#### **Elderly Care : Concept and Principles**



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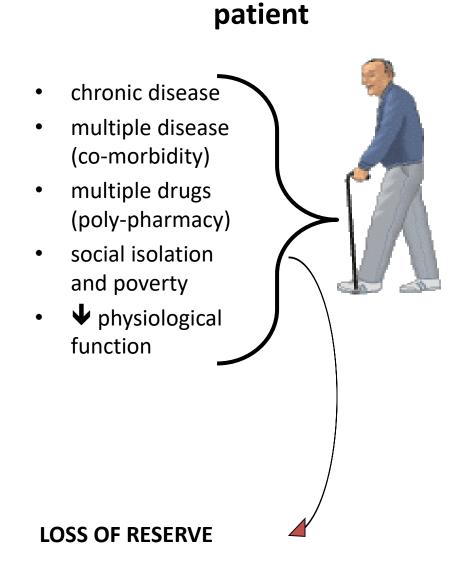
## Who is old?



#### Elderly:

- 60 & + years of age (UN)
- 65 & + developed countries
- 50 & + African countries,

birth certificates problem)



The typical "geriatric"

# What's Aging ? Why is it a concern?



### Aging – definition

• Aging is a physiological process is associated with complex changes in all organs.

 The accumulation of biological changes over time leading to decreased biological functioning and impaired ability to adapt to stressors.

#### Who is the ?

### Geriatricians

Diagnose, treat & manage diseases & conditions

• Special approach for aging patients and

### **General principles of geriatric care**

- Multi-factorial disorders are best managed by multi-factorial interventions
- Atypical presentations need to be considered
- Not abnormalities require evaluation and treatment
- Complex medication regimens, adherence, problems, and poly-pharmacy are common challenges

Ref: 2010 Current Medical Diagnosis & Treatment McGraw Hill Lange

### **Principles of Geriatrics**

- 1. Aging is not a disease.
  - Aging occurs at different rates
  - Between individuals
  - Within individuals in different organ systems
- 1. Geriatric conditions are chronic, multiple, multifactorial
- 2. Reversible conditions are underdiagnosed and undertreated
- 3. Function and quality of life are important outcomes
- 4. Social support and patient preferences are critical aspects

### **Principles of Geriatrics**

- 5. Geriatrics is multidisciplinary issues
- 6. Cognitive and affective disorders prevalent and undiagnosed at early stages
- 7. Iatrogenic disease common and often preventable
- 8. Care is provided in multiple settings
- 9. Ethical and end of life issues guide practice

### Why Elderly are special group?

### Normal Aging vs. Disease

- Normal aging
  - "Crow's feet"
  - Presbycusis
  - Seborrheic keratoses; loss of skin elasticity
  - Benign forgetfulness
  - Decreased blood vessel compliance
  - Increase in % body fat

- Disease
  - Macular degeneration
  - Tympano-sclerosis
  - Basal cell CA
  - Dementia
  - Athero-sclerosis
  - Hypertension
  - Obesity

#### **Common Geriatric Syndromes**

Dementia vs Delerium Fragility Sacropenia Falls & Gait and mobility impairment Polypharmacy Urinary Incontinence Depression



Frailty

#### Dementia

Mental problems



Risk of falls

#### Polypharmcy and iatrogenic

Agitation and anxiety



#### Driving issues

#### Executive function

### Loss of motivation



#### Decline in quality of life: Saudi Elderly study

Senani SA & Al-saif A, J. Phys. Ther. Sci. 27: 1691–1695, 2015

- chronic disease,
- falls, (more with DM (58%) & HTN (29%))
- sedentary lifestyle (69%;more in joint / bone pain (90%))
- low physical activity (63%)
- sleep disturbances,
- Sensory impairments-depression risk and
- decreased self-sufficiency.

#### Assessment of old patient!

**Comprehensive geriatric assessment (CGA)** 

#### **Structured Approach**

#### Multidimensional

- Functional ability
- Physical health (pharmacy)
- Cognition
- Mental health
- Socio-environmental

#### Multidisciplinary

- Physician
- Social worker
- Nutritionist
- Physical therapist
- Occupational therapist
- Family

#### **Comprehensive geriatric assessment (CGA)**

- Co-ordinated multidisciplinary assessment
- Identify medical, functional, social & psychological problems
- The formation of a plan of care including appropriate rehabilitation
- The ability to directly implement treatment recommodations by the multidisciplinary team
- Long term follow up
- Targeting (age & frailty)

### Fraility

- Frail people suffer from three or more of five of following symptoms;
  - unintentional weight loss (10 lbs or + in last yr ),
  - muscle loss,
  - a feeling of fatigue,
  - slow walking speed and
  - low levels of physical activity.
- vulnerable to significant functional decline
- Typically 75 years of age or older with multiple health conditions; acute and chronic; as well as functional disabilities.

#### **Areas of Assessment**

- Functional assessment
- Mobility, gait and balance
- Sensory and Language impairments
- Continence
- Nutrition
- Cognitive/Behavior problems
- Depression
- Caregivers

### Example of Assessment areas!

Cognitive and affective disorders are prevalent and commonly undiagnosed at early stages: Dlerium, multi-infartion dementia.

Geriatric depression is often undiagnosed

## Iatrogenic illnesses are common and many are preventable:

Polypharmacy, adverse drug reactions. The use of five or more medications is considered polypharmacy.

Complications of hospitalization, falls, immobility, and deconditioning.

### EOL care

Advance directives are critical for preventing some ethical dilemmas.

**Palliative care and end-of-life care are essential good QOL.** 

#### **Supporting the Normal Changes**

#### Changes in Vision:

- Decreased peripheral vision
- Decreased night vision
- Decreased capacity to distinguish color
- Reduced lubrication resulting in dry, itchy eyes

#### **Changes in Hearing**

- Sensitivity to loud noises
- Difficulty locating sound
- More prone to wax build up that can affect hearing

#### **Changes in Smell and Taste**

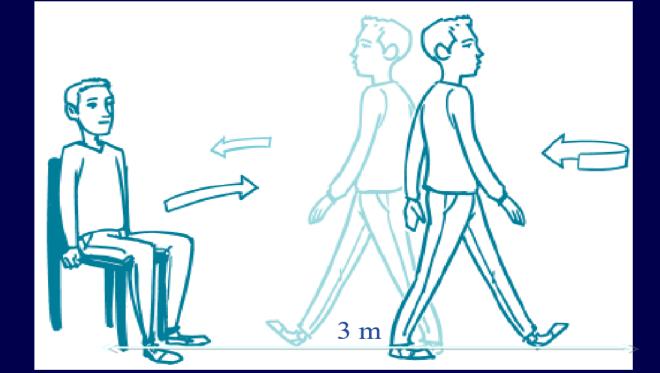
- Decreased taste buds and secretions
- Decreased sensitivity to smell

#### **Changes in Skin**

- Decrease in moisture and elasticity
- More fragile- tears easily
- Decrease in subcutaneous fat
- Decrease in sweat glands -less ability to adjust body temperature.
- Tactile sensation decreases- not as many nerves
- May bruise more easily

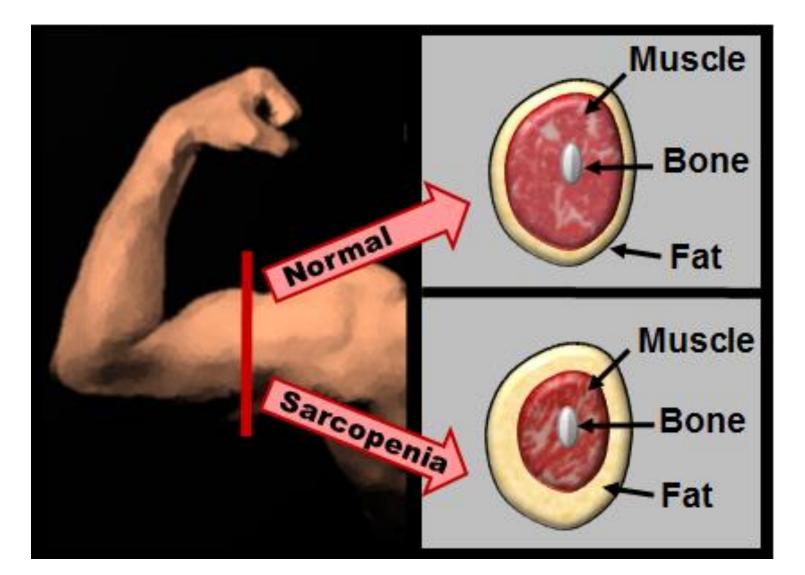
### **Physical Assessment**

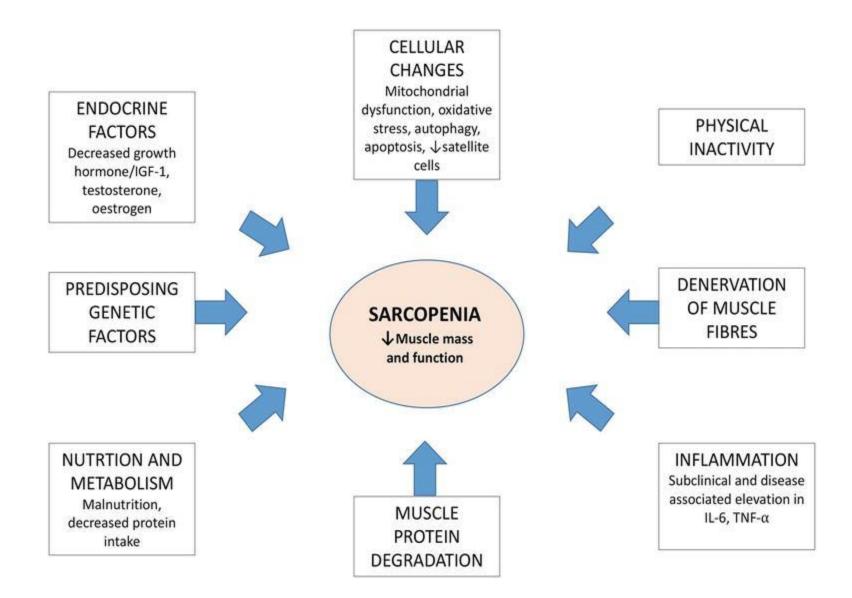
#### **Timed Up and Go**



Community Dwelling Frail Older Adults > 14s associated with high fall risk

### Sacropenia





#### **Changes in Elimination**

- Bladder atrophy- inability to hold bladder for long periods
- Constipation can become a concern because of slower metabolism
- Men can develop prostate problems causing frequent need to urinate
- Incontinence make occur because of lack of sphincter control

#### Changes in Bones and Joints

- Decreased height due to bone changes
- Bones more brittle risk of fracture
- Changes of absorption of calcium
- Pain from previous falls or broken bones
- Joints less lubricated may develop arthritis

#### **Changes in Cognitive Ability**

- Don't lose overall ability to learn new things but there are changes in the learning process
- Harder to memorize lists of names and words than for a younger person
- Sensory and motor changes as well as cognitive ability may affect ability to respond – hard to know which is which

#### **Functional Ability**

- Functional status refers to a person's ability to perform tasks that are required for living.
- Two key divisions of functional ability:
- Activities of daily living (ADL)
- Instrumental activities of daily living (IADL).

### **Functional Assessment**

• Activities of Daily Living (ADL):

Feeding, dressing, ambulating, toileting, bathing, transfer, continence, grooming, communication

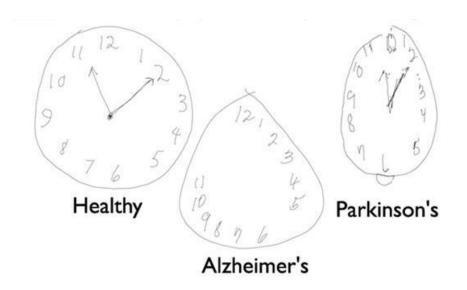
• **Instrumental ADL (IADL):** Cooking, cleaning, shopping, meal prep, telephone use, laundry, managing money, managing medications, ability to travel

### **Cognitive Assessment**

Many tools •

- MOCA •
- MMSE •

Clock Drawing test



### Healthy Aging !



### **Physical Exercise**

Reduces Fall risk by 47%

#### **Prevention of Fall**

#### Ambulatory Adults >65 30% per year



Death Injury Fractures 10-15% Hip 1-2% Long Lie Fear of Falling

Reduced Activity/Independence (25%)

### Causes

#### Extrinsic Environment Intrinsic Age **Gait/Balance** Disorder Sarcopenia Vestibular **Orthostatic Hypotension Special Senses – Vision/Hearing** Disease Dementia Depression Drugs **Foot problems** Incontinence



### Home Safety



### Summary



#### Health Maintenance in the Elderly

- Recommend primary and secondary disease prevention screening.
- Review all medications.
- Control all chronic medical problems.
- Optimize function
- Verify the presence of an adequate support system
- Discuss and document advanced directives

#### **Prevention and Promotion**

Smoking in middle age is a risk factor

- Exercise
- Calcium & vit.D supple
- Vaccines (influenza)
- Treatment of HTN & management of risk factors







### **Any Questions?**

**Thank You**