

## Aging in Place: Universal Design and Assistive Technology



### Introduction

There are many frustrations that come with aging, a disability, or a recovery period after an illness or surgery. It is aggravating, and sometimes scary, when previously routine activities become challenges. Family member or caregivers have difficulty watching aging parents or adult children struggle to maintain their own homes and function within them. Although there are times when a person should move or give up an activity, for many that isn't necessary. Simple home modifications or the use of assistive devices will give individuals the ability to function independently. Making use of Universal Design principles can help all individuals, especially senior adults, age in place successfully.

### Background Information

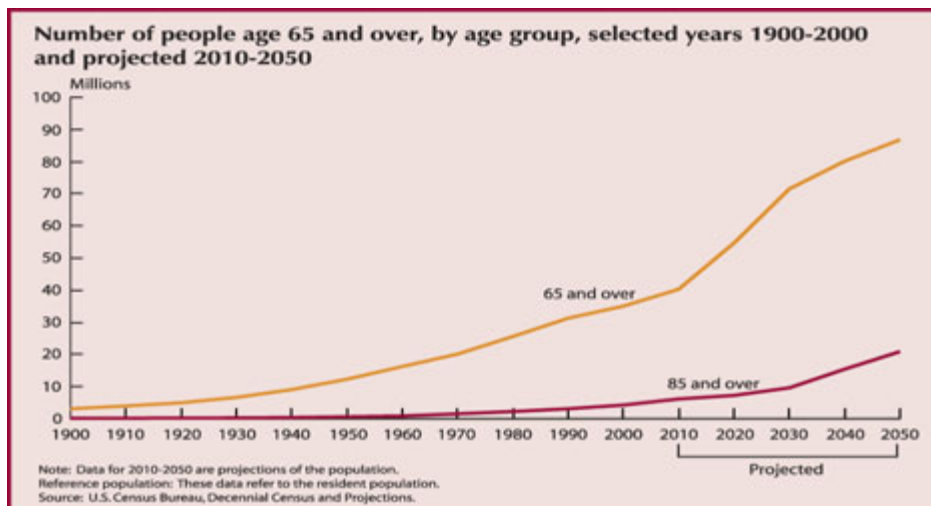
At the beginning of the 20th century:

- Older adults and people with disabilities were true minorities.
- The average human lifespan was only 47 years.
- People with spinal cord injuries had only a ten percent chance of survival.
- Most people with chronic conditions lived in nursing institutions.

People are living longer today, and we may anticipate the following:

- At birth, we can expect to live 78 years.
- If we live to age 65, we can expect to live an additional 17 to 20 years.
- If we live to age 85, we can expect to live another six to seven years.

**Antibiotics and other medical advances enable people to survive accidents and illnesses that were previously fatal.** For example, pneumonia was once considered the “old man’s friend.” Now we have antibiotics, and most individuals recover.



**Figure 1.** The rise in life expectancy over the years.

## Health and Housing Concerns – Understanding the Terminology

The health and housing concerns of senior adults and disabled individuals are often interrelated. Health concerns can create or compound the problems of inadequate or old housing, and housing concerns can create or compound health problems for aging and disabled individuals. When a living environment is affordable and appropriate, individuals—regardless of age or abilities—are more likely to remain healthy and independent. Individuals can age in place with the help of universal design elements and assistive technology in the home. The following terms will increase one’s understanding of these concepts:

**Aging in Place:** This term refers to growing older without having to move in order to secure necessary support services in response to changing needs.

**Activities of Daily Living (ADLs):** This tool assesses the functional status of the elderly, the mentally ill, those with chronic diseases, and others. Being able to complete ADLs is a critical part of independent living. Although there are no strict rules, the standard ADLs are activities related to personal care and include the following:

- Bathing or showering
- Dressing
- Eating (or self feeding)
- Getting in or out of bed or a chair
- Using the toilet

**Instrumental Activities of Daily Living (IADLs):** These activities are not necessary for fundamental functioning but are very useful for living alone and in the community. As with ADLs, the list of IADLs is not standard; however, the general areas considered IADLs are:

- Care of others
- Care of pets
- Child rearing
- Communication device use (such as the telephone)
- Community mobility
- Cooking or meal preparation and cleanup
- Financial management
- Health management and maintenance
- Safety procedures and emergency responses
- Shopping

**Universal Design:** This term refers to the design of products, services, and environments to be usable by as many people as possible regardless of age, ability, or circumstance. **Example:** Curb cuts from the street to the sidewalk enable people pushing strollers, as well as wheelchair users, to cross the street without jumping the curb.

**Assistive Technology (AT):** This term includes assistive, adaptive, and rehabilitative devices that promote greater independence by enabling individuals to perform tasks that they were formerly unable to accomplish or had great difficulty accomplishing. **Examples:** AT can be low-tech (a simple zipper pull) all the way to high-tech (a computer).

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