I. Gerontological Rehabilitation- Presented by Betty Clark, BSN MED RN CRRN

A. Care of the Geriatric Patient

1. **Definition—usual age over 65 years**
2. **Statistics: 1 in 8 Americans are over 65**

a. Life-expectancy recently dropped due to COVID.
b. Oldest old are the fastest growing age group > more people with chronic illnesses and functional limitations
There is a difference in acquiring a disability at an advanced age vs. aging with early onset of disability. Advanced age disability – more associated medical issues.
c. Care settings:

i. Home health
ii. Hospice
iii. Assistive living
iv. Nursing homes
v. Adult day care

B. Three (3) Types of Theories on Aging

1. **Physiological/Biological theories**

a. Genetics: deactivation of essential molecules, like deoxyribonucleic acid (DNA) and proteins.

b. Cellular: environmental damage is cumulative from sun, Noise, wind & Chemicals

Immune-system gradually becomes less effective & Neuroendocrine changes — There is a dramatic decrease in hormonal secretion and decreased regulation in the hypothalamus.

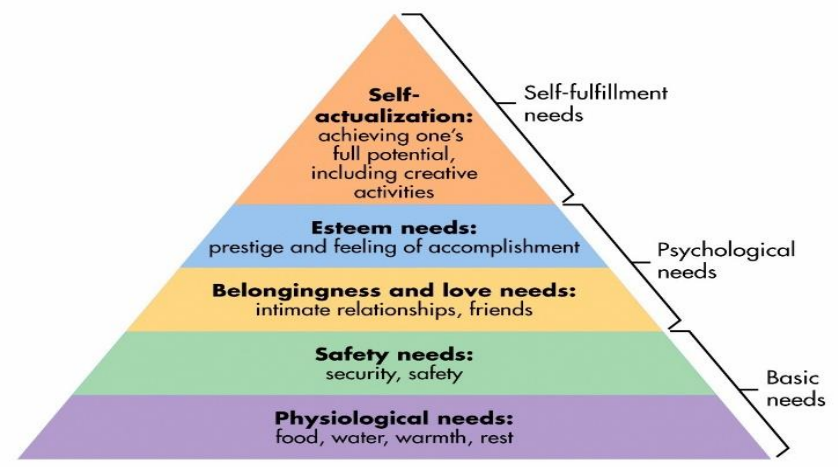
2. Developmental - Erickson's Stage 8 Stage Eight: 65 years to death: Maturity-Integrity vs Despair) learning-Acceptance of one's life

Sociological theory—Havighurst (activity theory)

1) When we maintain regular and usual activities throughout a person's life results in satisfaction. Roles, behavior, and activities change as we age.
2) Task is the disengagement from the tasks of middle age
3) Developmental tasks:

1. Adjust to changes in health and physical abilities
2. Adjust to retirement
3. Adjust to loss of spouse
4. Establish affiliation with one's age group
5. Adjust to new social roles
6. Establish satisfactory living arrangements

Psycho-logical theories Maslow's hierarchy of needs (Maslow, 1954)



b. Roles change as we age.
c. Consistency in personality traits over time

C. <u>The Aging Process</u>

System	Effect of Aging
Cardio-pulmonary	Decreased flexibility- arterial stiffness (↑B/P,HF,↑O^2 demand) Decreased functional reserve Decreased vital capacity, decreased cough reflex
GI	Decrease appetite & nutrient reserves Decreased salvia production & peristalsis Decreased gag reflex
Hematologic	Anemia Hypoalbuminemia Decreased body water
Hepatic	Decreased enzyme activity
Metabolic and excretory	Decreased efficiency of glucose metabolism Decreased flexible basil metabolic rate (BMR) Decreased thyroid & male/female hormones production Slower response to stress Decreased nutrient reserves Slower/incomplete healing
Musculoskeletal	Decreased muscle mass and bone density Decreased maximal strength Decreased flexibility & compensation for sway Osteopenia/osteoporosis/osteoarthritis Wider stance, head forward posture
Integumentary	Thinning and loss of elasticity Decreased sweat glands production Brittle and thickening of nails
Neurological	Slower processing of information from ↓size of brain Decreased quality of sleep/rest Decreased proprioception
Neurosensory	Decreased depth perception and coordination Decreased field of vision -Presbyopia Increased glare sensitivity Decreased perception of higher tones Decreased taste & smell Decreased perception of pain and touch
Immunological	Reduced resistance to infection
Renal/GU	Decreased glomerular filtration rate & kidney atrophy Enlarged Prostate Bladder changes/dysfunction Increased function at night
Safety considerations	Special considerations and Physical constraints

1. Special considerations

a. Cumulative functional impact of acute/chronic medical illness
b. UTI's
c. Impact of acute hospitalization
d. Effects of deconditioning/fragility
e. Falls (more than 1/4 of all elders fall each year)
f. Gait alteration
g. Cardiovascular change
h. Medication use linked to falls
    i. Diuretics
    ii. Psychotropics
    iii. Anti-Parkinsonian agents
    iv. Antihistamines

2. Physical constraints

a. Foot Problems
b. Lack of quality nutrition
c. Support factors—The elderly may have inadequate social supports.
d. Adverse drug effects
e. Polypharmacy
f. Adherence
g. Altered pharmacokinetics
h. Sleep disorders
i. Daytime fatigue
j. Insomnia
k. Sleep apnea
l. Pain
m. Anxiety/Agitation

3. Geriatric syndromes that can affect rehabilitation

a. Delirium
b. Dementia
c. Falls
d. Dizziness
e. Urinary incontinence
f. Malnutrition
g. Dehydration
h. Functional loss
i. Polypharmacy

4. Aging with a disability

Disability	Special Concerns
Arthritis	Joint protection
COPD	Energy conservation Oxygenation needed
Heart disease	Exercise intolerance Edema

Vascular disease	Wounds heal slower Amputation due to diabetic complications
Multiple sclerosis	Intensity of activity modifications
Post-Polio syndrome	New/recurrent weakness Increased fatigue
Spinal-cord Injury (SCI)	Shoulder disuse/overuse "Skin failure"
Traumatic brain injury	Secondary injury Caregiver fatigue

5.Psychosocial Issues

Grief and Loss	Retirement, loss of spouse, children, and friends Social isolation, Change in living conditions, role changes & finance issues
Stress and Coping	Changes in support systems and coping strategies
Life review	Reminiscence
Elder Abuse	Physical, psychological sexual, and neglect abandonment Financial exploitation
Caregiving	Spousal, family & friends
Suicide	Very high-risk due depression and lack of support systems
End of Life decisions	Advanced directives, POA for all legal and health issues

Rehabilitation of the elderly is focused on the quality of life and not the longevity