

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

حضرت رسول اکرم (ص)

وجود سالمندان در بین شما باعث برکت و نعمت های الهی میشود

(بحار الانوار)



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Outline

- Definition of aging
- Review of world aging
- Physiologic change in aging
- Care of geriatric patient

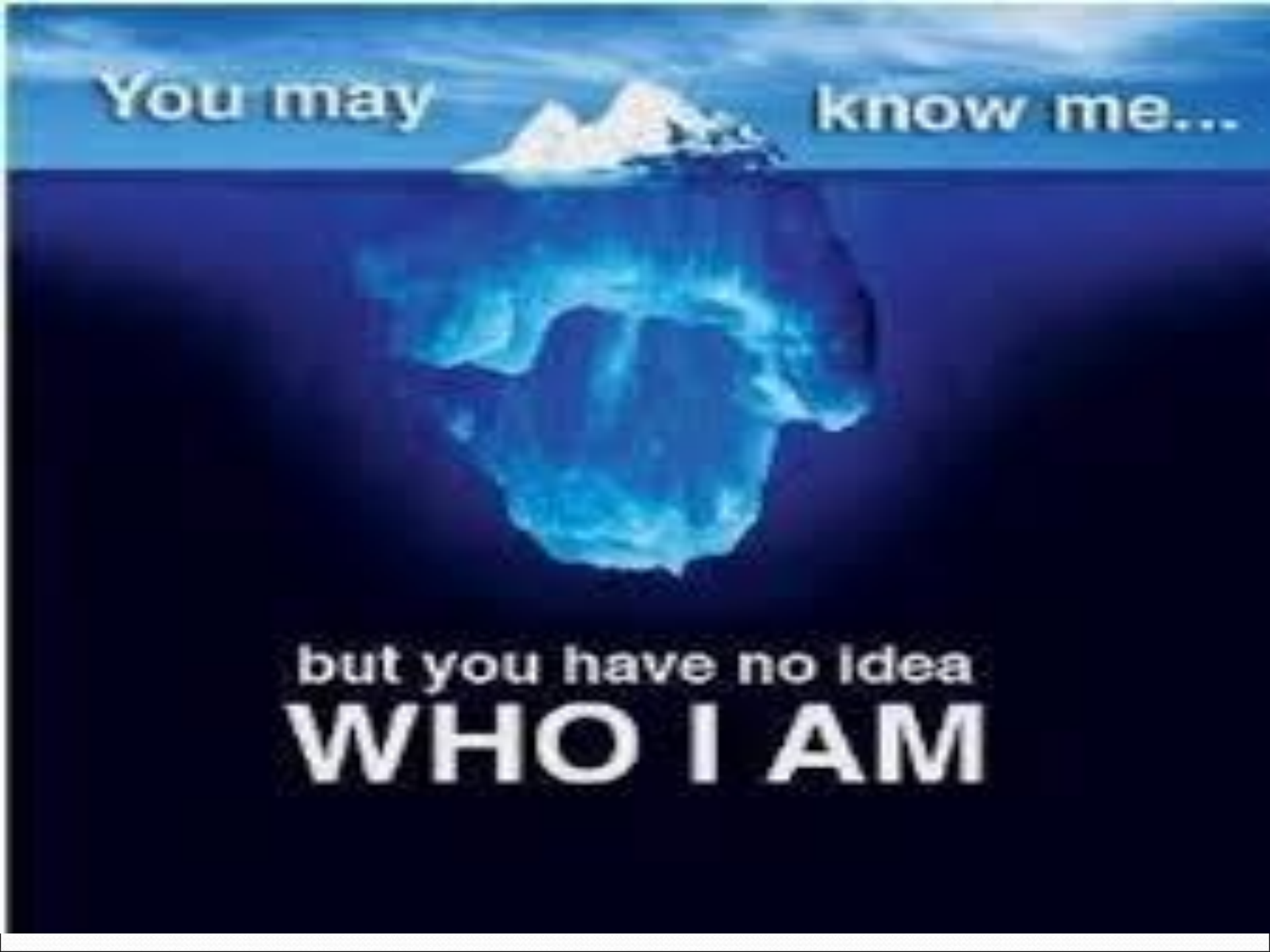
Definition of aging





You may

know me...



but you have no idea
WHO I AM

Definition of aging

Ageing is characterized by :

Failure to maintain homeostasis Under conditions of physiological stress

1- it is universal

2- it is deteriorative

3- it does not cause breakdown in homeostasis

Definition of aging

- Chronological age (number of years lived)
- Physiologic age (age by body function)
- Functional age (ability to contribute to society)
- Psychologic age

Chronological Aging WHO

- Young old 60-75 yrs.
- Old 76-90 yrs.
- Old old > 91 yrs.

Definition

Gerontology

The scientific approach to all aspects of ageing (health, sociological, economic, behavioral, environmental).

Geriatrics

A branch of gerontology and medicine which deals with the clinical, rehabilitative, psycho-social and preventive aspects of illness in elderly people.



WORLD POPULATION

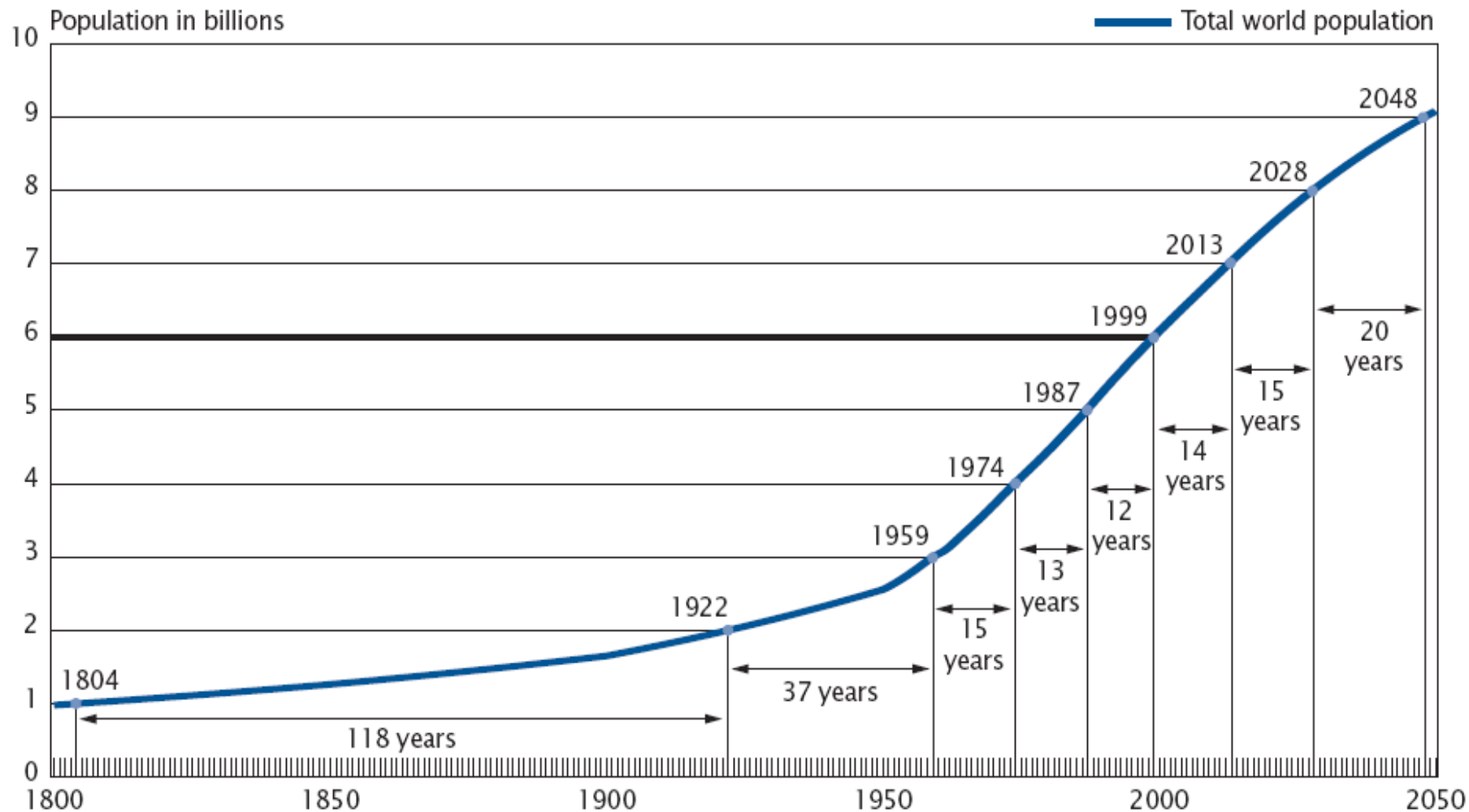
7,834,757,342	Current World Population	[+]
138,493,157	Births this year	[+]
326,079	Births today	[+]
58,142,746	Deaths this year	
136,896	Deaths today	
80,350,412	Net population growth this year	[+]
189,183	Net population growth today	

GOVERNMENT & ECONOMICS

\$ 13,031,327,018	Public Healthcare expenditure today	[+]
\$ 8,878,177,476	Public Education expenditure today	[+]
\$ 3,994,312,242	Public Military expenditure today	[+]
78,917,435	Cars produced this year	[+]
149,960,071	Bicycles produced this year	[+]
244,891,506	Computers produced this year	[+]

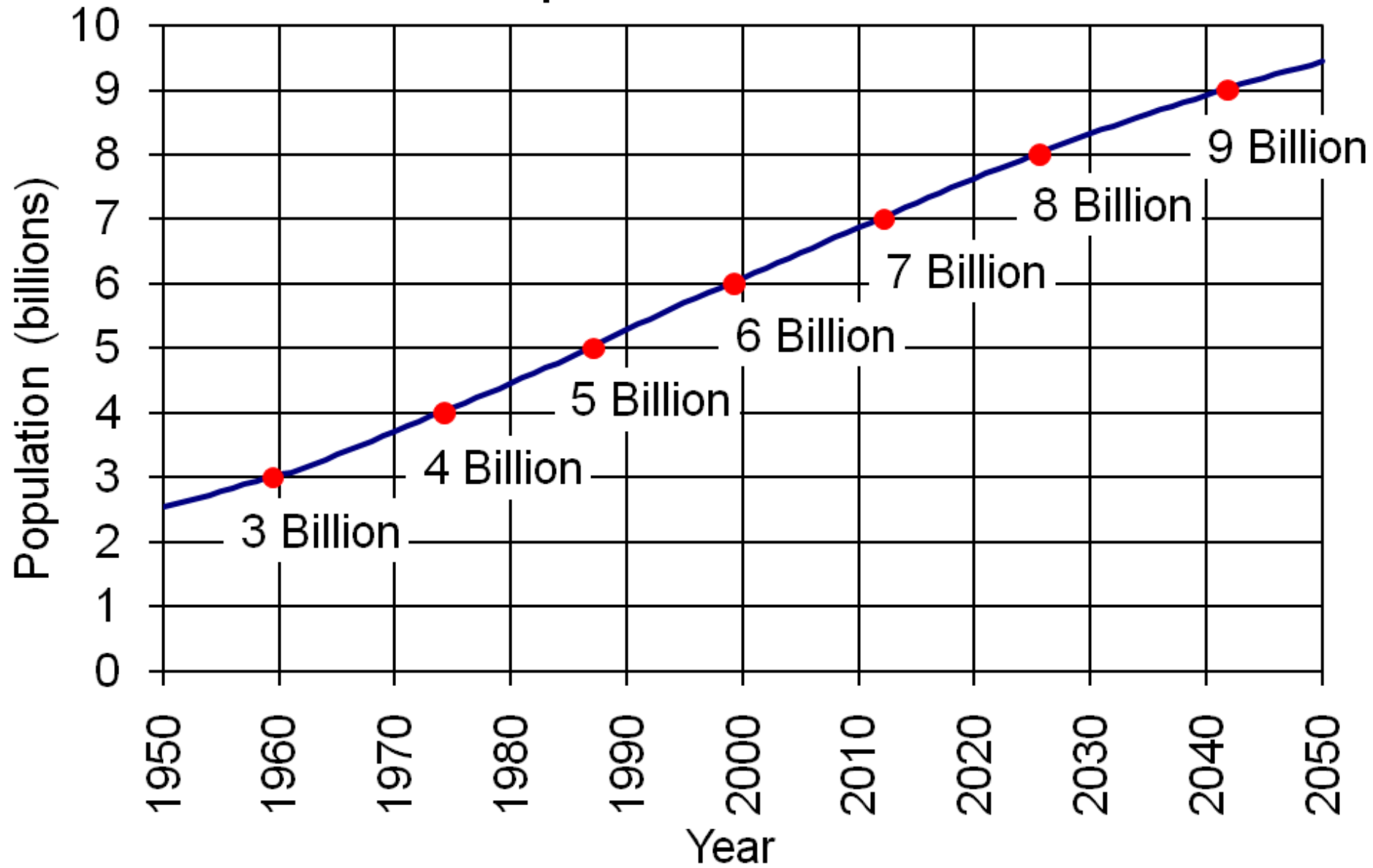
SOCIETY & MEDIA

Figure 1.
Time to Successive Billions in World Population: 1800-2050
The sixth billion accrues to world population in record time!



Source: United Nations (1995b); U.S. Census Bureau, International Programs Center, International Data Base and unpublished tables.

World Population: 1950-2050



Source: U.S. Census Bureau, International Data Base, June 2011 Update.

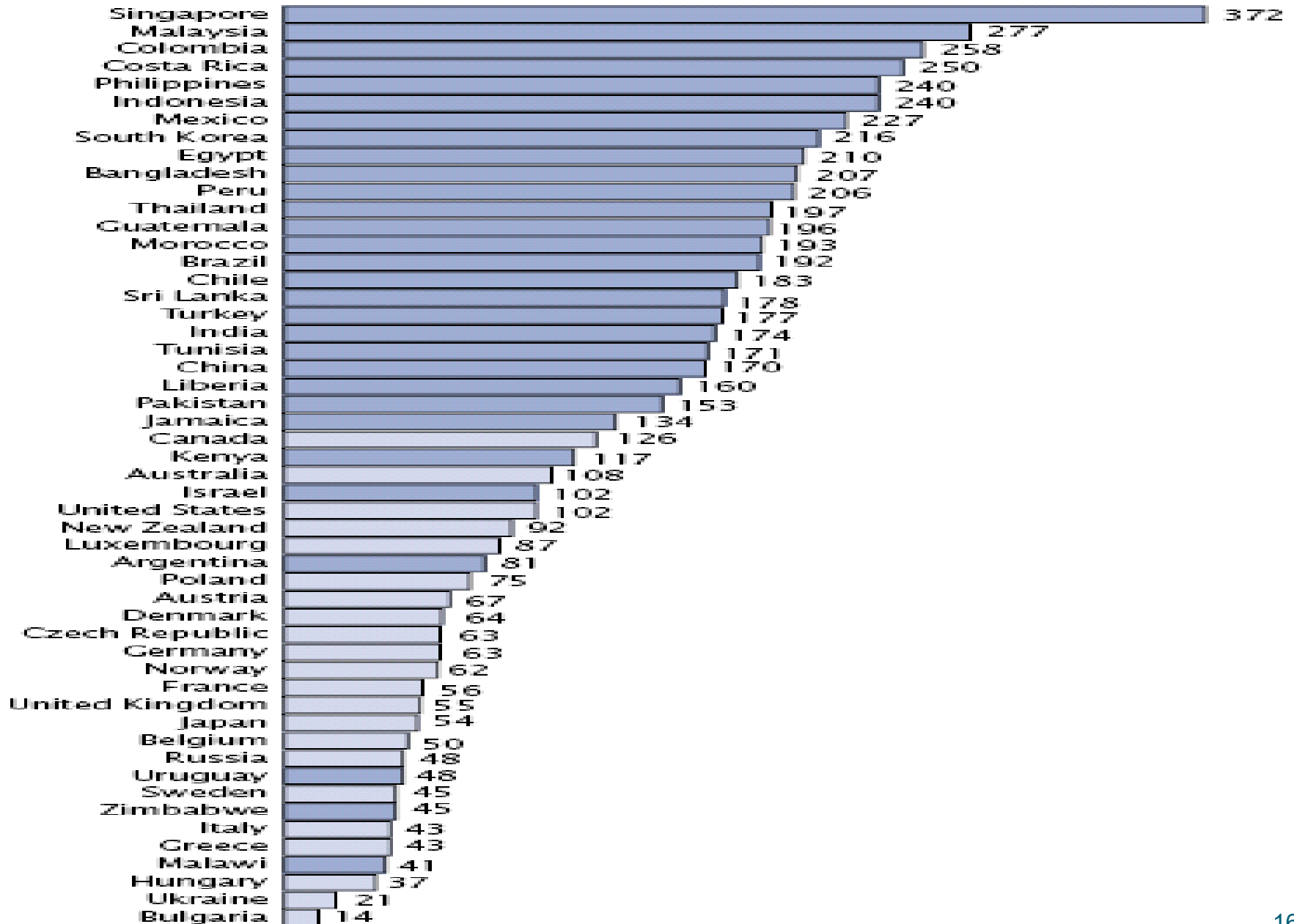
The World's 25 Oldest Countries: 2000

(Percent of population 65 years and over)



Percent Increase in Elderly Population: 2000 to 2030

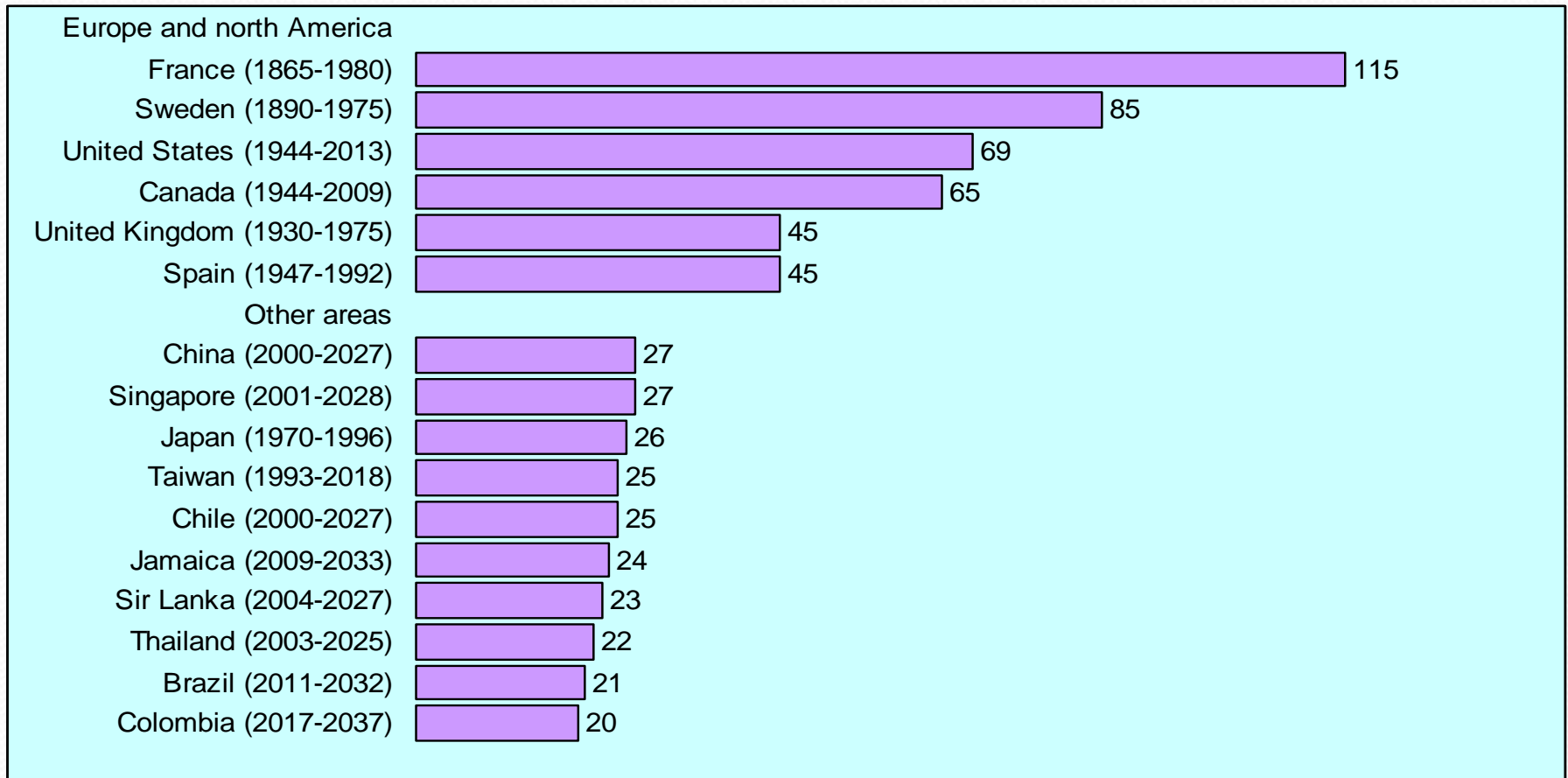
Developed countries
 Developing countries



Source: U.S. Census Bureau, 2000a.

Speed of aging

Number of years required or expected for percent of population aged 65 and over to rise from 7 to 14





IRAN

Esfahan

Kerman

Shiraz

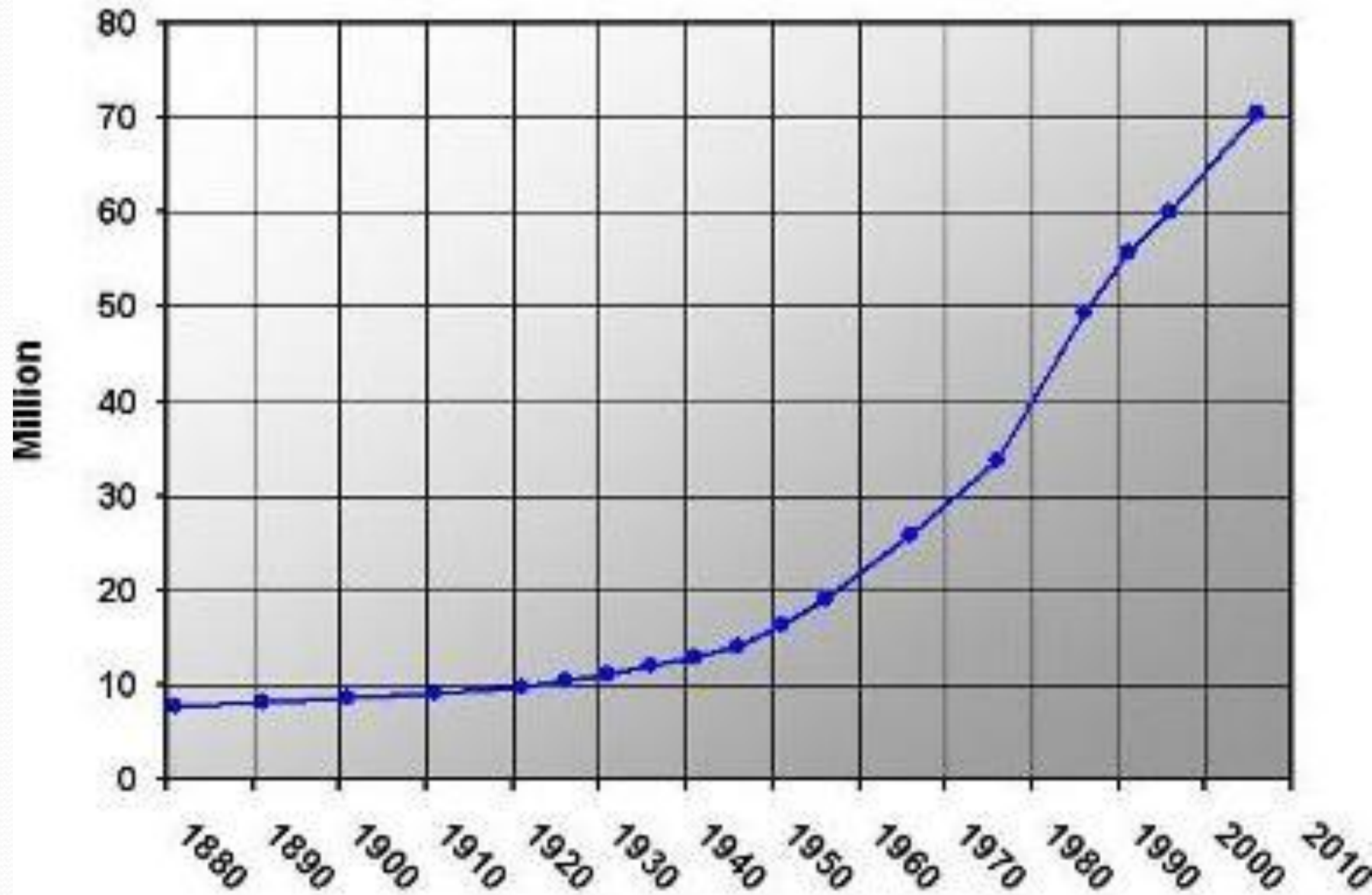
Bandar-e
Bushehr

Bandar
'Abbas

IRAQ

SAUDI

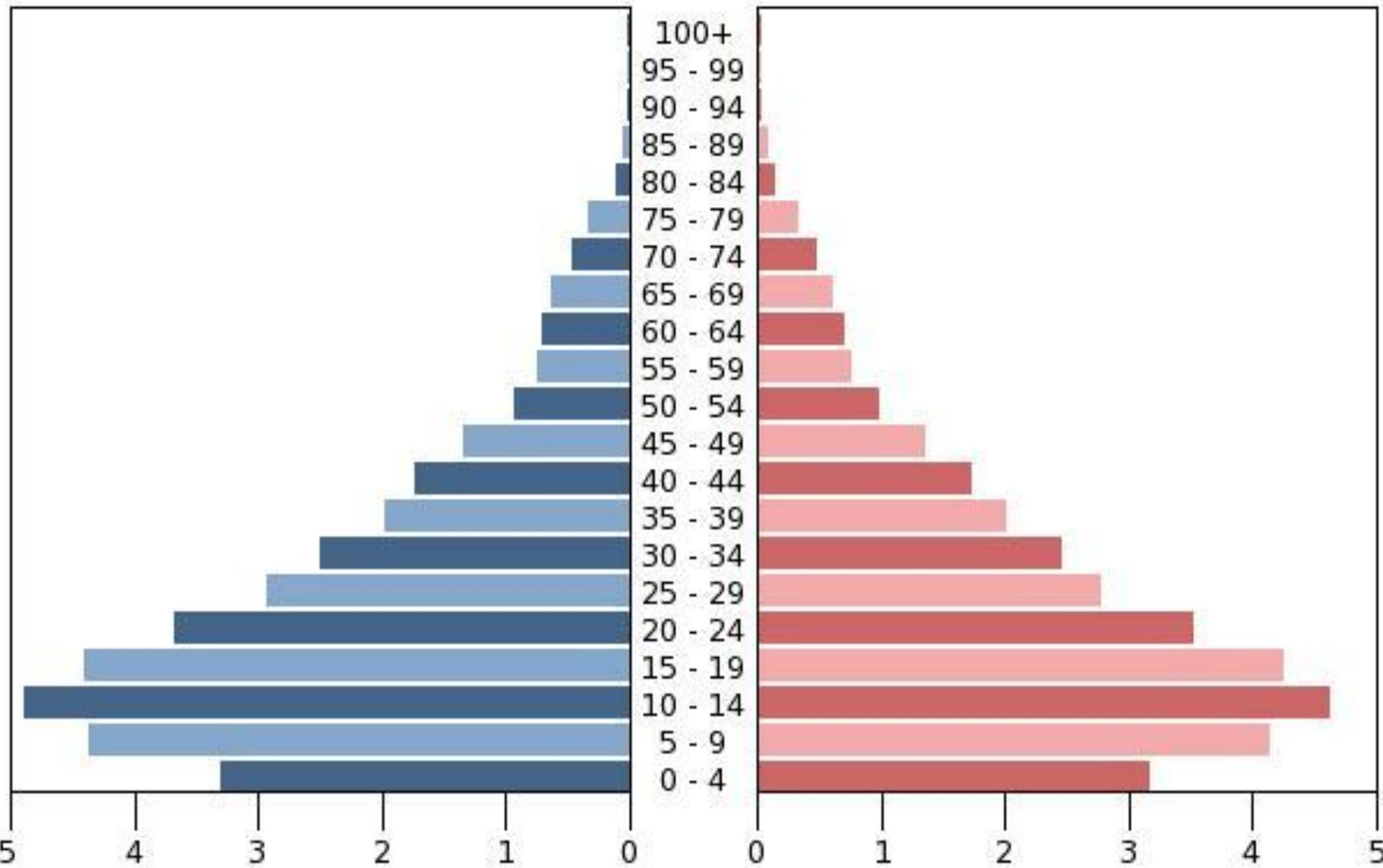
Population of Iran (1880 - 2005)



Male

Iran - 2000

Female

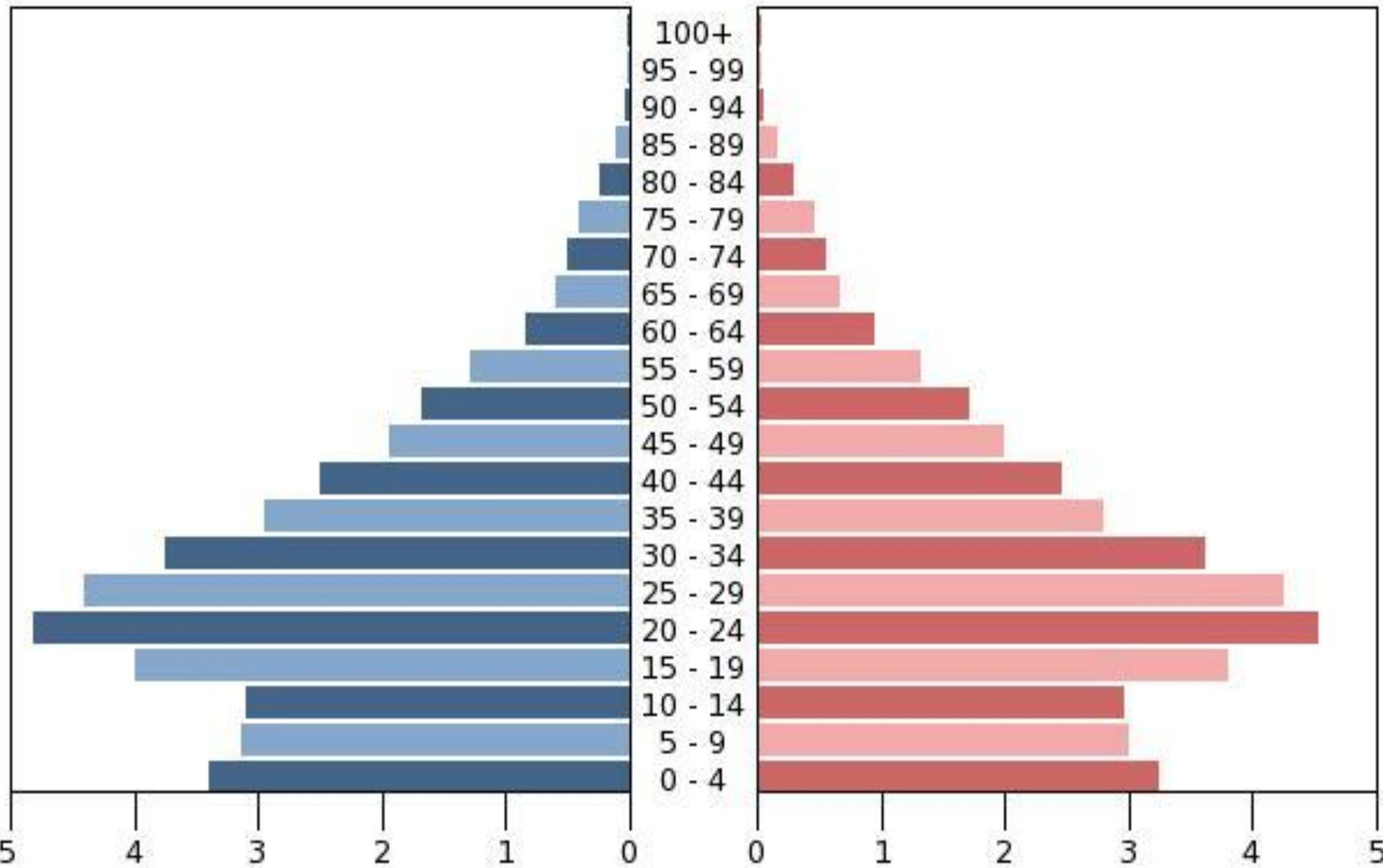


Population (in millions)

Male

Iran - 2011

Female

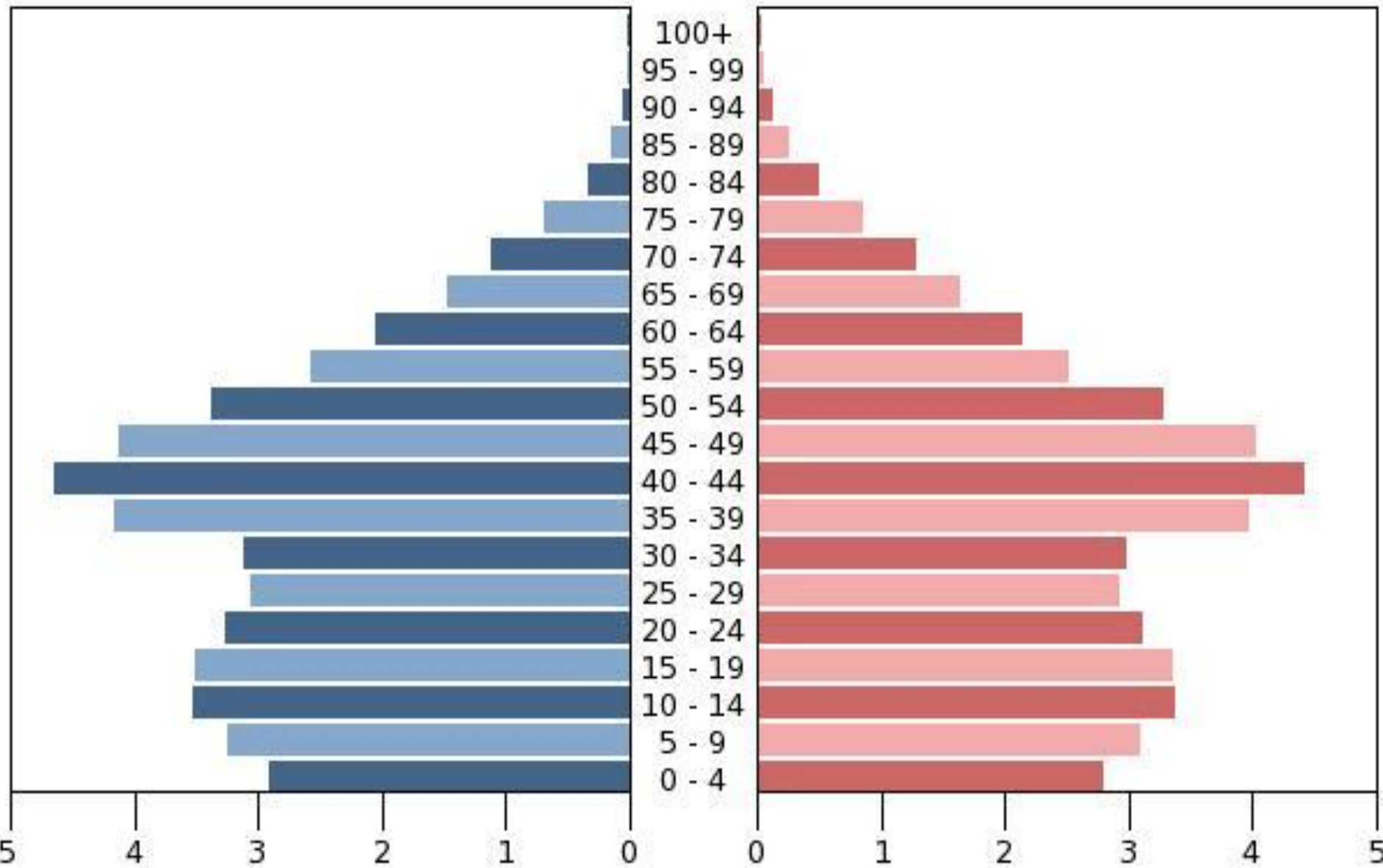


Population (in millions)

Male

Iran - 2030

Female

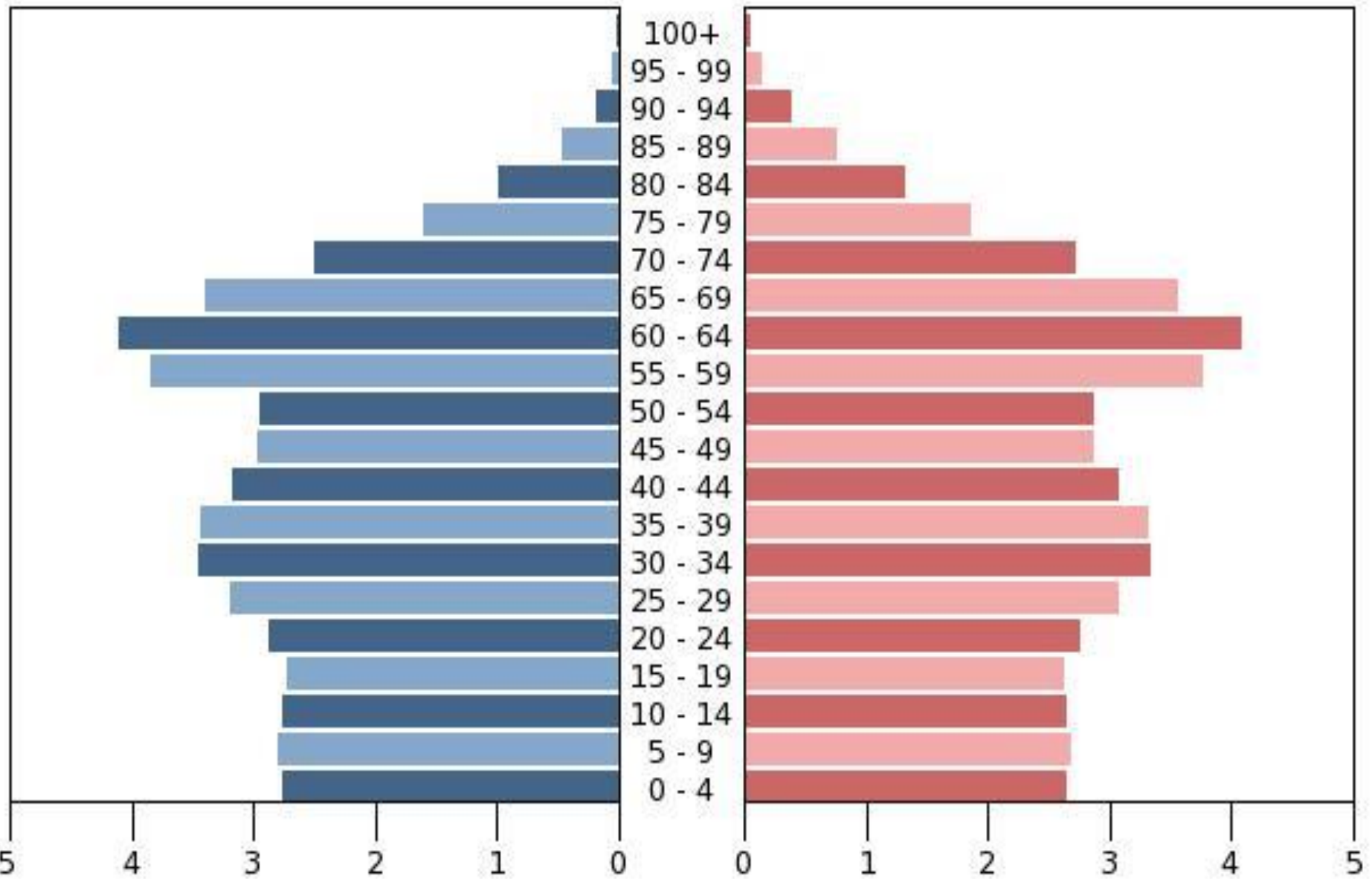


Population (in millions)

Male

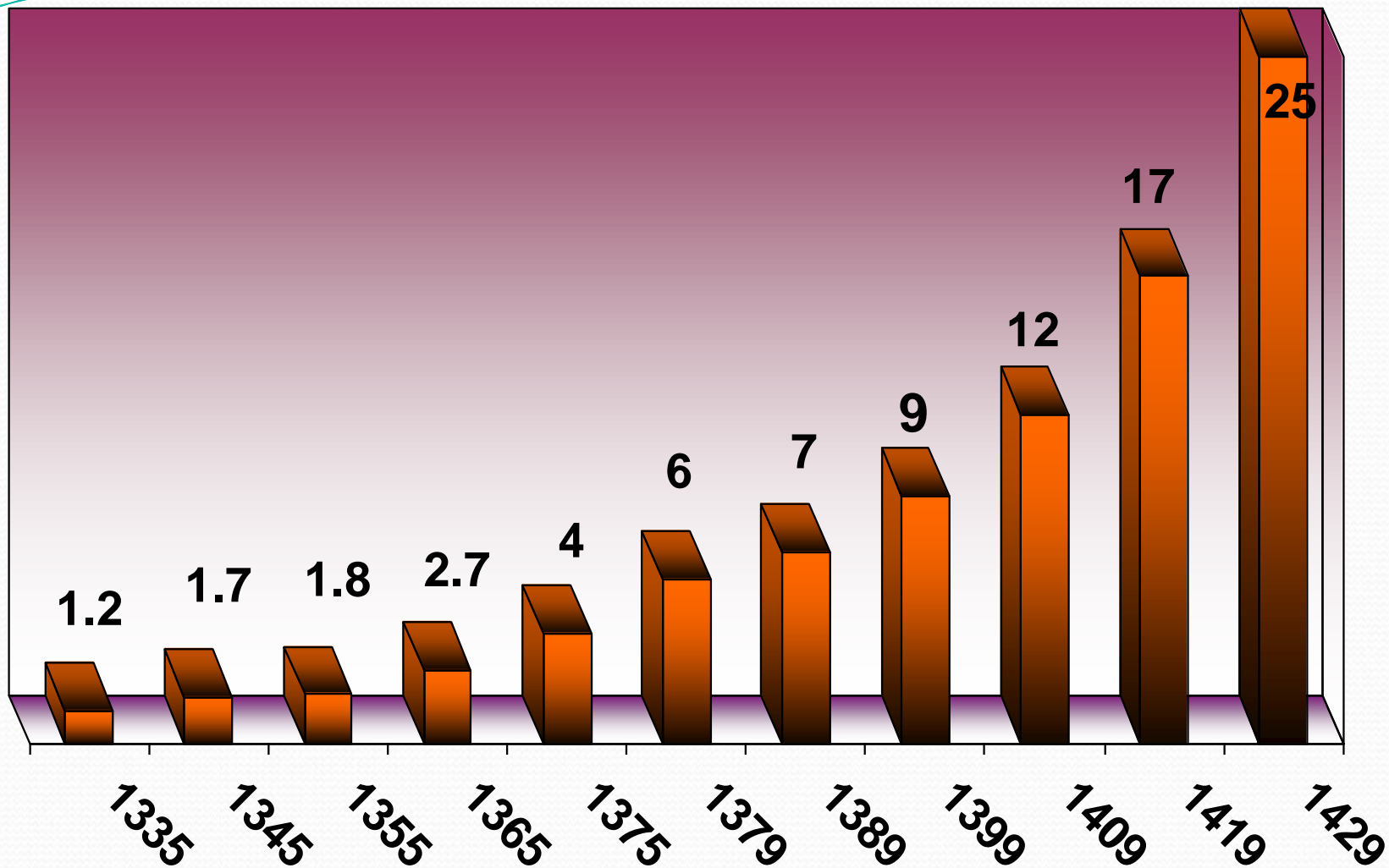
Iran - 2050

Female



Population (in millions)

رشد تغییرات سالخوردگی جمعیت در ایران گذشته، حال و آینده





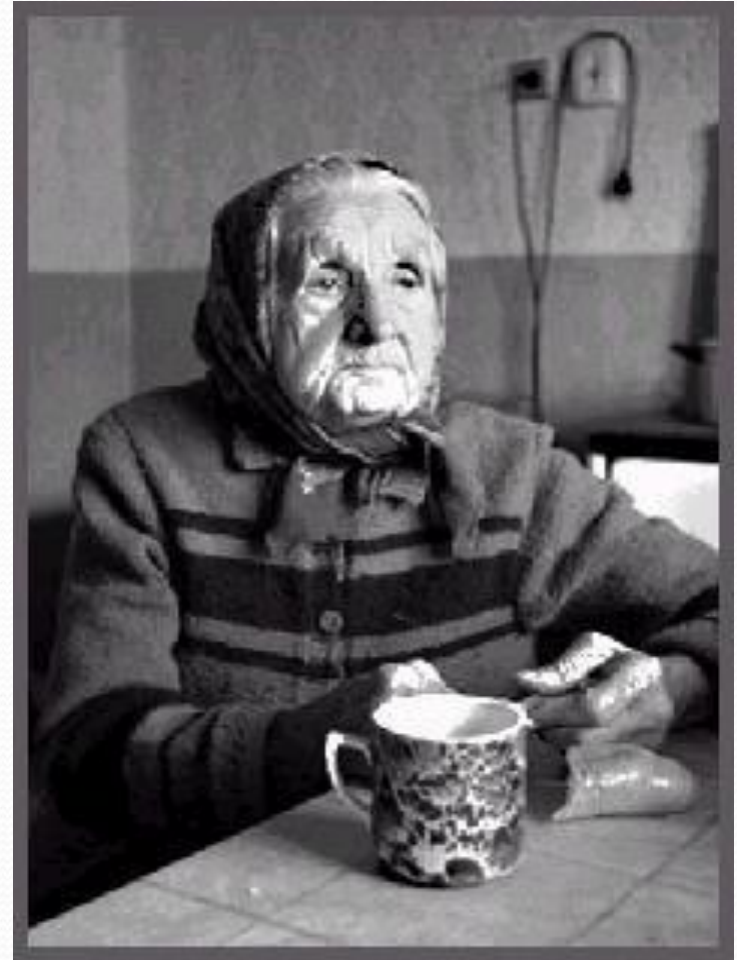
Physiologic change in aging

Different

- Age
- Individual
- Organ
- severity

SKIN/ HAIR/ NAILS

- Loss of subcutaneous fat
- Thinning of skin
- Decreased collagen
- Less sweat glands
- Temperature regulation difficult
- Hair pigment decreases
- Hair thins



RESPIRATORY SYSTEM

- Lungs become more rigid
- Pulmonary function decreases
- Number and size of alveoli decreases
- Vital capacity declines
- Reduction in respiratory fluid
- Bony changes in chest cavity



CARDIOVASCULAR SYSTEM

- Heart smaller and less elastic with age
- By age 70 cardiac output reduced 70%
- Heart valves become sclerotic
- Heart muscle more irritable
- More arrhythmias
- Arteries more rigid
- Veins dilate



GASTROINTESTINAL SYSTEM

- Reduced GI secretions
- Reduced GI motility
- Decreased weight of liver
- Reduced regenerative capacity of liver
- Liver metabolizes less efficiently



RENAL SYSTEM

- After 40 renal function decreases
- By 90 lose 50% of function
- Filtration and reabsorption reduced
- Size and number of nephrons decrease
- Bladder muscles weaken
- Less able to clear drugs from system
- Smaller kidneys and bladder



NEUROLOGICAL SYSTEM

- Neurons of central and peripheral nervous system degenerate
- Nerve transmission slows
- Hypothalamus less effective in regulating body temperature
- Reduced REM sleep, decreased deep sleep
- After 50% lose 1% of neurons each year



MUSCULOSCELETAL SYSTEM

- Adipose tissue increases with age
- Lean body mass decreases
- Bone mineral content diminished
- Decrease in height from narrow vertebral spaces
- Less resilient connective tissue
- Synovial fluid more viscous
- May have exaggerated curvature of spine



IMMUNE SYSTEM

- Decline in immune function
- Trouble differentiating between self and non-self - more auto-immune problems
- Decreases antibody response
- Fatty marrow replaced red marrow
- Vitamin B12 absorption might decrease - decreased hemoglobin and hematocrit

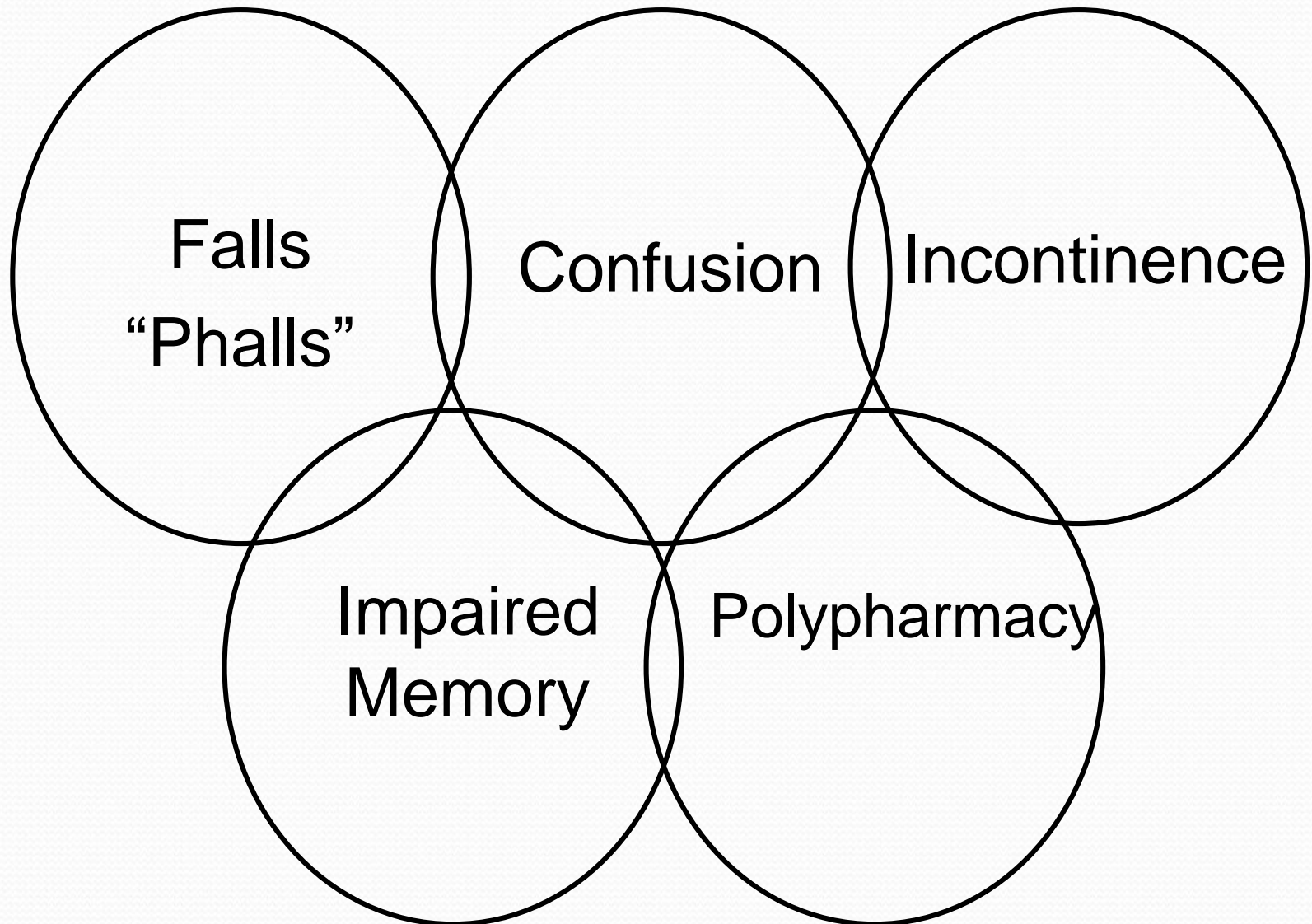


ENDOCRINE SYSTEM

- Decreased ability to tolerate stress - best seen in glucose metabolism
- Estrogen levels decrease in women
- Other hormonal decreases include testosterone, aldosterone, cortisol, progesterone




GERIATRIC GIANTS





Caregiving of geriatric patient

- 
- Basic Caregiving Skills
 - Specialized caregiving Skills
 - Caring for an Older Person Who Lives Alone
 - Caring for an Older Person Who Needs Limited Assistance
 - Providing Long-term Care
 - Caring for a Person Who has Alzheimer's Disease
 - Caring for a Person Who is Terminally Ill

Basic Caregiving Skills

- Giving Medications
- Providing a Healthy Diet
- Pressure Sores
- Hygiene
- Symptoms to Monitor
- Depression
- Bed Making

Basic Caregiving Skills

➤ Giving Medications

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➤ Providing a Healthy Diet

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Basic Caregiving Skills

➤ Hygiene

Basic Caregiving Skills

➤ Symptoms to Monitor

Basic Caregiving Skills

➤ Depression

Basic Caregiving Skills

➤ **Bed Making**

specialized caregiving Skills

- Wound Care
- Wound Infection
- Incontinence
- Managing Intravenous Medications
- Immobility(Respiratory Function , Deep Vein Thrombosis)
- Dealing with Specific Illnesses :Influenza and Pneumonia,
Diabetes, Angina , Stroke, cancer...

Thank you



ROSHD.IR