

*Grow old along with me!  
The best is yet to be,  
The last of life, for which  
The first was made.*

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*Rabbi Ben Ezra, 1864*



2013

Virginia

EMS

Symposium

# *“A LOOK AT THE TWIGHLIGHT YEARS”*

## *Prehospital Assessment and Care of the Aging Patient*

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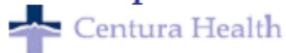
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PreHospital Services**





## *Trends in Aging*

- \* Geriatric patients are individuals older than 65**
- \* In 2000, the geriatric population was almost 35 million**
- \* Represent 12% of the population**
- \* In 2011 the first Baby-Boomers will reach 65**
- \* By 2020, the geriatric population is projected to be greater than 54 million (20%)**



*The*  
**GRAYING**  
*of*  
**AMERICA**

*2/3 of all 65 y.o.  
people who have  
ever lived, are  
alive today*



## *Life Expectancy*

- \* In 1900 life expectancy was 47
- \* Has doubled in the past 100 years
- \* Women – 84 years
- \* Men – 81 years





# *Attitudes toward Aging and the Elderly*

**Aging does not imply diminished  
happiness**

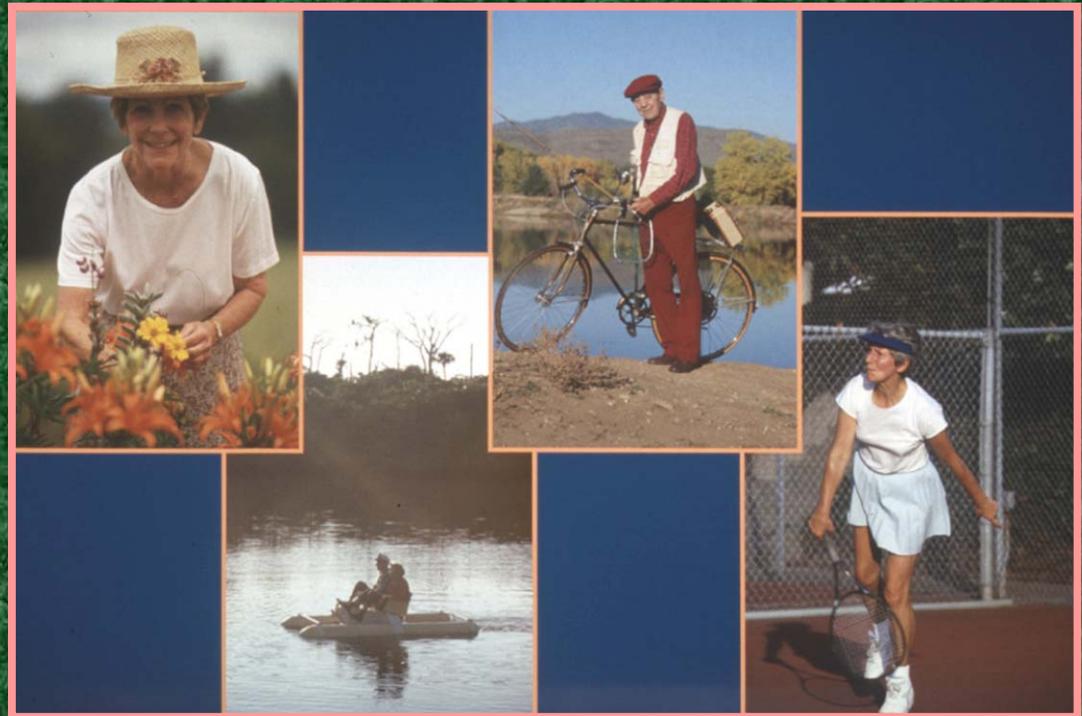




# *Attitudes toward Aging and the Elderly*

**Aging does not have to mean you are impaired**

And in the end, it's not the years in your life that count. It's the life in your years !





## *Physiologic Changes*

- \* 5-10% per decade of life after age 30**
- \* The systems most affected are:**
  - \* Cardiovascular**
  - \* Musculoskeletal**
  - \* Respiratory**
  - \* Nervous**
  - \* Sensory**



## *Physiologic Changes*

- \* Reduced ability to raise the heart rate
- \* Reduced compensatory mechanisms
- \* Muscle shrinkage, calcification
- \* Osteoporosis, thinning of the disks
- \* Bones tend to compact against one another
  - \* Compression fractures
- \* Reduced pulmonary capacity
- \* Loss of cilia, reduced cough reflex
- \* Decreased cerebral flow
- \* Reaction time slows down
- \* Balance is less precise, prone to falls
- \* Generalized weakness, can't get up



# *Dementia*

## \* Dementia

- \* Chronic global impairment > 1 year
- \* Chronic state, unlike delirium
- \* Change in patients *usual* level of functioning

## \* Symptoms:

- \* Memory loss of recent events
- \* Language loss
- \* Impairment of reasoning, judgement and calculation skills
- \* Inability to move around safely



# *Dementia*



## \* Causes:

\* Illnesses

\* Hypothyroidism

\* Nutrition  
imbalance

\* Vitamin  
deficiencies

✦ Thiamine (B12)

\* Structural CNS

\* Hydrocephalus

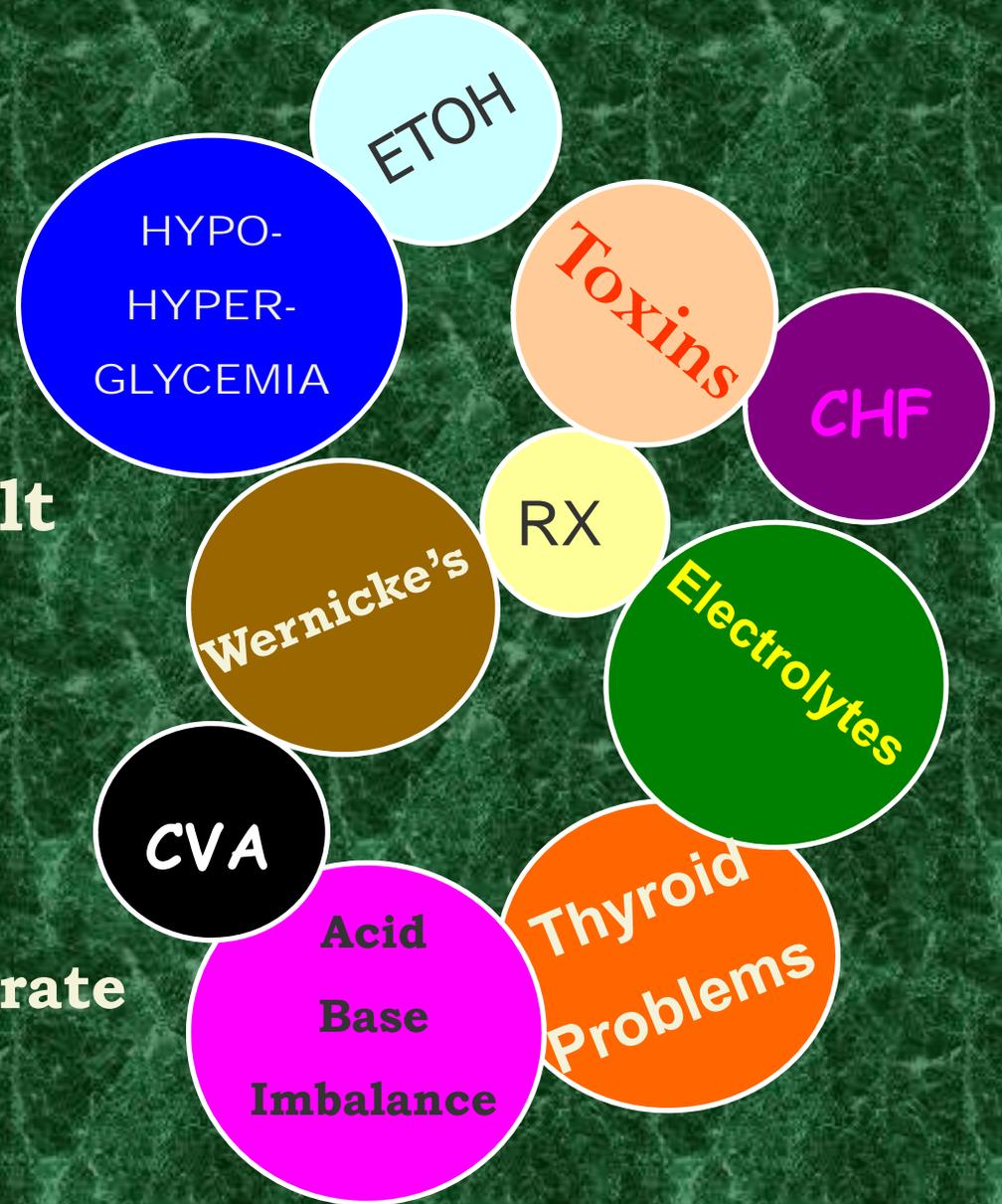


# Delirium

\* May be as a result of a serious underlying condition and a true emergency!

\* Prognosis:

\* 15%-30 Fatality rate





# *Delirium*

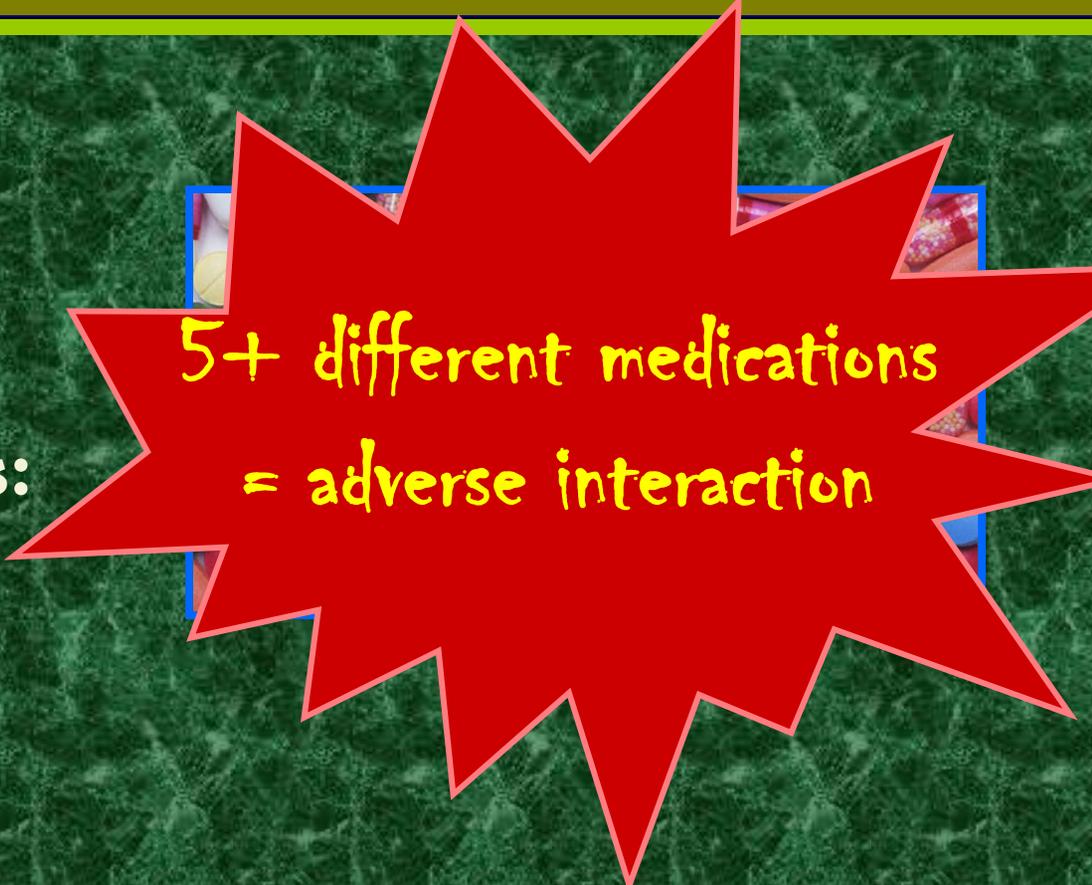
- \* **Drug Induced Illness**
- \* **Accidental OD accounts for 30% of all drug induced admissions for the elderly**
- \* **Why:**
  - \* **Not compliant, forget, confused, vision, self selection**
  - \* **Multiple Rx from multiple PMD**
  - \* **New meds vs. old, half used**
  - \* **OTC Rx with cumulative effects**



# *Polypharmacy*

## \* Common Culprits:

- \* Analgesics
- \* Antidepressants
- \* Anti -Diabetic Agents
- \* Anti Inflammatory
- \* Anti- Anginal
- \* Beta Blockers
- \* Diuretics
- \* Lipid Lowering
- \* Estrogen replacements
- \* Respiratory medications



5+ different medications  
= adverse interaction

*“Half the modern drugs could  
well be thrown out of the window,  
except that the birds  
might eat them”*

*Dr. Martin Henry Fischer (1879-1962)*



# *Depression*

- \* **Most common psych disorder in the elderly**

- \* **Causes:**

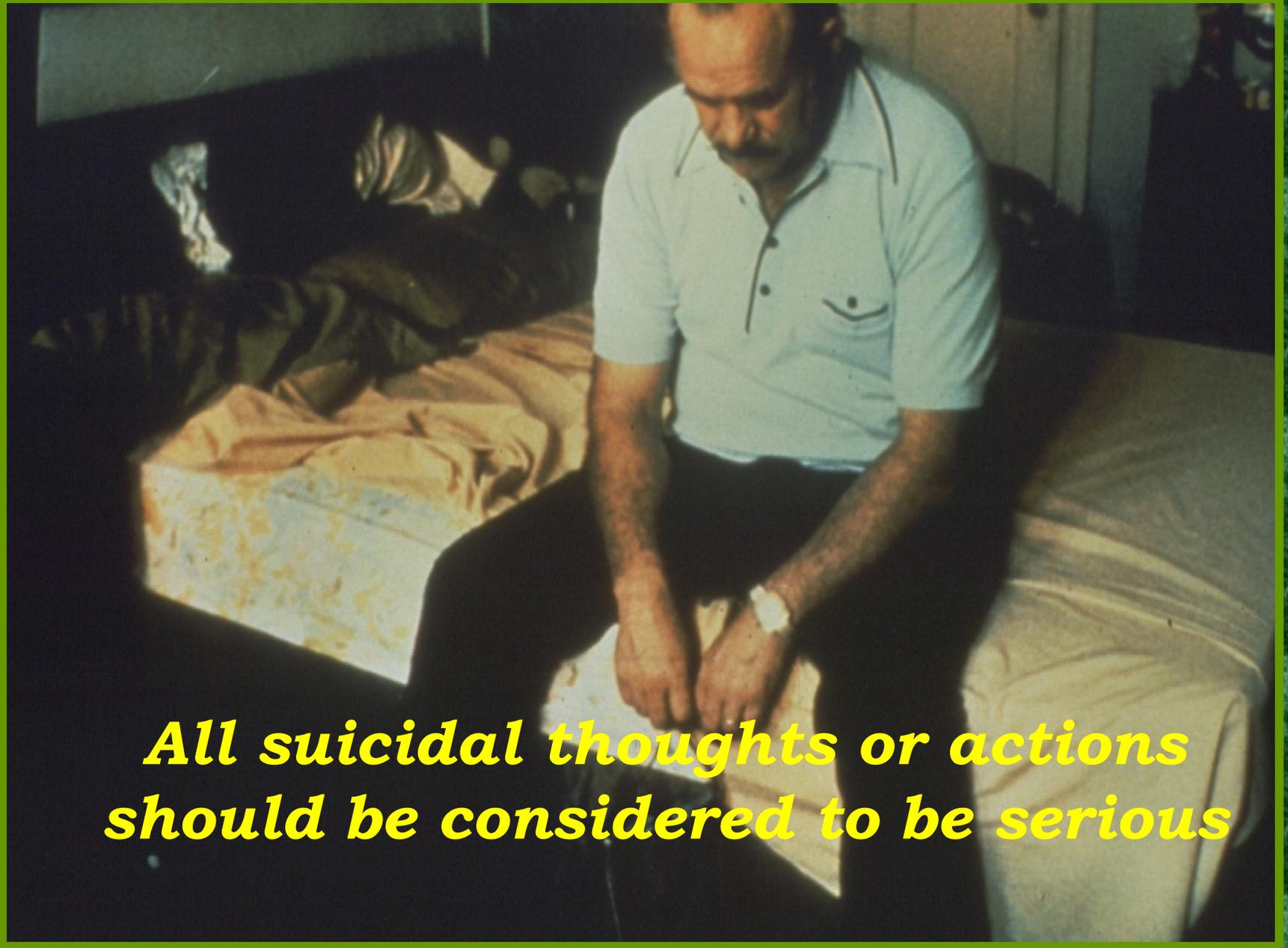
- \* **Stress of multiple illnesses**
- \* **Environmental changes,**
- \* **Bereavement, social rejection**

- \* **Symptoms:**

- \* **Lack of energy**
- \* **Loss of appetite, libido**
- \* **Poor self esteem**

- \* **25% of suicides occur in patients >65**

- \* **Men have the highest incidence**
- \* **Usually more lethal**



***All suicidal thoughts or actions should be considered to be serious***



## *Geriatric Trauma*

**Trauma is the fifth leading cause of death for persons >65**

**Risk of death from multiple trauma is 3 X greater at age 70 than at age 20**



*More susceptible to an equivalent degrees of injury*

*Protective mechanisms are slow*

*Less cardiac reserve*



## *Vehicular Trauma*

**A third of traumatic deaths in people 65-74 are secondary to vehicular trauma**

### **MVA Crash Fatalities Among the Elderly**

- \* More likely to be female (46% vs 32%)
- \* More likely to be belted (57% vs 31%)
- \* More likely to be driving (71% vs 69%)
- \* Less likely to be intoxicated (5% vs 38%)  
*(Note: Fatality rates were higher in areas of increased population density)*



## *Head Trauma*

- \* **Two thirds of patients >65 who are unconscious upon arrival at ED do not survive**
- \* **Brain shrinks, creating space between the tissue planes**
  - \* **Bleeds w/o symptomology**





# Thoracic Trauma

\* **ANY MECHANISM THAT SUGGESTS THORACIC INJURY IN AN OLDSTER MUST BE CONSIDERED *LETHAL!***

\* **Loss of chest elasticity, loss of pulmonary reserve, low alveolar surface, loss of small airway patency, response of chemoreceptors**

\* **Oldsters have greater risk of heart and major vessel trauma than their younger counterparts.**

\* **Myocardial contusion = Pump failure = dysrhythmias**

\* **Aortic dissection**

\* **Ischemia happens often happens w/o heart involvement.**





## Elderly Predisposition to Shock

- ↓Renal mass = ↓renal function
- ↓Total body water
- ↓Total cells (*up to 30% fewer than us*)
- ↓SV, HR
- ↓Cardiac conduction
- ↓Subcutaneous tissue = ↓padding
- ↓Muscle & bone mass = ↓strength
- ↓Rate of healing

# *Less Traumatic..... Just as Lethal*

## Common Injuries *among the* Elderly

Brain

Wrists

Spine, esp.  
cervical

Ribs  
*(esp. vulnerable)*

Hips  
*(esp. vulnerable  
in women)*

Lower  
extremities



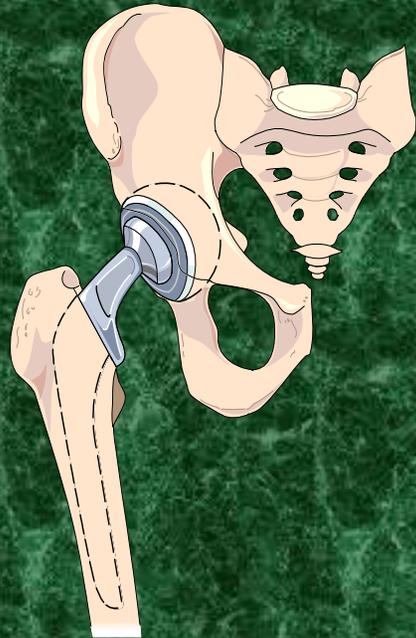


# Falls

- \* 9500 deaths per year
- \* 1/3 of elderly people living at home fall each year. 1 in 40 of these folks are hospitalized
- \* Of older people that are hospitalized as a result of a fall, 50% die within 1 year

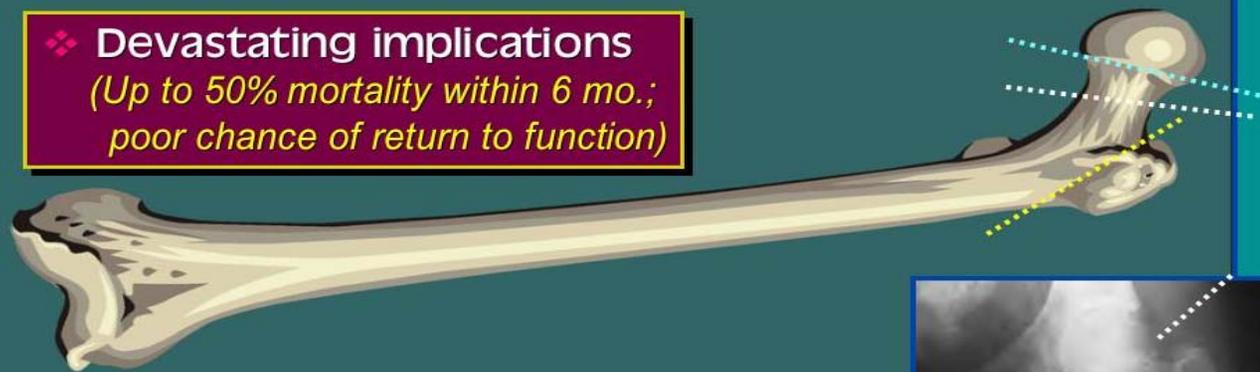
(Rose C, editor *Emergency Care of the Elderly*,  
*Emerg Med Clin North Am* May 1990)





*Hip fractures more likely to cause permanent life changes*

❖ **Devastating implications**  
*(Up to 50% mortality within 6 mo.;  
poor chance of return to function)*





## *Elder Abuse*

**“The infliction of physical injury, pain debilitating mental anguish, unreasonable confinement, or willful deprivation by a caretaker of services which are necessary to maintain mental and physical health of an elderly patient”**



# *Elder Abuse*

## \* Types:

### \* Physical

- \* Hitting, restraint

### \* Psychological

- \* Threats, humiliation

### \* Financial or material

- \* Theft, forced relocation

### \* Neglect

- \* Withholding Rx, food, assistance

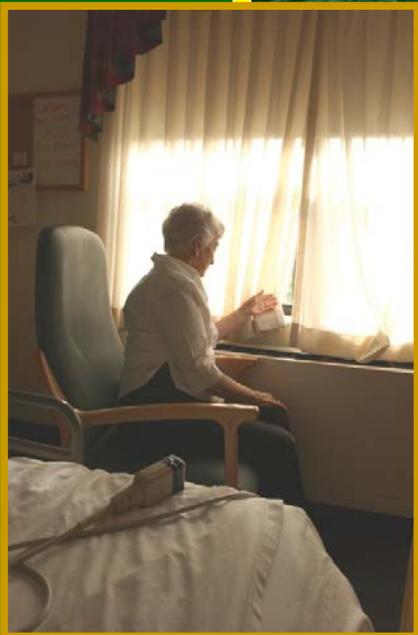
## \* Characteristics:

### \* Victim

- \* Woman, 75y/o, widow, one or more impairments, financially, physically dependent
- \* Nursing home patients who receive no visitors have a high livelihood

### \* Abuser:

- \* Relative (daughter), in residence, ETOH, anger with role, job or family crisis, psych Hx





**Victims are often  
hesitant to report  
Signs of abuse are  
overlooked**



# *Elder Abuse*

- \* Repeated visits to the emergency department
- \* A history of being “accident prone”
- \* Soft-tissue injuries
  - \* Bruises, bites, grab marks, genitals
- \* Vague explanation of injuries
- \* Multiple psychosocial complaints
  - \* Depression
  - \* Self-destructive behavior
  - \* Eating and sleeping disorders





## *Management Priorities*

- \* Volume loading may precipitate CHF
- \* Hypovolemia and hypotension are poorly tolerated
- \* BP < 120 hypovolemia should be considered
- \* Tachycardia is an unreliable indicator of shock
- \* Decreased ability to maintain normal acid-base balance and to compensate for fluid changes
- \* All organ systems have less tolerance to hypoxemia
- \* Lower  $P_{O_2}$  levels in elderly
- \* Decreased chest wall compliance and excursion = less vital capacity
- \* COPD oxygen considerations



*Just imagine yourself in their position...*

**What would it be like to be very very old ?**

**What would it be like to not be able to care for yourself ?**

**What would it be like to feel and be helpless?**

**What would it be like to be cold, dirty, scared, hungry, tired ?**

**Do you want YOU to take care of you ?**



# *Communicating with the Elderly*

*Elderly people* **hate it** *when you...*

- \* Talk ABOUT them in their presence
- \* Shout at them
- \* Treat them like idiots or children
- \* Ask questions, then interrupt them
- \* Ignore what they have to say

**Show respect**

**Speak slowly and distinctly**

**Give them time to answer**

**Transposition of feelings**

**“I’m sorry you feel so bad**

# *Communicating with the Elderly*

**Position yourself at  
eye level**

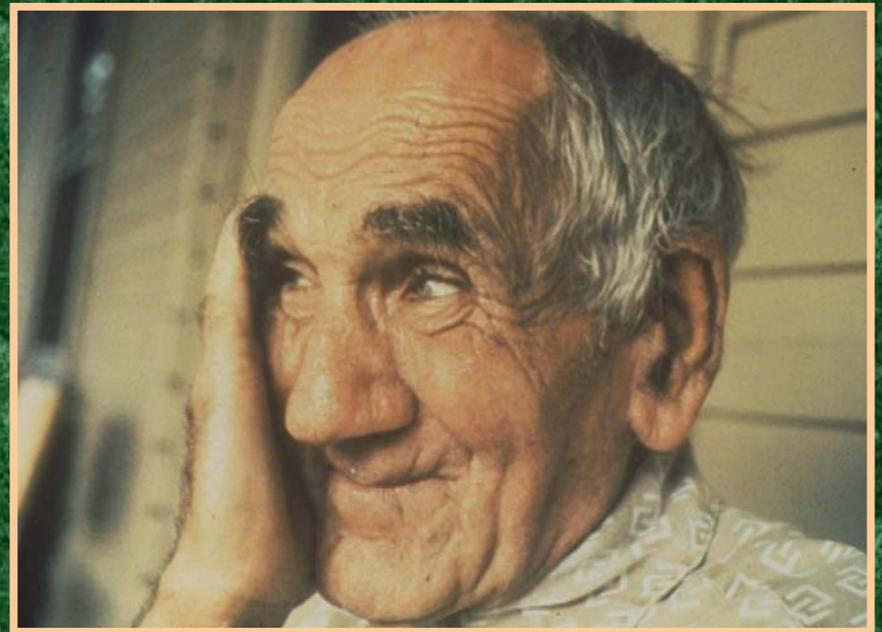
**Maintain their  
modesty**





## *Assessment*

*Pediatric patient are  
not just little adults !*



*Geriatric patients are  
not just older adults !*



# *Assessment*

- \* Include all past and current medical conditions
- \* Difficulty localizing even simple injuries or pain
- \* Differentiate chronic from acute
- \* “Vials of life”, diabetic syringes, ETOH, hygiene
- \* What does he/she look like now vs. normal appearance?





## *Geriatric Assessment Pearls*

- \* Elderly folks tend to have many illnesses at once**
- \* Assessment can be difficult due to chronic conditions**
- \* Response to pain may be diminished**
- \* Patient/prehospital practitioner may underestimate severity of problem**
- \* Loss of autonomy, hospital fears, \$ fears**



## *Geriatric Assessment Pearls*

- \* Patience is a virtue**
- \* Who you are and how you act, can be more important than what you are doing**
- \* Do not assume the patient is deaf, but speak slowly/carefully**
- \* Be aware of assistive devices (glasses, dentures, walkers)**
- \* Be a good listener**



# *Conclusion*

He that would pass the latter part  
of life with honor and decency  
must remember when he is young  
that he shall one day be old,  
and remember when he is old,  
that one day he was young.

Samuel Johnson



*THANK  
YOU*

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