

# OLD AGE, DISORDERS AND THEIR MANAGMENT

## The five common aspirations of a human being

To live for a long time

- To retain ones faculties
- Preserving ones waning strength
- Ability to relax from the burdens of the day
- To have a timely and dignified death
  - *'Anayaasena maranam vinadynyena jeevitam'*

*common aspirations of a human being ...*

## Purusharthas

- Dharma
- Artha
- Kama
- Moksha

# Life span of human

- Charaka, Susruta and Vagbhata – Active life span of **100 years**
- Isavasya upanishad, brahmanas, Chnadogyopanishad – **116 yrs.**
- Bible - **120 years**
- Estimation of scientists - **115-140 years** (average **120 yrs.**)
- Today's Biostasticians - America – average expectancy **75 years**  
India - average expectancy **63 years**

# Stages in the life span

- Parental period: Conception to birth
- Infancy: Birth to the end of the second week
- Babyhood: end of the second week to end of the second year
- Early childhood: Two to six years
- Late childhood: Six to ten or twelve years
- Puberty or preadolescence: Ten or twelve to thirteen or fourteen years
- Adolescence: Thirteen or fourteen to eighteen years
- Early adulthood: Eighteen to forty years
- Middle age: Forty to sixty years
- Old age or senescence: sixty years to death

## **Babyhood and early childhood**

- Learning to take solid foods
- Learning to walk
- Learning to control the elimination of body wastes
- Learning sex differences and sexual modesty
- Getting ready to read
- Learning to distinguish right and wrong and beginning to develop a conscience

## Late childhood

- Learning physical skills necessary for ordinary games
- Building a wholesome attitude toward oneself as a growing organism
- Learning to get along with age-mates
- Beginning to develop appropriate masculine or feminine social roles
- Developing concepts necessary for everyday living
- Developing a conscience, a sense of morality, and a scale of values
- Developing attitudes toward social groups and institutions
- Achieving personal independence

- Achieving new and more mature relations with age-mates of both sexes
- Achieving a masculine or feminine social role
- Accepting one's physique and using one's body effectively
- Desiring, accepting, and achieving socially responsible behavior
- Achieving emotional independence from parents and other adults
- Preparing for an economic career
- Preparing for marriage and family life
- Acquiring a set of values and an ethical system as a guide to behavior – developing an ideology



## Early adulthood

- Getting started in an occupation
- Selecting a mate
- Learning to live with a marriage partner
- Starting a family
- Rearing children
- Managing a home
- Taking on civic responsibility
- Finding a congenial social group

## Middle age

- Achieving adult civic and social responsibility
- Assisting teenage children to become responsible and happy adults
- Developing adult leisure – time activities
- Relating oneself to one's spouse as person
- Accepting and adjusting to the physiological changes of middle age
- Reaching and maintaining satisfactory performance in one's occupational career
- Adjusting to aging parents

## Old age

- Adjusting to decreasing physical strength and health
- Adjusting to retirement and reduced income
- Adjusting to death of spouse
- Establishing an explicit affiliation with members of one's age group
- Establishing satisfactory physical living arrangements
- Adapting to social roles in a flexible way

## Demographic trends

- The world population of the elderly is increasing and by the year 2050, adults older than 65 years will comprise  $1/5^{\text{th}}$  of the global population.
- In India 3.8% of the population are older than 65 years of age. According to an estimate the likely number of elderly people in India by 2016 will be around 113 million.
- The twenty-first century is witnessing a gradual decline in fertility, and with increase in life expectancy, the society will need to grapple with issues of longevity.

# Definitions

- AYU means – ‘*Itigachati iti ayuh*’

‘*Unn gamanasheela*’ – Indicates its nature of continuation

‘*Nityaga*’ – signifies continuation of consciousness

- VAYAH means – ‘*Vayastasceti kale pramana viseshapeksini hi sariravastha vaya abhidhiyathe*’

(- Ch. Vi. 8:122)

It means the stages of body in terms of time units or that which passed.

## *Definitions*

- JARA means – Jr + Ana + Tap - '*Irish vayo hanow*' – Loss in the period of life span

*'Jeeryanti anayo angani iti jara'* –

Degeneration of body organs

*'Vayah krita*

*slathamamsadyavastha visesha'* – Looseness of muscles and of other tissues under the influencing of aging.

The other terms like pravaya, jirna, sthavira, jarana, vridhdhatve etc, terms used for the Jara condition.

# Theory of senescence: Swabavoparama vada

*“Jayantae hetu visamyat visama dehadhatava:*

*hetusatmyatat samaastheshan swabavopramaha sada//”*

C.S. 16.27

*“Pravritti heturbhavanam na nirodasthi karanam /*

*kechittatrapi manyantae hetum heturavartanam //”*

C.S. 16.28

- Presence of hetu for development results in vridhi I.e. growth
- Absence of hetu for development results in kshaya i.e. decay

Eg. 1. Biological cells

2. Plants, crops

# Conditions influencing longevity

- **Heredity:** Longevity tends to run in families.
- **Physical characteristics:** People of average size and body structure tend to live longer than those who are under – or overweight or who are very tall or very short.
- **General physical condition:** A good physical condition throughout life, but especially during the growth years of childhood and adolescence, is favorable to longevity.



## *Conditions influencing longevity...*

- **Sex:** Women, as a group, outlive men.
- **Race:** In America, blacks, puerto ricans, and other minority – group members have a shorter life expectancy than whites.
- **Geographic location:** People who live in urban and suburban areas tend to live longer than those who live in rural areas as a result of better health and medical facilities.

## *Conditions influencing longevity...*

- **Socioeconomic level:** The higher the socioeconomic level, the longer the individual's life span tends to be
- **Intelligence:** Individuals with high intelligence and those with intellectual interests live longer than the less intelligent.
- **Education:** People who are better educated tend to live longer than those whose education is limited.

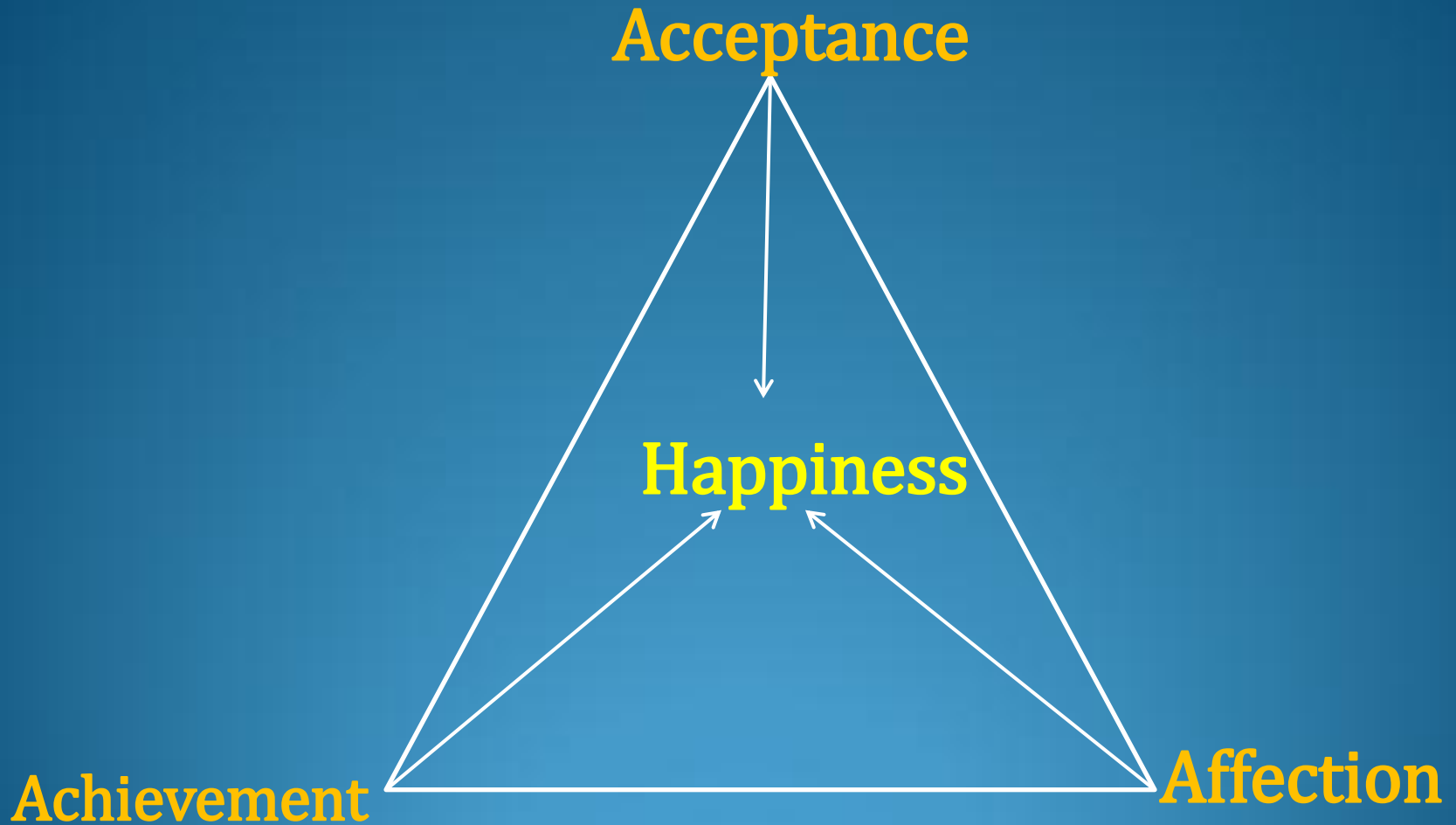
## *Conditions influencing longevity...*

- **Smoking and drinking:** Nonsmokers and non drinkers tend to live longer than those who smoke and drink excessively
- **Marital status:** Those who are efficient tend to live longer than those who have never been married.
- **Efficiency:** Those who are efficient tend to live longer than the inefficient because they expend less energy in whatever they do.

## *Conditions influencing longevity...*

- **Anxiety:** The tendency to suffer from anxiety due to work, family, economic or other problems leads to hypertension which shortens the life span.
- **Occupation:** The kind of work the individual does affects the length of the life span.
- **Happiness:** People who are reasonably happy and satisfied with the pattern of their lives normally live longer than those who are dissatisfied and unhappy.

# The “three A’s of happiness.”



# Happiness varies at different times in the life span

- Retrospections covering the whole life span or large segments of it reveal the degree of happiness at different ages.
- Many adults remember puberty and early adolescence as so unhappy that they claim they would not want to return to childhood even if they could.

## *Different times in the life span ..*

- But when person is unhappy in later part of life recollects the happiness of playing in childhood.
- In a study reported by Meltzer and Ludwig even the adult years were found to vary in degree of happiness, with the subjects describing the years before middle age as happier than those after middle age (75).

## *Different times in the life span ..*

- Because happiness and unhappiness are subjective states, information about them must come from introspective and retrospective reports or from answers to questionnaires, all of which lack scientific accuracy.
- At all ages there are three essentials of happiness – **acceptance, affection, and achievement** – all of which must be fulfilled to the individual's satisfaction if happiness is to be attained.
- Dr. Deepak Chopra



## Milestones of aging or sequential loss of biological factors in aging

<b>Decades</b>	<b>year</b>	<b>Vagbhat</b>	<b>Sarangadhar</b>
First	1-10	Balya	Balya
Second	11-20	Vrddhi	Vrddhi
Third	21-30	Prabha	Chabi
Fourth	31-40	Medha	Medha

## *Physiology of ageing ...*

<b>Decades</b>	<b>year</b>	<b>Vagbhat</b>	<b>Sarangadhar</b>
Fifth	41-50	Tvaca	Tvaca
Sixth	51-60	Sukra	Drsti
Seventh	61-70	Drsti	Sukra
Eight	71-80	Srotendriya	Vikrama
Ninth	81-90	Mana	Buddhi
Tenth	91-100	Sparsendriya	Karmendriya

# Aging and the tridoshas

	Balyavastha	Madhyavastha	Vridhavastha
Kapha	+++	++	+
Pitta	+	+++	++
Vata	+	++	+++

## • Functions of pranavayu affected in old age

Manoniyamana, manoprerana

Annapraveshana

Sarvendriyayojana

Steevana

Swasa, uchwesa, niswasa

Utsaha

## • Functions of Udana vayu affected in old age

Urja

Balam

Praythna

Varna

Vakpravriti

## *Aging and tridoshas ...*

- **Functions of samana vayu affected in old age**

Srotavalambana

Agnibalapradana

Annapachana

Annadharana

Kittaadhonayana

Sara maladi vivechana

- **Functions of Vyana vayu affected in old age**

Gati Prasarana

Akshepa

Nimesha

Unmesha

Nanavidha chesta pravarthanam

Rasa rakta samvahana

- **Functions of apana vayu affected in old age**

Sukrotsarga

Mutrosarga

Artavotsarga

Garbhotsarga

Purishotsarga

Malamoksha Malakshepanam

# Pitta and ageing

- **Functions of Pacaka pitta affected in old age**

Annapacana      Kshut      Ojas Ruchi

- **Functions of Ranjaka pitta affected in old age**

Rasaranjana      Rasasara(Twak)

## *Pitta and ageing ...*

- **Functions of Alochaka pitta affected in old age**

Rupagrahana (visual effects)

- **Functions of Brajaka pitta affected in old age**

Prabha Chaya Dehamardavam

- **Functions of Sadhaka pitta affected in old age**

Buddhi Medha Abhiprardita

Manorathas Harsha

# Kapha and ageing

- **Functions of Avalambaka kapha affected in old age**

Trikavalambana

Bala DrutiBuddhi

- **Functions of Tarpka kapha affected in old age**

Indriyatarpana

## *Kapha and ageing ...*

- **Functions of Bodhaka kapha affected in old age**

Rasabhodana

- **Functions of Slesaka kapha affected in old age**

Astisandhislesanam Sandistirata

- **Functions of Kledeka kapha affected in old age**

Anna kledena



# Saptadhatus and ageing

- **Functions of Rasadhātu affected in old age**

Preenana (Nutritional disorders)

- **Functions of Rakthadhātu affected in old age**

Jeevana (Hemopoietic disorders)

- **Functions of Mamsadhātu affected in old age**

Lepana (Muscular atrophies)

- **Functions of Medodhātu affected in old age**

Medokshaya (Lipid disorders)

## *Saptadhatu and ageing ...*

- **Functions of Asthidhatu affected in old age**

Dharana (Bone disorders)

- **Functions of Majjadhatu affected in old age**

Purana (Osteoporosis etc,)

- **Functions of Sukradhatu affected in old age**

Garbhadharana (Reproductive disorders)

Harsa      Ullasha

# Agni and ageing

Pachana, Parinama (Digestion and metabolism)

Visama pacana dhatu visamya

# Malas and ageing

Pureesha, Mutra, Sweda

# Indriyas and ageing

Jihwa – Vak pravritti , Hastha – Chesta pravritti, Pada – Gati pravritti

Payu – Mala pravritti, Upastha – Sexual indulgence

# Srotas and ageing

Sangha, Avarodha, Atipravritti

According to involvement of each srotas

# Jara (old age disorders) is an inescapable part of life

Jara can be classified in two aspects

1. Kala jara (Timely ageing) – Physiological ageing
2. Akala jara (Premature ageing) – Pathological ageing

# Old Age: Personal and Social Adjustments

- **Characteristics of old age**

Old age is a period of decline

There are individual differences in the effects of aging

Old age is judged by different criteria

There are many stereotypes of old people

- **Characteristics of old age**

Social attitudes toward old age

The Elderly have a minority – group status

Aging requires role changes

Poor adjustments in characteristic of old age

The desire for rejuvenation is widespread in old age

- **Adjustment to physical changes in old age**

Changes in appearance

Internal changes

Changes in physiological functions

Sensory changes

Sexual changes



- **Changes in motor abilities in old age**
- **Changes in mental abilities in old age**

Causes of changes in mental abilities

How great is mental decline in old age?

Variations in mental changes



- **Changes in interest in old age**

**Personal interests**

*Interest in appearance, clothes*

**Recreational interests**

*Causes of changed recreational activities,*

*Common recreational activities in old age*

**Social interests**

*Kinds of social disengagement, Sources of social contact, social participation*

*Old Age ...*

Religious interests

Interested in death

*When will I die?*

*What is likely to cause my death?*

*What can I do to die as I wish to die?*

*Am I justified in taking my life?*

*How can I have a “Good” health?*

*Sex differences in interest in death*

## *Old Age ...*

- **Hazards to personal and social adjustments in old age**

Physical hazards

Psychological hazards

*Acceptance of cultural stereotypes of the elderly*

*Effects of physical changes of aging*

*Changes in life patterns*

*Tendency to “slip” mentally*

*Feelings of guilt about idleness*

*Reduced income*

*Social disengagement*

- **Common changes in appearance during old age**

Head region

Trunk region

Limbs

- **Common changes in sensory functioning in old age**

Vision

Hearing

Taste

Smell

Touch

Sensitivity to pain

## *Old Age ...*

- **Common changes in motor abilities in old age**

Strength

Speed

Learning new skills

Awkwardness

- **Mental changes in old age**

Learning

Reasoning

Creativity

Memory

Recall

Reminiscing

Sense of humor

Vocabulary

Mental rigidity

## *Old Age ...*

- **Common conditions responsible for changes in recreational activities**

Health

Economic status

Education

Marital status

Sex

Living conditions

- **Sources of social contact affected by aging**

Close, personal friendships

Friendship cliques

Formal groups or clubs



- **Some common effects of religious changes during old age**

Religious tolerance    Religious beliefs

Religious observances

- **Common physical hazards characteristic of old age**

Diseases and physical handicaps

Malnutrition

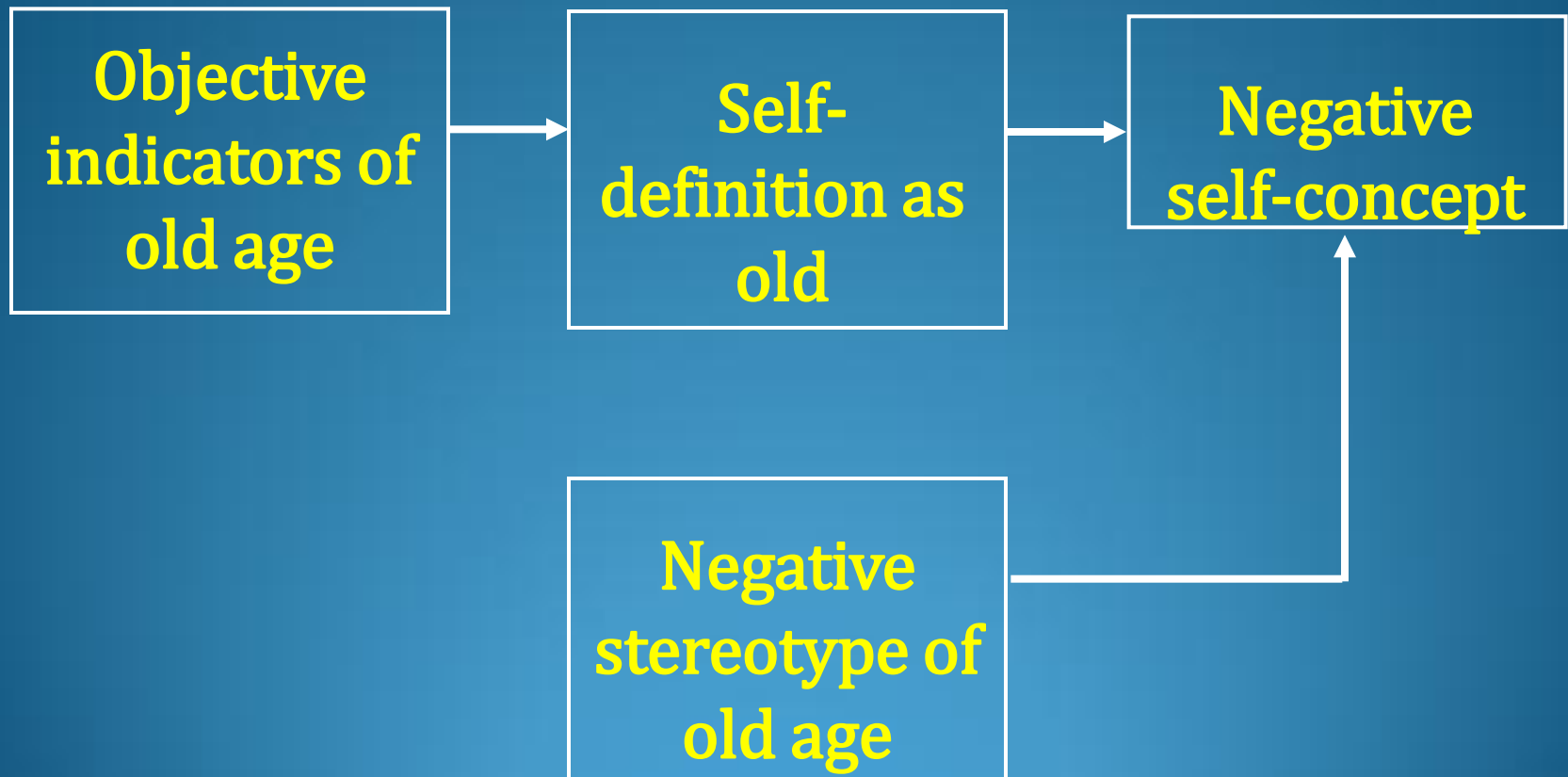
Dental disorders

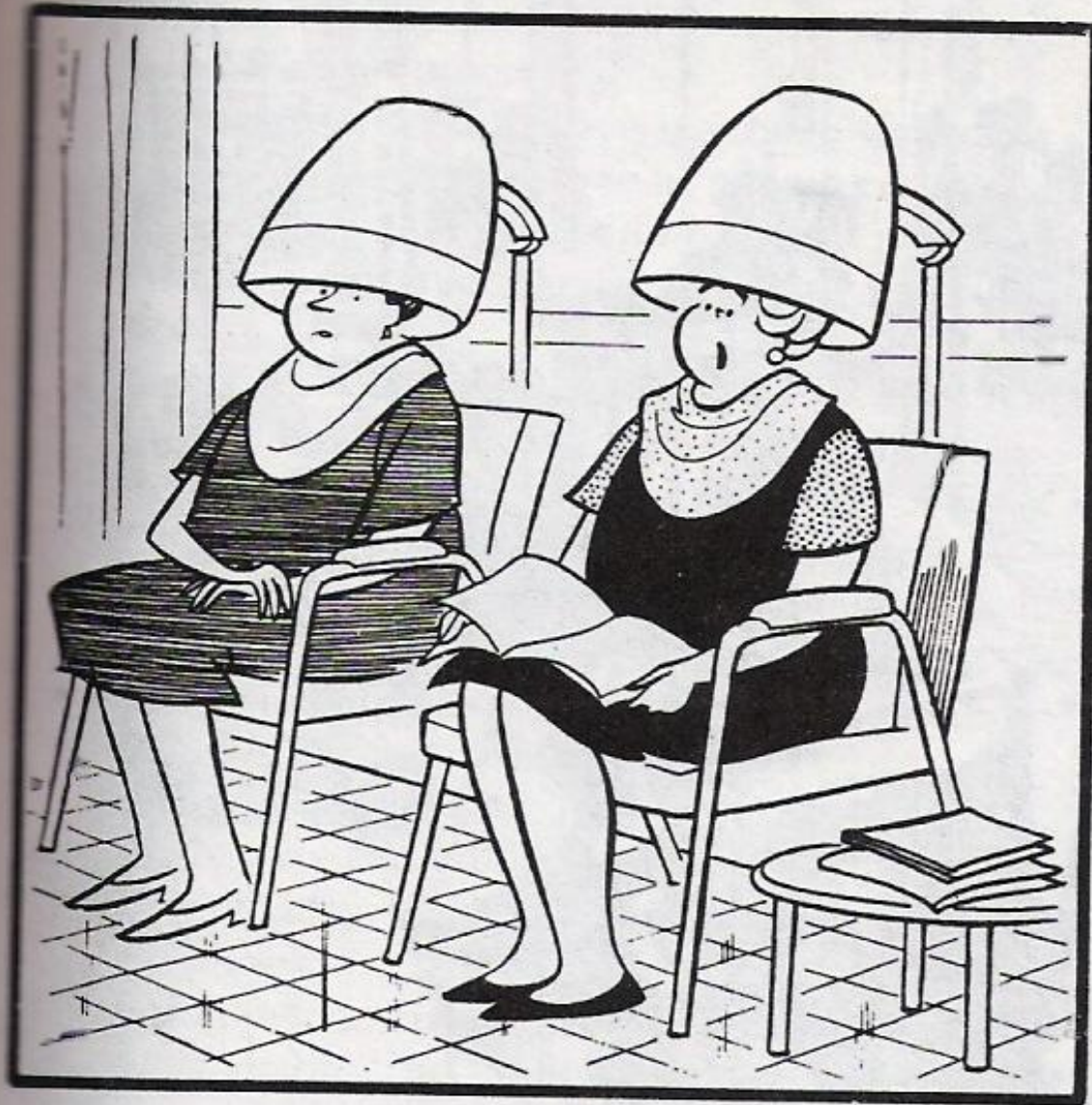
Sexual deprivation

Accidents

## *Old Age ...*

Unfavorable attitudes toward personal aging combined with unfavorable social attitudes toward aging result in a negative self - concept





**"I keep hoping Herbert will look at me and say, 'How beautiful,' but all he ever says is 'how much?'"**

- **Musculo skeletal diseases**

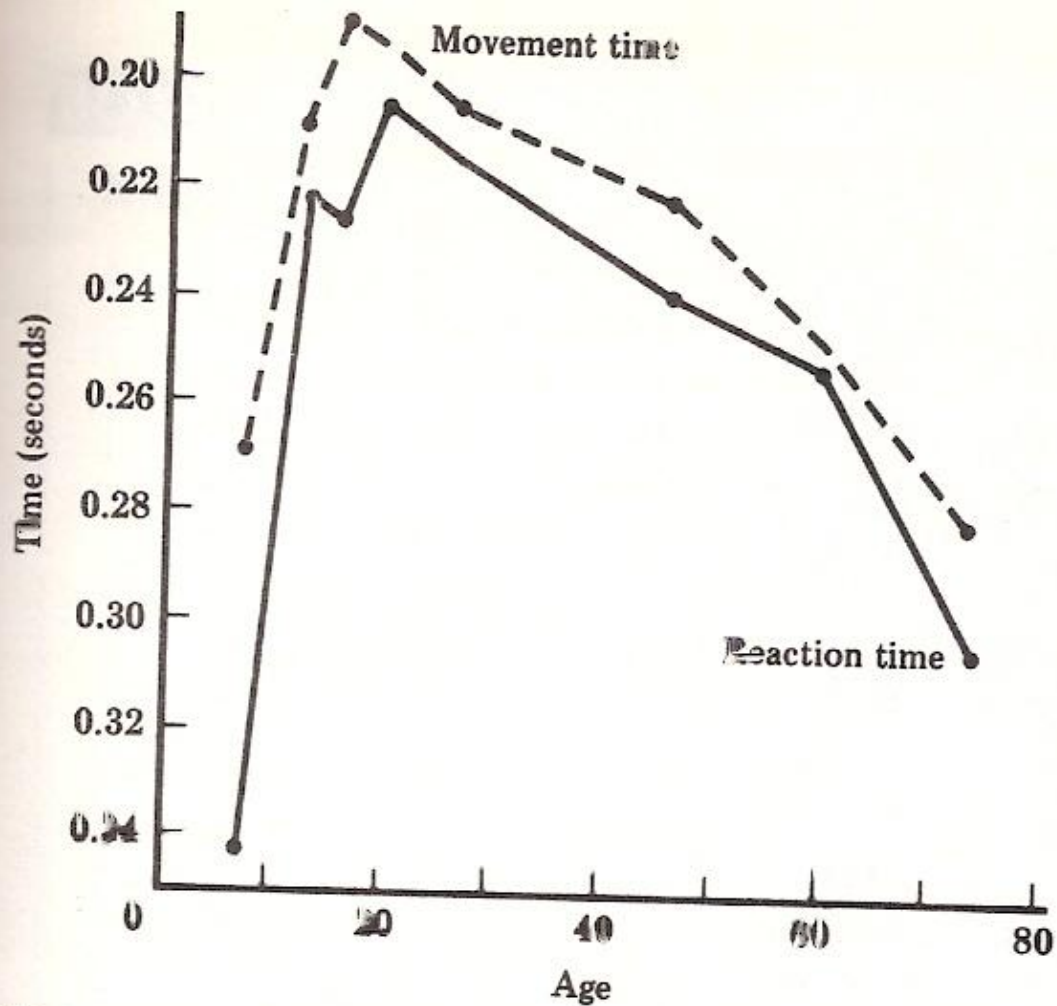
Sandigatavatam      Astikshayam

Saravanga vayu      Vayu in the ears, etc.

Vayu in muscles and fat

Vayu in ligaments      Vata kantakam

Khalli                      Gridrasi



**FIGURE 13-5** Speed of reaction and of movement decline sharply as age advances. (Adapted from J. Hodgkins. Influence of age on the speed of reaction and movement in females. *Journal of Gerontology*, 1962, 17, 385-389. Used by permission.)

• **Changes in nerve cell number with aging**

Cerebral cortex      Hippocampus

Amygdala              Cerebellum

Dendritic changes    Axonal changes

Amyloid plaques      Subcortical regions

Regressive changes in neurones with aging

# Neurological signs in old age

## Clinical changes

Mental status

Sleep patterns

Cranial nerves

Motor system

Reflexes

Sensation

## Laboratory changes

Electroencephalographic changes

Computerized axial tomography

*Neurological signs ...*

## **Neurological dysfunction due to involution: Disability without disease**

Normal dementia

Dizziness

Disorders of gait

Cervical spondylosis

## **Exaggerated vulnerability**

Drug sensitivity

Head trauma

Confusion states



*Neurological signs ...*

# Recognition of neurological disease in the aged

Headaches

Blackouts

Impaired vision

Numb hand or weak hand

Lethargy

Acute mental change

*Neurological signs ...*

## Neurological diseases

Ardita

Pakshaghatha

Akarmanyatha

Jihwa stamba

Smtiti bramsam

*Buddhitatva*

Veaga, Bhavana

Stitistapaka

Kampa vata

Khanjam and panku

Kalaya khanjam

Pada harsa

Pada daham

Visvaci

Mutra adidam (Neurological bladder  
incontinence)

**The neurological disorders seen in old age include the following:**

Stroke

Epilepsy

Parkinson's disease

Alzheimer's disease

Intracranial tumor

Spinal spondylosis

Peripheral neuropathies

# Management of Jara

The aim of the treatment in jara vyadhi is

- Slow down the process of decay
- Countering the adverse effects resulted out of old age.
- Managing the physiological changes which are hampering the routine life.

## *Management of Jara ...*

- Countering the pathological disorders.
- Adjustment to family and social needs.
- Adjustment of psychological needs.

The old age diseases are to be treated with general principles of treatment according to individual disease but with precautions.

# 1.Lakshhanika chikitsa

**2.Shodhana chikitsa** – since the old age people are delicate they should not be administered teeksana shodana chikitsa but always keep on Vatanulomana chikitsa.

**3. Rasayana chikitsa** – A. by way of food

B. by way of drugs

C. Ausadha ahara according  
to individual's apya  
vyadhi i.e. nimitika  
rasayana

D. Achara rasayna

**4. Involving in Family, social, cultural  
recreations and spiritual activities**

## Tailas for abhyangana

- **For Pittanubanda roga** - Narayana tailam, Pinda tailam
- **For prasupti** - Pinnyaka tailam, Cincadi tailam
- **For sensory function** - Ksheerabala, Sahacharadi, Dhanvantaram
- **For ushnvirya utility** - Kottancukkadi, Prabhanjanam, Cincadi
- **For wasting conditions** - Panchasneham, Mahamasa



# Svedana

In old age sveda kriyas are done with care. During the sveda kriya, heart, eyes and scrotum must be protected. Ekanga sveda like patra pottalam etc, are used for pain management.

In wasting degeneration condition mamsa pinda svedam, sastika pinda svedam are used. Procedures like kayasekam or pizhichal are very good for old age diseases.

## Pradhana shodhana karma

- **Pancha karma** is contraindicated for above 70 or below 10. Vamana is to be avoided and virecana is to be done with care.
- **In krura kosa vasti** is better than virecana.
- **Yapana vasti** like ksheera vasti very useful in old age.
- **Matra vasti** and nasyam are done without any problem.
- ***Role of anuvasana in old age.***

# Recommended Rasayanas in general

Bramha rasayanam (ideal choice)

Asvaganda rasayana

Kaphikachu  
rasayana

Chyavanaprasam

Narsimha  
rasayana

Triphala

Silajit

Sukumara rasayanam are few examples

# Single rasayana drugs for some specific disease conditions

**Disease of Eye:** Jyotishmati (*Celastrus paniculata*), Triphala (Three myrobalans), Satavari (*Asparagus racemosus*), Yastimadhu (*Glycyrrhiza glabra*) and Amalaki (*Emblica officinallis*).

**Diseases of Heart:** Salaparni (*Desmodium gangaticum*), Arjuna (*Terminalia arjuna*), Guggulu (*Commiphora mukul*), Pushkaramula (*Inula racemosa*).

**Skin diseases:** Bhallataka (*Semecarpus anacardium*), Vidanga (*Embella ribes*) and Bakuchi (*Psoralia coryfolia*).

## *Single rasyana drugs ...*

**Rasayana for overall health:** Guduchi (*Tinospora cordifolia*), Amalaki (*Emblica officinalis*), Aswagandha (*Withania somnifera*), Cow's milk and Takra.

**Asthma:** Sirisha (*Albezia lebbeck*), Agastya (*Sesbania grandiflora*), Haridra (*Curcum longa*), Haritaki (*Terminalia chebula*).

**Arthritis:** Rasona (*Allium sativum*), Guggulu (*Commiphora mukul*), Aswagandha (*Withania somnifera*) and Shunthi (*Zinziber officinale*).

## *Single rasayana drugs ...*

**Neuroptics:** Rasana (*Allium sativum*), Guggulu (*Commiphora mukul*), Bala (*Sida cordifolia*), Aswagandha (*Withania somnifera*).

**Diabetes:** Silajitu (*Black bitumen*), Amalaki (*Emblica officinalis*), Haridra (*Curcuma longa*), Tejpatra (*Cinnamomum tamala*), Methika (*Trigonella foenum graecum*).

**Lipid disorders:** Guggulu (*Commiphora mukul*), Haritaki (*Terminalia chebula*), Pushkaramoola (*Inula racemosa*), Vaca (*Acorus calamus*).

## *Single rasayana drugs ...*

**Hypertension:** Rasona (*Allium sativum*), Sarpagandha (*Rauwolfia serpentina*), Aswagandha (*Withania somnifera*), Jatamansi (*Nardostachys jatamansi*).

**Brain and memory disorders:** Brahmi (*Bacopa monnieri*), Mandooka parni (*Centella asiatica*), Jyotishmati (*Celastrus paniculata*), Kapikachhu (*Mecuna pruriens*), Tagara (*Valeriana wallichii*).

## • Developmental tasks of old age

Adjusting to decreasing physical strength and health

Adjusting to retirement and reduced income

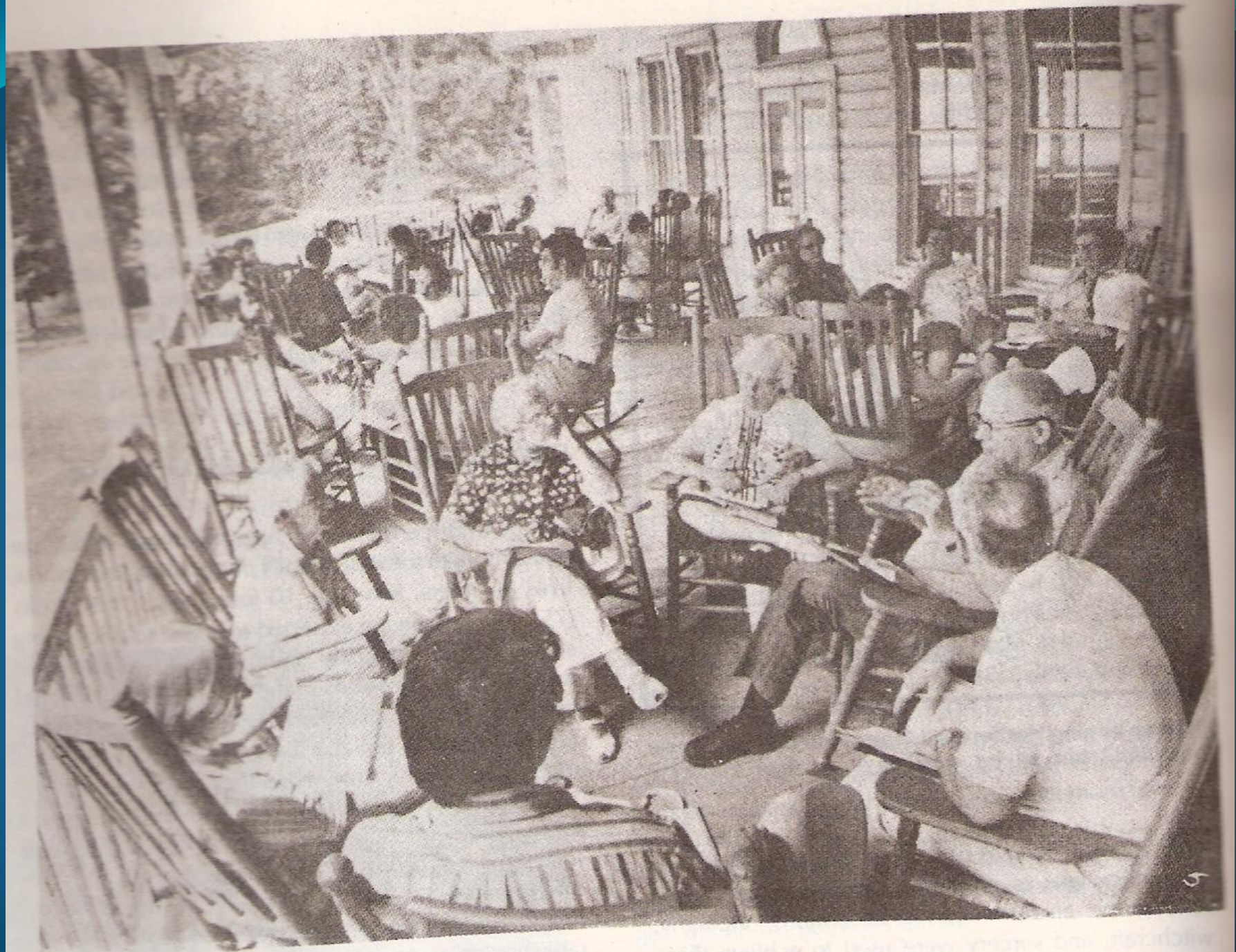
Adjusting to death of spouse

Establishing an explicit affiliation with members of one's age group

Establishing satisfactory physical living arrangements

Adapting to social roles in a flexible way





# ACHARA RASAYANA (BEHAVIOURAL REJUNIVATOR)

**BE + HAVE = BEHAVIOUR**

- SPEAK TRUTH
- WITHOUT ANGER
- AWAY FROM  
ALCOHOL &  
OVER SEX
- AVOID OVER STRAIN
- SPEAK KINDLY
- CLEAN
- BOLD
- RESPECT ELDER
- KIND
- GAIN BLESSINGS OF  
ELDERS & SPIRITUALS

- REQUISITE SLEEP &  
PHYSICAL ACTIVITIES
- CONTROL OF SENSES
- MILK & GHEE
- STANDARDS OF  
COUNTRY & TIME
- KNOWLEDGE OF LEGAL &  
ETHICAL ASPECTS
- CUSTOMS &  
TRADITIONAL SUBJECTS

**Growth  
motivation**

**Deficiency  
motivation**



**Abraham Maslow**

# The five common aspirations of a human being

- To live for a long time
- To retain ones faculties
- Preserving ones waning strength
- Ability to relax from the burdens of the day
- To have a timely and dignified death

*'Anayaasena maranam vinadynyena jeevitam'*

# Purusharthas

- Dharma
- Artha
- Kama
- Moksha

*“ADEENAAH SHYAAM SARADHAH SATAM /  
BHOOYASCHA SARADHAH SATAATH //”*

Y.36/24

‘O’ Paramatma, bless with hundred or more years of life without any problems.

*“KURVENNEVAH KARMAANI /  
JI JEEVISHESCHATAM SAMAA : //”*

Y.40/2

Desire for hundred years of life  
while working in the world.

ThankQ