75th Anniversary of IUNS Workshop for World Food Day 2021

The Power of Nutrition Science for Safe Food and Sustainable Planet Health
Nov 16 - 17

NUTRITION FOR HEALTHY WELLBEING AND AGING:
EVIDENCE FROM LATIN AMERICA
Updated Nutrition Targets and Health Goals

Wilma B. Freire PhD
SOCIEDAD LATINOAMERICANA DE NUTRICIÓN (SLAN)
CONTENTS

→ Introduction

→ Nutrition Situation

→ Conclusions
The population of Latin America and the Caribbean is aging rapidly.

- The population over 60 years will increase from 11% to 25% in 35 years (Wong and Pallonini, 2009).

- In 2050, the proportion of adults over 60 years in the region will be similar to that of Germany, Holland, Switzerland, Denmark and other European countries.

- There is great heterogeneity within the region.

- Belize, Bolivia, Guatemala, Guyana, and Haiti will be like China, with about 15% of the population over 60 years.

- Bahamas, Barbados, Brazil, Chile, Colombia, Costa Rica, Jamaica, Trinidad and Tobago, and Uruguay will be like Germany, Japan, with a proportion of older adults close to 30.
Figure 1. Latin America and the Caribbean: transformation of the age structure, 2015-2060

Health conditions among older adults

Principal causes of mortality and morbidity: chronic diseases.

According to WHO, 75% of deaths in the region are due to chronic disease, an increase of almost 20% compared to 1990.

Population aging was responsible for around 15% of the increase in the total burden of mortality and morbidity related to chronic diseases between 2006 and 2016 (Gakidou et al. 2017).

The principal cause of mortality and morbidity among older adults are cardiovascular diseases, including ischemic disease and cerebrovascular events. These represent 25% of the total burden of disease in people age 60 years or more.

Source; https://esa.un.org/unpd/wpp/Download/Probabilistic/Population/
About 25% of the population above 60 years suffers from cardiovascular disease, and is higher among men (27%) than women (24%).

The prevalence of these diseases increases with age, ranging from 10% to 12% among people from 50 to 59 years to greater than 40% among people above 70 years in some cases.

Arterial hypertension is one of the principal causes of cardiovascular disease. WHO estimated in 2012 that 50% of cases of these diseases could be avoided by controlling arterial hypertension.

Source: https://esa.un.org/unpd/wpp/Download/Probabilistic/Population/
Diabetes is another chronic disease that has increased in recent decades, to the point that some studies refer to the “diabetes epidemic” in the region (Palloni y Mceniry 2007).

Diabetes is responsible for 7% of the total burden of disease in the region among people 60 years of age or more. 15% of older adults suffer from diabetes. The prevalence is slightly greater in men than women.
Prevalence of diabetes in older adults in Latin America and the Caribbean (%)

<table>
<thead>
<tr>
<th>Country</th>
<th>50-59 Total</th>
<th>M</th>
<th>F</th>
<th>60-69 Total</th>
<th>M</th>
<th>F</th>
<th>70-79 Total</th>
<th>M</th>
<th>F</th>
<th>≥80 Total</th>
<th>M</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>10.0</td>
<td>11.0</td>
<td>9.1</td>
<td>15.9</td>
<td>17.5</td>
<td>14.6</td>
<td>17.6</td>
<td>19.3</td>
<td>16.3</td>
<td>15.0</td>
<td>16.5</td>
<td>14.3</td>
</tr>
<tr>
<td>Barbados</td>
<td>18.5</td>
<td>18.5</td>
<td>18.5</td>
<td>27.1</td>
<td>26.3</td>
<td>27.9</td>
<td>30.0</td>
<td>28.4</td>
<td>31.2</td>
<td>26.3</td>
<td>25.0</td>
<td>27.0</td>
</tr>
<tr>
<td>Chile</td>
<td>7.9</td>
<td>8.5</td>
<td>7.3</td>
<td>13.1</td>
<td>14.0</td>
<td>12.3</td>
<td>15.5</td>
<td>16.5</td>
<td>14.7</td>
<td>12.6</td>
<td>13.8</td>
<td>12.0</td>
</tr>
<tr>
<td>Ecuador</td>
<td>10.3</td>
<td>10.5</td>
<td>10.0</td>
<td>14.4</td>
<td>14.8</td>
<td>14.1</td>
<td>16.1</td>
<td>16.5</td>
<td>15.7</td>
<td>14.8</td>
<td>15.7</td>
<td>14.2</td>
</tr>
<tr>
<td>Haiti</td>
<td>15.7</td>
<td>13.8</td>
<td>17.5</td>
<td>21.0</td>
<td>17.5</td>
<td>24.0</td>
<td>21.3</td>
<td>17.7</td>
<td>24.1</td>
<td>17.6</td>
<td>15.7</td>
<td>18.8</td>
</tr>
<tr>
<td>Mexico</td>
<td>25.4</td>
<td>28.8</td>
<td>22.3</td>
<td>30.7</td>
<td>34.1</td>
<td>27.6</td>
<td>31.0</td>
<td>34.5</td>
<td>27.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: https://esa.un.org/unpd/wpp/Download/Probabilistic/Population/
Skeletal muscle diseases are the most common causes of chronic pain and impact the quality of life with regard to mobility and dependence (Woolf et al. 2012).

According to GBD (2016), skeletal muscle diseases are among the chronic conditions with the highest prevalence levels among older adults, affecting one third of people over the age of 60. They affect more women than men and is as high as 40% among people over the age of 80 in the region.

Source: https://esa.un.org/unpd/wpp/Download/Probabilistic/Population/
<table>
<thead>
<tr>
<th>Country</th>
<th>50-59</th>
<th>60-69</th>
<th>70-79</th>
<th>≥80</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>M</td>
<td>F</td>
<td></td>
</tr>
<tr>
<td>Argentina</td>
<td>41.7</td>
<td>40.6</td>
<td>42.7</td>
<td>46.8</td>
</tr>
<tr>
<td>Barbados</td>
<td>33.2</td>
<td>31.3</td>
<td>34.8</td>
<td>39.5</td>
</tr>
<tr>
<td>Chile</td>
<td>44.4</td>
<td>42.6</td>
<td>46.2</td>
<td>49.5</td>
</tr>
<tr>
<td>Ecuador</td>
<td>32.5</td>
<td>30.2</td>
<td>34.7</td>
<td>37.6</td>
</tr>
<tr>
<td>Haiti</td>
<td>30.9</td>
<td>30.3</td>
<td>31.5</td>
<td>35.1</td>
</tr>
<tr>
<td>Mexico</td>
<td>31.8</td>
<td>28.9</td>
<td>34.4</td>
<td>35.9</td>
</tr>
</tbody>
</table>

Source: https://esa.un.org/unpd/wpp/Download/Probabilistic/Population/
**Risk factors.** Excessive consumption of alcohol or tobacco, sedentary lifestyles, and unhealthy diets.

Data from GBD (2016) estimate that 43.5% of the burden of mortality and morbidity due to chronic diseases are related to environmental, occupational, and lifestyle factors.

**Functional limitations:** mobility, cognitive, sensorial, and communication.

**Dependence.** When a person is unable to autonomously perform at least one basic activity of daily life.
Difficulties related to basic instrumental daily life activities.

Number of older adults in conditions in dependency. Persons who require care.

Socioeconomic conditions: living alone, living in households of children, living alone with spouse, other arrangements.

Extreme poverty.

Pension coverage.

Source https://esa.un.org/unpd/wpp/Download/Probabilistic/Population/
Nutritional situation

People over the age of 60 experience greater risk of developing nutritional illnesses.

In addition, aging is accompanied by a variety of physiological, biochemical, and psychological changes that affect physical activity as well as behavior, food consumption habits, and social relations.

Source: https://esa.un.org/unpd/wpp/Download/Probabilistic/Population/
Metabolic, physiological, and biochemical processes change with aging and tend to have adverse effects on nutritional status.

Decreasing sense of taste, smell, vision, and interferes with swallowing and the enjoyment of foods.

The loss of teeth and poorly fitted dentures interfere even more with swallowing.

Digestion and absorption of nutrients are affected by decreased gastrointestinal function.

Source: https://esa.un.org/unpd/wpp/Download/Probabilistic/Population/
The kidney mass and the number of functional nephrons diminishes with age, which in many individuals produces decreasing capacity to eliminate the products of metabolic discharge.

Disminished size of the liver with a loss of hepatic function.

Lean mass, the content of total water in the organism, and bone mass decrease, while adipose tissue and plasma volume tend to increase.

Lower metabolic index and decreased glucose tolerance mean that older adults are more vulnerable to obesity and diabetes.

Source: https://esa.un.org/unpd/wpp/Download/Probabilistic/Population/
Physical activity

Changes in body composition. Factors to consider.

• Decrease and modification in the senses of taste and smell.
• Frequent problems with chewing and salivation, which diminish or modify food consumption patterns.
• Lower digestive and metabolic efficiency.
• Problems of the muscles and bones.
• Poor vision and auditory capacity.
• Illness: cardiovascular, urinary tract, mental (depression, anxiety, and others).
• Chewing.
• Interactions between nutrients and medications.

Source: https://esa.un.org/unpd/wpp/Download/Probabilistic/Population/
Conclusions

The increase of the older adult population, which is a product of the demographic and epidemiological transitions, requires national policies that promote specific intervention programs.

These programs should be based on a multidisciplinary and interrelated vision that contain specific responses to the problems that affect this population.

In this sense, proposals for managing nutritional problems require joint interdisciplinary planning and the identification of specific areas of action.

Source: https://esa.un.org/unpd/wpp/Download/Probabilistic/Population/
Proposals must be based on scientific evidence.

While there is limited experience in the Americas, it is essential to study strategies and programs implemented in Cuba, Costa Rica, and Brazil.

These countries are examples of successful interventions with the participation of the population at national and local levels.

Source: https://esa.un.org/unpd/wpp/Download/Probabilistic/Population/
Among the major aspects to be considered:

The promotion of a new culture of aging.

The promotion of programs to solve specific problems.

The implementation of specific services for aging population

An understanding of the characteristics of the process of aging that promote harmonic relationships among family members and the community, as well as labor relations as places for transmitting experiences and social support networks.
Finally, the identification of thematic modules, such as:

a) Human development;
b) Health for all;
c) Contemporary culture;
d) Free time and recreation;
e) Social security and social services; and
f) Individual development and educational self development.
Thank you