronabinol for general end-of-life care (↑ food intake & sleep, ↓ nausea and pain, and ↑ general well-being). Use low doses & introduce 1st dose at bedtime to limit delirium.

Pressure Ulcers

Staging Pressure Ulcers

Stage 1

Non-blanchable erythema of intact skin. The ulcer appears as a defined area of persistent redness in lightly pigmented skin, whereas in darker skin tones, the ulcer may appear with persistent red, blue, or purple hues. In individuals with darker skin, discoloration of the skin, warmth, edema, induration, or hardness may also be indicators.

Stage 2

Partial thickness skin loss involving epidermis, dermis, or both. The ulcer is superficial and presents clinically as an abrasion, blister, or shallow crater.

Stage 3

Full thickness skin loss involving damage to or necrosis of subcutaneous tissue that may extend down to, but not through, underlying fascia. The ulcer presents clinically as a deep crater with or without undermining of adjacent tissue.

Stage 4

Full thickness skin loss with extensive destruction, tissue necrosis, or damage to muscle, bone, or supporting structures (*e.g.*, tendon, joint capsule). Undermining and sinus tracts also may be associated with Stage 4 pressure ulcers.

Reverse Staging

Clinical studies indicate that as deep ulcers heal, the lost muscle, fat, and dermis is NOT replaced. Instead, granulation tissue fills the defect before re-epithellalization. Given this information, it is not appropriate to reverse stage a healing ulcer. For example, a pressure ulcer stage 3 does not become a stage 2 or a stage 1 in your documentation during healing. You must chart the progress by noting an improvement in the characteristics (size, depth, amount of necrotic tissue, amount of exudate, etc.) One tool to do so is called the PUSH Tool 3.0. See www.npuap.org for details.

Management Guidelines

Principles:	Relieve pain Relieve pressure Avoid dehydration Remove necrotic debris	
Stage I and II:	Needs	- Clean, moist surface - Protect from external environment
	Options	- Wet-to-moist saline gauze - Thin film polymer - Hydrocolloid
Stage III and IV with deadspace, exudate	Needs	-Clean, moist surface - Protect from external environment - *Absorption of exudate* - *Obliteration of dead space*
	Options	- Wet-to-moist saline gauze - Hydrocolloid dressing - Synthetic absorption dressing - Hydrogel
Stage III and IV with necrosis	Needs	- Clean, moist surface - Protect from external environment - *Debridement*
	Options	- Surgical; Autolytic; Enzymatic
Heel Ulcers	Needs	- Protect from external environment - Complete Pressure-reduction - DO NOT debride (unless abscess, infection)

Epworth Sleepiness Questionnaire

Screening for Sleep Disorders

How likely are you to doze off or to fall asleep in the following situations, in contrast to just feeling tired? This refers to your usual way of life in recent times.

0 = would never doze
1 = slight chance of dozing
2= moderate chance of dozing
3 = high chance of dozing

Situation
Sitting and reading
Watching TV
Sitting inactive in a public place
As a passenger in a car for an hour
Lying down to rest in the afternoon
Sitting and talking to someone
Sitting quietly after lunch without alcohol
In a car while stopped for a few minutes

Scoring: Out of 24, the higher the number, the more likely patient has a sleeping disorder.

Johns MW. Sleepiness in different situations measured by the Epworth Sleepiness Scale. *Sleep* 17(8):703-10, 1994.

"The degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions."

Risk Factors for Health Literacy

H ealth information difficult to locate
E ducation level may be low
A frican American*
L earning disabilities
T erminology: lack of understanding of medical terms
H ispanic*

L ow income
I mmigrant*
T reatment options may be poorly understood
E lderly*
R eading ability may be below 7th grade level
A ctivity limitations
C ognitively impaired
Y ahoo (older persons may struggle with computer literacy)

*Older people in these populations often had limited access to education.