

# The Global Burden of Diseases and Injuries Among Older Adults

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The global burden of diseases and injuries among older adults is a critical public health issue that requires immediate action.<sup>1, 2</sup> The global population of older adults has increased since 1990, and the overall death rates for both sexes have also declined,<sup>2</sup> meaning that the proportion of older adults in the population is growing steadily worldwide.<sup>3</sup> In 2016, there were about 617 million individuals aged 65 and above worldwide, which constitutes 8.5% of the global population. According to projections, this percentage is anticipated to increase to almost 17% by 2050, meaning that there will be around 1.6 billion individuals aged 65 and older worldwide.<sup>3</sup>

The transition towards an aging population is a testament to improvements in healthcare and living conditions.<sup>4</sup> The increase in the global population and the decrease in death rates among older adults from 1990 to 2019 have accelerated population aging,<sup>2</sup> which brings with it a number of health challenges.<sup>5</sup> Furthermore, with additional improvements in healthcare and living conditions, this percentage is expected to continue to rise over the coming years.<sup>6</sup>

Non-communicable diseases (NCDs) contribute substantially to the burden of disease among older individuals.<sup>7</sup> The prevalence of diseases among individuals in this age group places a substantial burden on healthcare systems across the world and negatively affects the quality of their lives and their family members.<sup>8</sup> Cardiovascular diseases, cancers, and chronic respiratory diseases are prominent contributors within this category.<sup>2, 7</sup> The World Health Organization (WHO) has reported that the largest number of NCD-related deaths are attributed to cardiovascular diseases (17.9 million people annually),

with cancers second (9.3 million) and chronic respiratory diseases third (3.9 million).<sup>9</sup> As these diseases are often chronic in nature, they require long-term management, adversely affecting the sufferers' quality of life and greatly burdening the healthcare systems.<sup>2</sup> Furthermore, addressing the global burden of NCDs among older adults goes beyond just physical health, as it also includes their mental well-being.<sup>10</sup> Social isolation and mental health issues are prevalent among this population and can exacerbate the burden of disease.<sup>10</sup> Furthermore, loneliness, depression, and anxiety can affect overall well-being and increase the risk of developing chronic conditions.<sup>2, 7, 11</sup> There are a number of risk factors that contribute to the prevalence of NCDs, including unhealthy dietary habits, low physical activity, smoking, high alcohol consumption, and high blood pressure.<sup>9</sup> In addition, social isolation has been closely linked to a heightened risk of premature death from all causes, and it is related to a 50% higher risk of developing dementia.<sup>12</sup> Alzheimer's disease (AD), the most prevalent form of dementia, ranks as the fifth most common cause of death among adults aged 65 and above. In 2022, AD incurred an estimated \$305 billion cost to the US economy, a figure projected to reach \$1 trillion as the aging population continues to grow.<sup>13</sup> Furthermore, hypertension continues to be a prominent risk factor for cardiovascular diseases.<sup>14</sup>

While communicable diseases (CDs) generally affect all age groups, older individuals may face increased vulnerability due to age-related declines in the functioning of their immune systems.<sup>15</sup> Infectious diseases such as influenza, pneumonia, and urinary tract infections are common among this part of the population.<sup>16</sup> Risk factors for CDs among older individuals include



immunosenescence, pre-existing chronic conditions, and proximity to infectious individuals.<sup>17</sup> Preventive measures include pneumonia and influenza vaccines, as well as good hygiene.<sup>18, 19</sup>

In the last few decades, a discernible shift has occurred in the burden of diseases among the older population, transitioning from a predominance of CDs to more NCDs.<sup>20</sup> This shift can be attributed to several factors, including improvements in healthcare, lifestyle and behavior changes, and advancements in medical science.<sup>20, 21</sup>

Injuries, including falls, fractures, and accidental injuries pose a significant health risk for older adults.<sup>2, 22</sup> Due to factors such as reduced bone density and balance, falls are particularly common and are a leading cause of injuries among older individuals.<sup>2, 23</sup> Injuries can result in long-term disabilities, decreased mobility, increased healthcare, and reduced independence.<sup>2, 22</sup> The primary mortality risk factor for injury differs according to age group. Among those aged 50-69 years old, the leading risk factor was occupational exposure, while for those aged 70 years or older the leading risk factor was low bone mineral density.<sup>1</sup> In addition, other injuries such as burns, motor vehicle collisions, and elder abuse can also have devastating consequences for this vulnerable population.<sup>2, 22</sup> Motor vehicle collisions cause significant morbidity and mortality worldwide.<sup>24</sup> It has been observed that elderly adults have a higher risk of mortality due to motor vehicle collisions. The incidence of motor vehicle collisions and high mortality rates among the elderly highlights the importance of developing a dedicated triage system, particularly in low and middle-income countries where these procedures are not yet in place. Moreover, it is crucial to investigate and implement effective road safety measures to safeguard older adults who are at greater risk while using the roads. This requires enhancing the existing surveillance and information systems to ascertain the distribution of injuries from motor vehicle collisions in this population,<sup>24</sup> which would be a significant stride toward the effective formulation of road safety measures.

It is important to note that while the burden of NCDs increases, CDs still threaten older populations, especially in regions with limited access to healthcare and poor sanitation.<sup>16, 20, 25</sup> The persistence of emerging infectious diseases and the challenge of antimicrobial resistance continue to necessitate sustained vigilance and proactive interventions.<sup>25, 26</sup> Efforts to address the shifting burden include public health campaigns to promote healthy lifestyles, the early detection and management of NCDs, investment in research, and the development of new treatments and preventive strategies. By focusing on both CDs and NCDs, healthcare systems can effectively address the comprehensive healthcare needs of older adults and improve their overall well-being.<sup>7, 27</sup> Identifying and addressing these risk factors through regular check-ups, home modifications, and medication management can also significantly reduce injuries.<sup>28</sup> Nevertheless, the

increasing population of older individuals presents a continuing challenge to reduce the injury burden.

Effectively addressing the global burden of diseases and injuries affecting older adults requires a multifaceted approach. This approach should encompass a broad spectrum of elements, including the formulation of public health policies, healthcare system reforms, and the implementation of community-based interventions. Collaboration between healthcare providers, policymakers, researchers, and communities is vital for identifying gaps in care, implementing evidence-based practices, and advocating for the rights and well-being of older adults. To ensure holistic care for older adults, healthcare systems should adopt integrated approaches that encompass mental health promotion, social engagement initiatives, and access to mental health services. We can mitigate the burden on individuals, families, and healthcare systems by prioritizing preventive measures, improving access to healthcare services, promoting social engagement, and fostering mental well-being. Policymakers, healthcare professionals, and communities must come together to implement comprehensive strategies to ensure healthy aging and an enhanced quality of life for older adults worldwide.

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The authors declare that they have no conflict of interests.

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