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# The Importance of Understanding Healthy Aging

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*ILSI Symposium Aging Gracefully: Staying Healthy & Well Late into Life*



# Conflict of Interest Disclosure

I have no conflict of interest to report in relation to this presentation.

# Aging Comprises:



Dynamic biological, physiological and psychosocial processes and systems.



Often involves common changes that may not be harmful, such as graying hair.

# However, aging also means:

## Often involves

Progressive  
and inexorable  
loss of function

## Leading to

Increased  
vulnerability to  
disease, frailty  
and disability

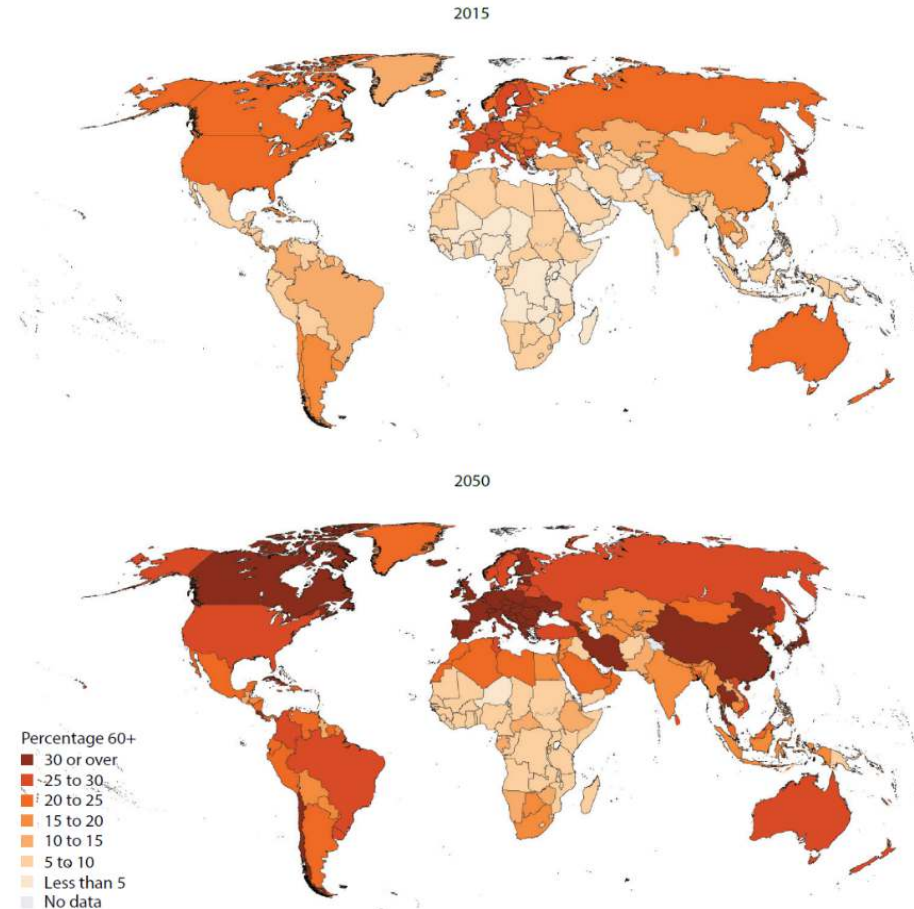
## Hypotesis

Theories to  
explain this  
decline have  
been offerered  
but none by  
itself can  
explain aging

# Global Situation

Percentage of the population aged 60 years or over, 2015 and 2050

The percentage of older persons in the population will increase in virtually all countries.

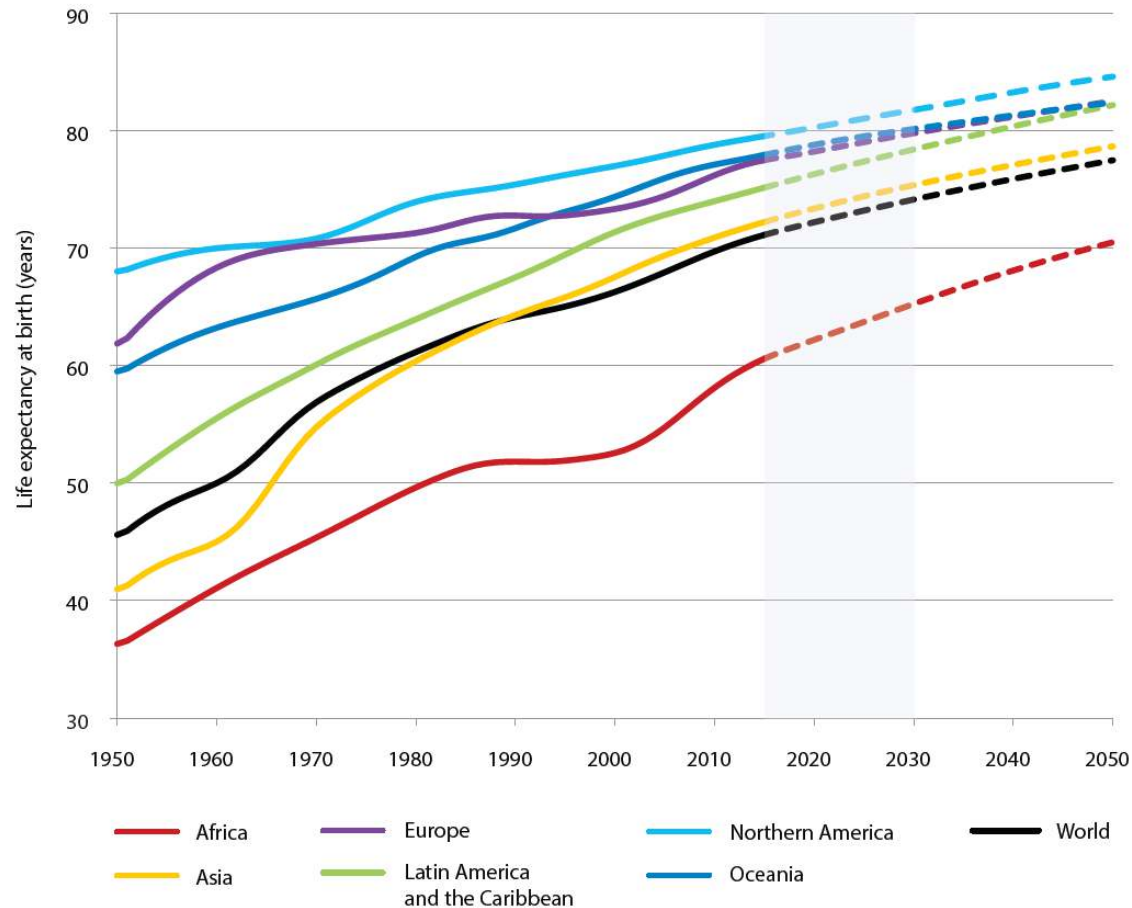


Data source: World Population Prospects: The 2015 Revision

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.

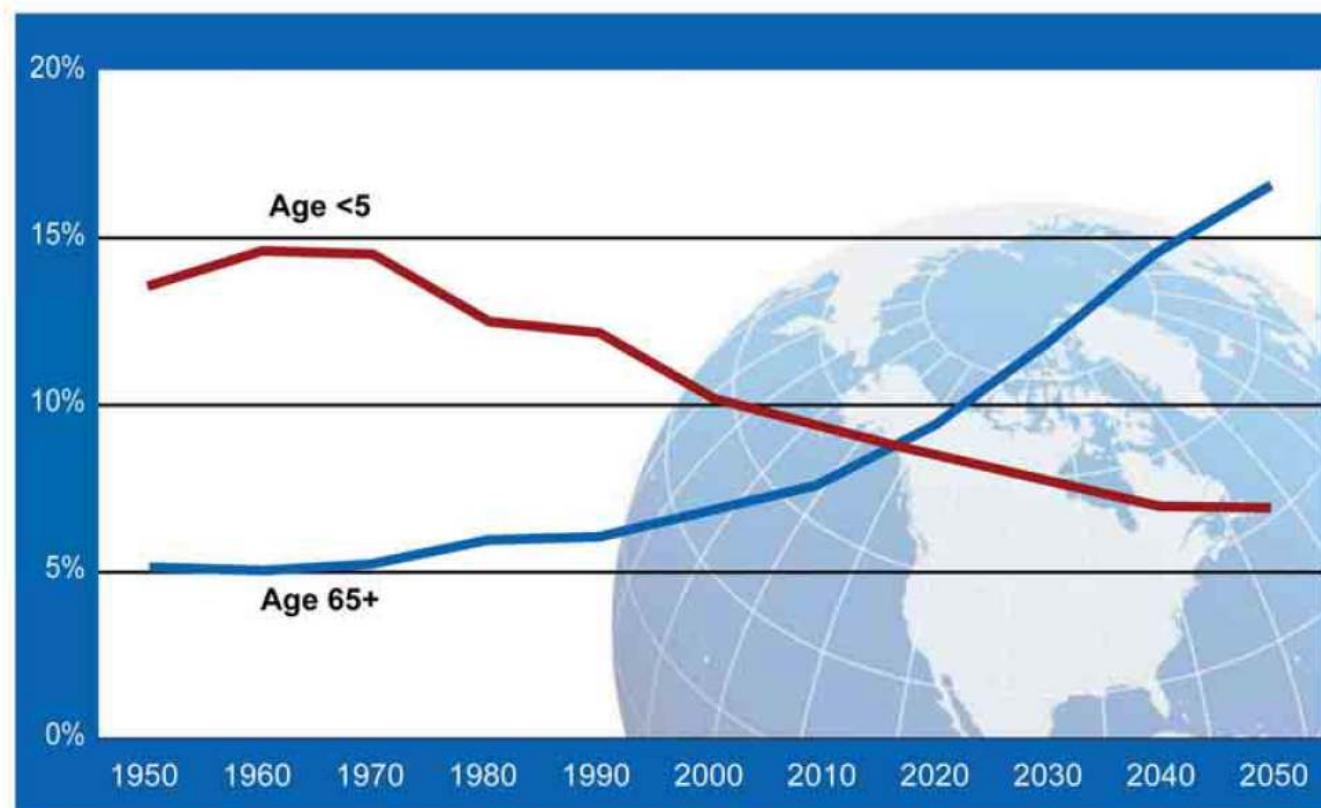
# Global Situation of Aging

Life expectancy at birth by region, 1950-2050



# Children vs People 65+

Young Children and Older People as a Percentage of Global Population: 1950-2050

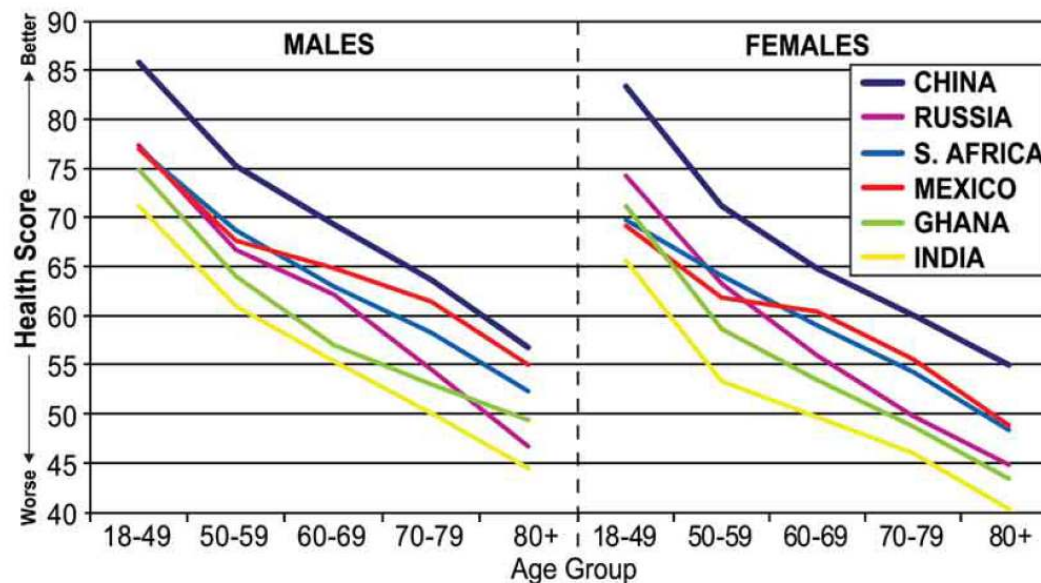


Source: United Nations. *World Population Prospects: The 2010 Revision*.  
Available at: <http://esa.un.org/unpd/wpp>.



# New Data on Aging and Health

Overall Health Status Score in Six Countries for Males and Females:  
Circa 2009



Notes: Health score ranges from 0 (worst health) to 100 (best health) and is a composite measure derived from 16 functioning questions using item response theory. National data collections conducted during the period 2007-2010.

Source: Tabulations provided by the World Health Organization Multi-Country Studies Unit, Geneva, based on data from the Study on global AGEing and adult health (SAGE).

## Researchers are beginning to define the link between genes and lifespan:

Genes have been implicated in normal aging processes, age-related diseases and longevity.

The interactions among genes and lifestyle, behavioral and social factors and their influences on the initiation and progression of some diseases.

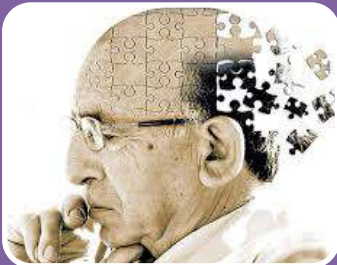
# First big challenge of the researchers



Is to develop a clearer understanding of the normal changes that accompany aging and distinguish them from the diseases and disabilities.



A common thread is the process of inflammation that increase the susceptibility of age-related pathologies and contribute to frailty.



Many others suffer: anemia, thrombosis, involuntary weight loss, dizziness, hearing or vision loss, dementia, frailty or incontinence.



# Research is also helping to:



Identify lifestyle factors and health behaviors that directly influence physical, cognitive and emotional fitness and risk of disease.



Scientists are developing and refining recommendations for people of all ages regarding optimal diet, use of dietary supplements, mental stimulations, physical exercise, quality sleep and interpersonal abilities.




Identify these behaviors and lifestyles that influence health and quality of life, we will be able to reinforce prevention efforts and improve caregiving.


# To more fully understanding the aging process




# 1. Support studies on healthy aging, well-being and longevity


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- Identify cellular and molecular factors that determine the pace of the aging process.

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- Identify development, prenatal, early life and environmental process that affect aging.

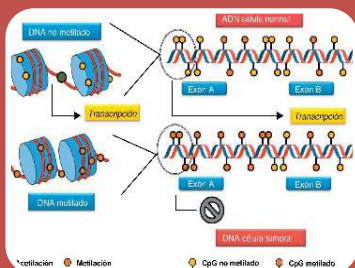
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- Understand the influence of obesity and metabolic status in healthy aging.

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- Understanding the sensory and motor changes associated with aging and how they increased the incidence of disease.

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- Continue to support basic research in the psychological science of aging and the impact of social interaction on health and well-being.

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- Explore the interplay between genetic, biological, clinical, social, economic, psychological and environmental factor affecting aging and longevity.

## 2. Accelerate the discovery of the causes and risk factors with disease and disability among older adults.



Identify the genetic and epigenetic bases of age-related diseases and conditions as well as factors that affect disease initiation and progression.



Improve our understanding of the molecular, genetic, cellular and tissue bases of aging that contribute to increased risk for, alter the course of and vary the response to the treatment of major age-associated disease.



Identify the molecular and cellular bases of age-related decline in immune responses.





Improve our understanding of how the inflammatory process is affected by aging and how these changes impact tissue function.



Identify, analyse and track changing patterns of disability for older adults and better understand factors contributing to these patterns.

### 3. Encourage translational research to bridge basic discovery and intervention development.

Identify and optimize opportunities for moving new knowledge from basic discovery to intervention development and back.

Facilitate communication among supported researchers and encourage interdisciplinary collaboration.

Improve and developing of collaboration between research centers and institutes, supporting collaborative research, eliminate barriers and communicate findings to the public.

# Finally:

It is necessary to know in an urgent and integral way the human aging process, which will allow us as a society to adopt measures giving to this population the meeting of economic, health, social and spiritual needs guaranteeing the enjoyment of an active and healthy old age.



