

TABLE 4.12 Checklist of Physiological Changes with Age and Some Design Implications

Sensory Process and Perception
<p>Age-related sensory losses occur with vision, hearing, taste, touch, and smell. One possible and practical design response to these losses is to load the environment with redundant sensory clues. This includes special attention to:</p> <ol style="list-style-type: none"> 1. The quality and quantity of light 2. The use of color (Brighter colors and those in the orange-yellow-red spectrum are easier to distinguish.) 3. Contrasts of light and dark shadows and advancing and receding colors as they distort depth perception 4. The intensity and pitch of sounds (Lower-pitched sounds are more easily heard.) 5. Tactual cues that may be more easily “read”
Central Nervous System and Cognitive Functions
<p>Although many cognitive functions do not change with age, concept formation ability and reaction time may be reduced. To facilitate orientation and promote safety, special attention must be given to:</p> <ol style="list-style-type: none"> 1. Decreased concept formation ability affecting orientation or way finding 2. Slower reaction time 3. Difficulty in distinguishing and interpreting background noises from foreground sounds
Muscular and Skeletal Systems
<p>Muscular strength, agility, and fine-motor control may diminish with age. The reduced resiliency of the skeletal system requires attention to safety, security, and environmental negotiability, as injury may be more devastating for older people. These have special implications for the design of:</p> <ol style="list-style-type: none"> 1. Ground surfaces and changes in elevation 2. Facilities requiring fine- and/or gross-muscle movement
Temperature Adaptation
<p>The reduced ability to adapt to changes in temperature requires amenities and detailing for temperature moderation and/or control.</p>
Disease
<p>Susceptibility to chronic diseases restrains activity. Special considerations for health-related problems include:</p> <ol style="list-style-type: none"> 1. Providing easy access to nearby restrooms 2. Providing options for those with various levels of reserve energy 3. Limitations on fine-motor control and gross-muscle movements due to arthritis

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