

Geriatric Board Review

Two definitions of Aging

1. A decreased ability to adapt
2. The irreversible progressive changes that take place in the performance of a cell, tissue, organ or total individual animal with the passage of time.
3. To truly be due to aging, a change must be:
 - a. Progressive
 - b. Intrinsic
 - c. Universal – occurring in all members of the species

The ability to adapt = the ability to survive.

There are wide individual differences in the rate of aging. Different organ systems may age at different rates within the same individual. With increasing age, the degree of variance increases.

Some observations:

1. Age related changes are more pronounced – and more easily observed – while performing complex tasks.
2. Aging has the greatest effect on the time it takes to adapt to stress.
3. Some older individuals have better physiological function than others who are decades younger.
4. Recovery from exercise is slower – heart rate, blood pressure, oxygen uptake, CO₂ elimination...
5. There is a decreased ability to maintain body temperature.

Common Effects of Aging:

1. Systolic pressure increases – Heart rate may decrease to compensate
2. Cardiac output decreases about 1% per year in older adults
3. Peripheral resistance increases
4. About 1/3 of otherwise healthy 75 year olds will experience a 20mm drop in BP when standing up from a seated position.
5. Decreases are seen in ventricular compliance, SA node function, heart valve function
6. CHF incidence increases as we age.
7. The Glomerular Filtration Rate – as measured by the Creatinine Clearance Rate – is stable to around age 35 when it begins a linear decline.
8. This decrease in GFR is matched by a decrease in urinary excretion of creatinine due to decreasing muscle mass.
9. The net effect is that there is no significant change in serum creatinine with aging.
10. Aging effects the skin, but it is difficult to separate the effects of aging from the effects of long-term exposure to environmental factors.
11. Older skin tends to be rougher (not dryer), more wrinkled, more lax, unevenly pigmented and have a variety of proliferative lesions such as skin tags, cherry angiomas, as well as benign and malignant neoplasms.
12. The most consistent change in the skin is a flattening of the dermal/epidermal junction.
13. The dermis becomes increasingly avascular and becomes paper thin.]
14. Body hair becomes less pigmented and less dense.
15. Axillary hair is virtually absent in 30% of women and 7% of men by age 60.
16. Eccrine, apocrine, and sebaceous glands become fewer, smaller and fibrotic.
17. Nails become thinner and may develop longitudinal ridges.
18. Traumatized nails may thicken.

Diagnosis of the Elderly Patient:

1. General Information
 - a. Diagnosis is challenging because physical reactions to illness such as pain, fever, etc. are often blunted
 - b. Non-specific symptoms such as “slowing up”, apathy, confusion, and self-neglect may hide specific symptoms of recognizable disease.
4. History taking:
 - a. Hearing loss, anxiety and confusion can make history taking difficult.

- b. Position yourself in front of the patient.
 - c. Speak slowly and clearly with a moderate increase in volume.
 - d. Convey a sense of unhurried concern.
 - e. Direct questions may be required.
 - f. Confirm the facts with relatives or others.
5. Physical Examination
- a. The following may be signs of normal aging and not signs of disease:
 - i. Absent Achilles reflex
 - ii. Absent vibration sense at the feet
 - iii. Limited upward gaze and poor convergence
 - iv. Wasting of the hand muscles
 - v. Arcus senilis
 - vi. Senile pupillary constriction
 - vii. Reduced stride
 - viii. Body flexion
 - ix. Skin tenting – even when well-hydrated
 - b. Palpate the temporal arteries for tenderness
 - c. Auscultate the carotids for bruits
 - d. Compare skin pallor to the conjunctiva
 - e. Check for goiter
 - f. Check for postural hypotension (Ragland's test)
 - i. A positive Ragland's can indicate adrenal or thyroid problems or can be caused by medication
 - g. Examination of underwear can reveal incontinence, bleeding, or discharge
 - h. Listen more carefully and longer for bruits
 - i. Some patients need to rest between deep breaths during lung auscultation
6. Questions that may be helpful:
- a. Do you feel safe at home?
 - b. Do you have trouble bathing?
 - c. Do you have trouble getting dressed?
 - d. Do you have trouble eating?
 - e. How difficult is it going up and down stairs?
 - f. Can you read the labels on your medication?
 - g. Ask about support systems – family, friends, church, social agencies
 - i. Have information in your office about Meals on Wheels, the local Senior Citizens Center...
 - h. Ask about finances
 - i. Ask about sex
 - j. Ask about their independence
 - k. Ask about their ability to drive
7. Observe your patient before, during, and after the exam
- a. The "Get Up and Go" test
 - i. The patient sits on a chair with no arm rests, gets up, walks a few steps then sits down again.
 - ii. This helps evaluate lower-extremity strength, coordination, balance, flexibility, and gait.
 - iii. If your patient has difficulty consider recommending yoga, Tai Chi, or dance along with more conventional exercise.
 - b. Removing and/or hanging up a jacket
 - c. Picking up a purse
 - d. Rising from a chair
 - e. Reaching for something on a shelf
 - f. Filling out paperwork
 - g. Walking across the reception room
8. Other Considerations:
- a. Malnutrition

- i. Consider dentition, mental state, arthritis, socio-economic status
 - ii. Loss of lean body mass – monitor body composition, not just weight
 - b. Activities of Daily Living
 - i. Basic – bathing, eating, dressing, walking
 - ii. Instrumental – housework, laundry, shopping, using the phone, balancing a checkbook
 - iii. Advanced – walking ¼ mile without rest or a mile with rest, mowing the lawn, other strenuous activities
 - c. Suicide Risk
 - i. More than 1/3 of suicides are by elderly who make up only 1/8 of the population
 - ii. Loss of health is a major cause of depression
 - iii. Retirement, death of a spouse, going to a nursing home are other stressful factors
 - iv. Don't be afraid to ask:
 - 1. Have you ever felt life isn't worth living?
 - 2. Have you ever thought about suicide?
 - 3. Have you ever thought about how you would do it?
 - v. IS PATH WARM – warning signs
 - 1. Ideation – thinking about it – the more detailed, the greater the danger
 - 2. Substance abuse
 - 3. Purposelessness
 - 4. Anxiety
 - 5. Trapped
 - 6. Hopelessness
 - 7. Withdrawal – social
 - 8. Anger
 - 9. Recklessness
 - 10. Mood change
 - vi. Testosterone declines with age – Decreased muscle mass, strength, and cognition, Increased depression
 - vii. Sarcopenia – suspect underlying disease, malnutrition, depression, low activity
 - viii. Depression
 - 1. They may not mention sadness
 - 2. May be indicated by severe weight loss
 - 3. May be triggered by chronic pain
 - 4. Exercise, magnesium, St. John's wort may be helpful
 - 5. Referral may be needed
 - ix. Dementia
 - 1. Brain exercises such as crosswords, sudoku, board games may help
 - 2. Nutrition – Phosphatidyl serine, phosphatidyl choline, whole-food concentrates, liquid meal replacements, multivitamin/multimineral, supplements, ginkgo biloba (increases circulation to the brain, but can also increase the possibility of cerebral hemorrhage in susceptible people).
 - 3. Social and physical activity
9. Intelligence
- a. Fluid Intelligence – solving new problems and puzzles
 - i. After age 30 it tends to decline 3-7 IQ points each decade
 - b. Crystallized Intelligence – knowledge gained from education, acculturation, and personal experience
 - i. Increases with age
10. Central Nervous System
- a. Normal Neuro-physiological Changes with Aging

- i. 45% of neurons may be lost over a lifetime
 - ii. Brain weight declines
 - iii. Neurotransmitters become depleted
 - iv. Receptors for dopamine, noradrenalin and acetylcholine become resistant and/or decrease in number
 - v. Blood vessels narrow due to atherosclerosis
 - vi. There may be amyloid deposition
 - b. These changes are offset by:
 - i. Redundancy – We apparently have many more neurons than we need
 - ii. Compensatory mechanisms
 - 1. Loss of speech may be due to brain damage may be re-learned in the other hemisphere
 - 2. Injured areas of the cerebellum may be compensated for by other motor areas
 - 3. Dendritic connections may lengthen and increase in numbers to compensate for the destruction of neurons.
11. Peripheral Nervous System
- a. The speed of peripheral nerve transmission slows with age
 - b. The Achilles reflex is diminished or absent
 - c. Motor coordination is reduced
 - d. Peripheral Polyneuropathy
 - i. Progressive sensory and motor symptoms
 - 1. Begins in the feet and lower legs – later involves the hands
 - 2. The sensory loss spreads proximally
12. The Senses
- a. As we age, we tend to lose:
 - i. Positional sense – sometimes cannot feel body sway and may have difficulty walking on uneven ground. Falls are more likely because they may not realize they are past their balance point until it is too late
 - ii. Perception of light touch
 - iii. Vibrational sense – especially in the lower extremities
 - iv. Hearing – often a 25% loss by age 65
 - 1. Presbycusis – an age-related bilateral loss – especially of the higher frequencies
 - v. Vision
 - 1. Causes of loss include:
 - a. Cataracts
 - b. Macular Degeneration
 - c. Pupillary constriction and slower reaction
 - d. Decreased peripheral vision and depth perception
 - vi. Taste – more often not really a loss of taste, but a loss of smell which affects taste. This may cause the patient to report a loss of appetite.
13. Macular Degeneration
- a. Two types – wet and dry (the dry form is more common – about 85%)
 - b. The brain initially compensates by filling in the gaps so diagnosis is often not made until the degeneration is fairly advanced
 - c. Yellowish fatty deposits called **drusen** appear on the macula
 - d. The wet form involves new blood vessels forming in the choroid behind the retina. There may be leakage into the retina
 - e. Screening for macular degeneration uses the **Amsler Grid**
14. Benign Paroxysmal Positional Vertigo (BPPV)
- a. The dizziness is thought to be due to debris (calcium carbonate) in the inner ear
 - b. These “ear rocks” are called **otoconia**
 - c. Two common treatments of BPPV

- i. The Epley maneuver – involves sequential movement of the head into four positions in order to move the otoconia into a less sensitive area
- ii. The Semont maneuver – the patient is rapidly moved from lying on one side to lying on the other.
 - 1. This is an aggressive maneuver that is not currently favored in the U.S.

15. Hearing Impairment

- a. General Information
 - i. Hearing loss can lead to:
 - 1. Social isolation
 - 2. Depression
 - 3. Cognitive impairment
 - 4. Dementia
 - ii. Hearing aids really help
 - 1. But only 10-20% of the people who could be helped will use them
 - iii. Hearing loss is the most common sensory disorder
 - iv. About 30% of community-dwelling elderly report hearing impairment, but it is probably much higher
 - v. Hearing loss in nursing homes ranges from 70-90%
- b. Causes of hearing loss
 - i. Sensorineural
 - 1. Cranial nerve VIII or cochlear problems
 - 2. Presbycusis
 - 3. Ototoxicity (from medication)
 - 4. Ménière's disease
 - ii. Conductive
 - 1. Otosclerosis
 - 2. Cerumen
 - 3. Chronic serous otitis media
 - iii. Mixed
- c. Conditions
 - i. Presbycusis
 - 1. The most common cause of sensorineural hearing loss
 - 2. Bilateral
 - 3. Begins with higher frequencies
 - 4. Eventually impairs lower frequencies
 - 5. Probably caused by cumulative damage to the cochlea or some central auditory processing impairment
 - 6. Worsened by:
 - a. Diabetes
 - b. Cerebrovascular disease
 - c. Hypothyroidism
 - d. Hypertension
 - e. Chronic alcohol abuse
 - f. Long-term noise exposure
 - ii. Ototoxicity – The cochlea is damaged by:
 - 1. Aminoglycoside antibiotics
 - 2. High-dose loop diuretics
 - 3. Chemotherapeutic agents
 - iii. Cerumen Impaction
 - 1. The most common cause of conductive hearing loss
 - 2. The most common reversible hearing impairment in the elderly
 - 3. Older persons are more likely to over-produce cerumen than younger people
 - iv. Otosclerosis
 - 1. The second most common cause of conductive hearing loss

2. The loss is from the inability of the ossicles to move
3. It is an autosomal dominant, inheritable disorder
- v. Chronic otitis media
 1. Usually involves a tympanic membrane perforation
 2. Can be associated with a Cholesteatoma
 - a. A mass of squamous cell debris leading to bony erosion and hearing loss
- d. History
 - i. Onset
 1. Insidious, Progressive, Sudden, etc.
 - a. Presbycusis is generally insidious and progressive
 - b. Medication usually causes sudden hearing loss
 - ii. Location
 1. Chronic otitis media is unilateral
 2. The other conditions are usually bilateral
- e. Physical Examination
 - i. The patient may
 1. Frequently ask the doctor to repeat questions or instructions
 2. Not answer questions appropriately
 - ii. The Whisper Test
 1. The doctor whispers a series of numbers and asks the patient to repeat them
 - iii. Otoscopic exam – for blockages and tympanic membrane integrity
 - iv. Rinne Test – If bone conduction is better than air conduction, suspect a conduction loss
 - v. Weber Test – Lateralization implies a conductive loss on the side of lateralization or a sensorineural loss on the opposite side
- f. Ancillary Tests
 - i. Screening Tests
 1. The Hearing Handicap Inventory in the Elderly – Short Version (HHIE-S)
 - a. 10 questions scored from 0-40
 - b. >26 indicates likely hearing loss
 2. Portable AudioScope
 - ii. Audiologic Evaluation
 1. Patients who fail the HHIE-S or portable audioscopy should be referred for formal audiological testing
 2. Tests include
 - a. Tone audiometry
 - b. Speech reception threshold
 - c. Bone conduction
 - d. Acoustic reflexes
 - e. Tympanometry
 - iii. Other Tests
 1. CT may be ordered if closer examination of the bony structures is indicated
 2. MRI can find acoustic nerve tumors
 3. Electronystagmometry and rotational tests can evaluate vestibular problems
 4. Sensorineural loss can be a sign of late syphilis
- g. Treatment – Three categories: Medical, Surgical, Rehabilitative
 - i. Medical Treatment
 1. Cerumen
 - a. Removal with ear spoon or curette
 - b. Irrigation with warm water or hydrogen peroxide

- c. Dissolving with a solution of 1 tablespoon of sodium bicarbonate in 4 ounces of water and applying 2 drops qid for 1-2 weeks
 - 2. Ototoxicity
 - a. Potentially ototoxic drugs can be discontinued, reduced or replaced
 - i. Gentamicin once daily is an effective antibiotic with low ototoxic potential
 - ii. Surgical Treatment – when hearing loss is >80 dB, surgery is less likely to benefit
 - 1. Cochlear implantation
 - a. Age is not a contraindication for cochlear implantation
 - 2. Stapedectomy
 - iii. Aural Rehabilitation
 - 1. Assistive hearing devices
 - a. Telephone amplifiers and large-area amplification systems
 - i. They amplify all sounds – including background noise
 - b. Television listening systems and Remote Microphones
 - i. They transmit sound directly to the individual
 - c. Alerting devices
 - d. Hearing Aids
 - i. Behind the ear, In the ear, Analog, Digital, Programmable...
 - ii. Usually effective for sensorineural hearing loss
 - iii. The main problem is people not using them
 - h. Concerns
 - i. Many primary care practitioners don't recognize or screen for hearing deficit
 - ii. The average time from onset of hearing loss to diagnosis is 10 years
 - iii. More effort toward decreasing the stigma and increasing the use of hearing aids is needed
 - iv. Hearing aids help, but do not return hearing to normal
 - v. It takes time to become accustomed to amplified sounds and to tune out the unwanted sounds
 - i. Resources:
 - i. Self-Help for Hard of Hearing People, Inc www.shhh.org
 - ii. American Speech-Language-Hearing Association www.asha.org
 - iii. American Academy of Audiology www.audiology.com
16. Exercise for older adults
 - a. General Information
 - i. Inactive persons have 5-8 times the risk of cardiovascular disease
 - ii. Regular exercise can reduce the risk of cardiovascular disease, hypertension, colon cancer, stroke, and more. It decreases blood glucose, blood pressure, depression and anxiety. It increases insulin sensitivity and mental function
 - iii. Low to moderate intensity exercise does a great job and is less likely to cause injury – Sports Physician Dr. Michael Colgan calls it “High repetition – Low intensity” exercise
 - b. The Target Zone
 - i. Dr. Phillip Maffetone's 180 formula – Subtract your age from 180, then modify the number by selecting one of the following categories
 - 1. Recovering from an illness or surgery or on regular medication: subtract 10

2. If you have not exercised before or catch colds and flu easily, or recovering from injury: subtract 5
 3. If you have exercised for two years with no problem: subtract 0
 4. If you have exercised for more than two years with no problems and are progressing well: add 5
- c. The Borg Scale – how does your exercise feel?
- i. This is a scale that ranges from very very light to very very hard.
 - ii. Your exercise should be kept somewhere between “somewhat hard” and “hard”
 - iii. The actual speed, duration, etc. will vary each day based on how the exercise feels to you each day
- d. Contraindications to exercise
- i. Chest pain
 - ii. Shortness of breath
 - iii. Dizziness
 - iv. Lightheadedness
 - v. Confusion
 - vi. Pain
- e. Strength training
- i. 8 weeks using weight machines tripled the leg strength of nursing home residents ranging from age 87 to 96
 - ii. To increasing strength: 3 sets of 5 repetitions of each exercise using 75% of maximum resistance
 - iii. To increase endurance: use 50% of maximum with 3 sets of 12 repetitions of each exercise
 - iv. Exercise three times per week
 - v. If joints are painful, isometrics can be used
 1. May be contraindicated with hypertension or other cardiovascular problems
- f. Flexibility exercise
- i. Stretching – can be done while watching television or talking on the phone
 - ii. Yoga or Tai Ch'i – helps build strength, balance, and flexibility
- g. Barriers to Exercise
- i. Arthritis
 1. Apply heat before exercising
 - a. Sometimes ice works better
 2. Massage the involved muscles
 3. Choose the best time of day
 4. Change the type of exercise – swimming, isometrics, rebounding
 5. Reduce weight of appropriate
 - ii. Fear of falling
 1. Yoga and Tai Ch'i
 2. Strength training
 3. Perform the exercises more slowly
 4. Build up slowly
 5. Use protective railings and grab bars
 6. Perform seated exercises
 - iii. Lack of transportation
 - iv. Lack of money
 - v. Lethargy
 - vi. With some creative effort, the above barriers can usually be overcome
17. Alcoholism and Older Adults
- a. Definition – The persistence for 1 month or more, of three or more of the following:
 - i. Drinking more or over a longer time
 - ii. Persistent desire or unsuccessful attempts to cut down or control use

- iii. Spending significant time obtaining, drinking, or recovering from the effects
 - iv. Intoxication or withdrawal when expected to fulfill major obligations
 - v. Giving up or reducing important activities because of drinking
 - vi. Continued use in spite of knowing it is causing problems
 - vii. Marked tolerance
 - viii. Withdrawal symptoms
 - ix. Drinking to relieve or avoid withdrawal symptoms
 - b. Types of Alcoholism
 - i. Late-onset reactive problem drinkers
 - 1. About 1/3 of elderly alcoholics are in this category
 - 2. Usually connected to the loss of a spouse, loss of abilities, etc.
 - 3. Can often be reversed with therapy
 - ii. Early-onset drinkers
 - 1. Have been heavy drinkers for a long time
 - 2. Recovery is more difficult
 - c. Assessment
 - i. More difficult in older adults because of the lack of work and social interactions
 - ii. CAGE questionnaire – Have you ever:
 - 1. Thought about **C**utting down?
 - 2. Felt **A**nnoyed when others criticize your drinking?
 - 3. Felt **G**uilty about drinking?
 - 4. Used alcohol as an **E**ye opener?
 - 5. Two or more “Yes” answers suggest an alcohol problem
 - d. Complications
 - i. Malnutrition
 - ii. Liver disease
 - iii. COPD
 - iv. Peptic ulcers
 - v. Cancer
 - vi. Risk of injury to self and/or others
 - vii. Sleep disturbances
 - e. Treatment Alternatives
 - i. Physician Counseling
 - ii. Intervention
 - iii. Detoxification Centers – Age-specific if possible
 - iv. Alcoholics Anonymous
 - v. Know your community resources
18. Polypharmacy
- a. At least 125,000 deaths each year from prescription drug misuse
 - b. At least 15% of nursing home admissions are a result of drug reactions
 - c. Physicians often prescribe drugs when there are non-pharmacological treatments available
 - d. Management
 - i. Avoid unnecessary medication
 - 1. Diet, Exercise, Supplements, Stress management, etc.
 - ii. Use one pharmacy
 - iii. Have the patient bring all their medications and supplements to your office
 - 1. Look them up in a PDR and write down all contraindications and possible adverse effects.
19. Injury Prevention
- a. Geriatric injuries result in twice the deaths as injuries in younger people
 - b. Decreased hearing, vision, balance, slow reactions, neurological impairment, medications and alcohol all contribute to more injuries

- c. 75% of falls occur in the home – About 40% of elderly people fall each year
 - d. Home Assessment
 - i. Illumination and convenient light switches
 - ii. Handrails, grab bars, and non-slip surfaces where appropriate – esp. tubs and showers
 - iii. Tack down or remove throw rugs
 - iv. Repair loose or torn carpet
 - v. Eliminate hazardous electrical cords, sharp corners, slippery floors, items stored in high cabinets
 - vi. Wear safe footwear – rubber soles, low heels, good fit
 - vii. Safe exercise to increase strength, balance and flexibility
20. Motor Vehicle Accidents
- a. General Information
 - i. The age group with the highest motor vehicle accident rate is 15-21
 - ii. The second highest age group is 65+
 - iii. The causes include:
 - 1. Slower reflexes
 - 2. Poor vision – especially poor dark adaptation – cataracts
 - 3. Cognitive impairment
 - b. Prevention
 - i. Age-specific driver safety classes – “55 Alive” from the AARP
 - ii. Compensate for decreased vision and hearing
 - 1. Keep windshield and windows clean
 - 2. Keep the radio turned down or off
 - 3. Keep the blower on the heater or A/C on a lower setting
 - 4. Keep a window slightly open
 - 5. Wear optical quality sun glasses\
 - iii. Consider medication timing
 - iv. Stop to rest frequently
 - v. Limit driving to the safest time of day
 - vi. Limit driving to familiar areas
 - vii. Keep the vehicle well-maintained
 - viii. Don’t drive when drinking
 - c. Prevention of Pedestrian Accidents
 - i. Wear highly visible clothing
 - 1. At night, consider a clip-on light and reflective clothing
 - ii. Don’t assume that the other drivers see you
 - iii. Lobby local officials to install properly timed pedestrian traffic signals
21. Geriatric Chiropractic
- a. Why Chiropractic for Older People?
 - i. They have joint pain, muscle pain, joint asymmetry, ROM abnormalities...
 - ii. In other words, they are almost like real people ☺ In fact, they probably need our knowledge and skill more than most others
 - b. Some thoughts:
 - i. Dr. Kirkaldy-Willis: Three Phases of spinal degenerative disease – Dysfunction, Instability, and Stabilization
 - ii. Question: Is it a good idea to destabilize that which their body has spent decades stabilizing?
 - iii. Dr. Guest’s fourth phase of spinal degenerative disease – Compensation leading to postural changes, soft-tissue changes, and calcification
 - iv. Long-term misalignment and abnormal regional spinal configuration result in bone and soft tissue remodeling
 - 1. Should restoration of “normal” curves be our goal? Should we attempt to undo what the patient’s body has spent years doing?
 - v. Dr. J.FI Markham – the ICA International Review of Chiropractic 1994

- vi. “When a doctor undertakes to remobilize the joints, they need to recognize and inform the patient of the possibility of increased symptoms ... as the adjustments may create instability. Such instability will usually create more pain and may not be quickly abated.”
- c. Considerations
 - i. Cervical problems are often related to shoulder and scapulocostal restrictions
 - 1. Active and passive stretching and deep tissue massage can restore scapular glide and shoulder abduction
 - ii. Thoracolumbar hypomobility contributes to the stiff, shuffling gait of many older patients
 - iii. Hip problems
 - 1. Circumduction with distraction followed by a quick distractive pull can be helpful
 - iv. Wrist and finger restriction
 - 1. “Milking” the forearm muscles can release the restriction in many cases
 - v. Spinal extension can be painful. The following can help
 - 1. A pillow under the head when supine or under the chest (and/or pelvis) when prone
 - 2. When lying prone is difficult, put them on a flexion table that is already in flexion
 - 3. Adjust thoracics with the “anterior” technique with the patient supine and flexed
 - 4. Adjust thoracics with the patient standing and “slumped”
 - 5. Include more I-S line of drive in your adjustments
 - vi. Mobilization
 - 1. Used “stair stepping” and “figure 8” technique (from SOT) on the cervicals
 - 2. Use blocks – not just on the pelvis, but also on the thoracics and lumbar
 - 3. Traction techniques (decompression, segmental distraction, etc. can be helpful
- d. Maintenance Care
 - i. May be particularly important for older patients
 - ii. Help them preserve motion and flexibility
 - iii. Help them improve strength
 - iv. Just the contact – social and physical – can be therapeutic