



# DEMENTIA-SUPPORTIVE ENVIRONMENTS: CONSIDERATIONS

Understanding the personal abilities and unique challenges faced by aging individuals, especially those living with Alzheimer's disease and other dementias, better equips design teams to create supportive care and living spaces. Changes that can be credited to dementia are noticeably different from the changes typical of normal aging, but both can occur at the same time:

**Normal Age-Related Changes** include weakened bones and joints; decreased muscle mass; slowed digestion and metabolism; bowel and bladder incontinence; dental and gum conditions; thin and fragile skin; poor balance, coordination, and reflexes; impaired, distorted, or tinted vision; and diminished or distorted hearing.

**Dementia** is a term used to describe a set of symptoms including significantly impaired memory, judgment, and recall; orientation to time and place; interpretation of imagery and spatial relationships; ability to plan, problem solve, or complete familiar tasks; and social skills such as communication, engagement, mood, and personality.

There are currently NO pharmacological or therapeutic treatments that prevent or cure most types of dementia. Good and thoughtful design, however, can reduce the stress associated with declining physical ability, memory loss, and care provision.

**Instructions:** It is important to focus on solutions that maintain or improve cognitive function, facilitate the performance of activities of daily living, reduce behavioral symptoms, and optimize quality of life through active management strategies. The current literature on creating supportive environments for individuals with dementia suggests 12 design programming considerations:

1. Integrate Memory Care: Internal Community
2. Integrate Memory Care: External Community
3. Reduce Scale
4. Simplify Layout
5. Include Destinations
6. Provide Access to Nature
7. Maximize Familiarity
8. Prioritize Access to Everyday Items
9. Regulate Sensory Stimulation
10. Enhance Meals
11. Afford a Spa Experience
12. Personalize Bedrooms

These design considerations are further detailed below in relation with the most common dementia-related impairments. Use this tool early in a project, even before programming, to assess and determine possible client-specific issues, opportunities, concerns, and solutions. In the example below, the team suggests addressing a simplified layout to aid comprehension by designing with the "hallmarks of home." The team has further annotated their ideas to better define what this means in the context of the project.

## EXAMPLE: Simplify Layout

Design intuitive room configurations, adjacencies, privacy, and affordances

Dementia-Related Impairments	Contextual Influence	Proposed Solution
Comprehension	Improve comprehension and navigation by using simple, intuitive, and familiar layouts.	<p>Design care areas with the "hallmarks of home."</p> <ul style="list-style-type: none"> <li>Locate shared living spaces toward the entry and private bedroom suites more remotely.</li> <li>Include a functional kitchen with adjacent dining that includes direct access to an outdoor space that can be used to extend dining activities.</li> <li>Select furniture and finishes that look residential but have commercial-grade durability.</li> <li>Remove or conceal institutional icons (e.g., nursing stations) and equipment.</li> </ul>



## 1. Integrate Memory Care: Internal Community

Enable interaction between those with and without dementia

Dementia-Related Impairments	Contextual Influence	Proposed Solution
Comprehension	Stimulate cognitive functioning through interpersonal interactions.	
Judgment	Manage impaired judgment by normalizing social contextual conditions.	
Recall	Improve recall using strategies that support individuals with severe memory deficits.	
Misinterpretation	Aid in interpreting contextual stimuli and information through social role modeling.	
Hypersensitivity	Quell hypersensitivity by stabilizing and normalizing social interactions.	
Spatial Awareness	Promote awareness of time and place by normalizing social contextual conditions.	
Activities of Daily Living (ADLs) (e.g., eating, dressing, mobility, personal hygiene, and continence)	Support all individuals in independently carrying out daily activities using strategies that support those with severe memory deficits.	
Instrumental ADLs (IADLs) (e.g., managing communication, medication, finances, transportation, meal preparation, shopping, and housework)	Support all individuals in carrying out periodic instrumental activities using strategies that support those with severe memory deficits.	
Focus	Promote active attention by normalizing social contextual conditions.	
Communication	Facilitate interactions by accommodating a range of communication styles and abilities.	
Withdrawal	Nurture active and passive engagement through planned and impromptu activities.	
Personality Changes (e.g., apathy, appetite, abnormal movement, irritability, depression, agitation, aggression, anxiety, sleep disturbances, delusions, disinhibition, hallucinations, and elation)	Moderate behavioral symptoms commonly associated with dementia by enhancing social stability.	



## 2. Integrate Memory Care: External Community

Facilitate contact and engagement with the surrounding community

Dementia-Related Impairments	Contextual Influence	Proposed Solution
Comprehension	Stimulate cognitive functioning by increasing the number and variety of accessible settings.	
Judgment	Manage potentially “risky” products, services, and settings by providing remote access.	
Recall	Enhance recall through continued access to familiar locations outside the care setting.	
Misinterpretation	Avoid giving the impression of involuntary captivity by facilitating outside connections.	
Hypersensitivity	Manage overstimulation in the immediate environment by providing remote access to unfamiliar or overstimulating places and activities.	
Spatial Awareness	Improve immediate spatial recognition by locating unfamiliar or confusing places offsite.	
Activities of Daily Living (ADLs) (e.g., eating, dressing, mobility, personal hygiene, and continence)	Most people with dementia do not live in care facilities, but benefit from having access to dementia-specific care and services.	
Instrumental ADLs (IADLs) (e.g., managing communication, medication, finances, transportation, meal preparation, shopping, and housework)	Most people with dementia do not live in care facilities, but benefit from having access to dementia-specific care and services.	
Focus	Promote active attention by combating boredom and inattention through environmental novelty and diversity.	
Communication	Facilitate interactions through maintained connections with interests and individuals.	
Withdrawal	Promote active engagement through continued access to remote resources.	
Personality Changes (e.g., apathy, appetite, abnormal movement, irritability, depression, agitation, aggression, anxiety, sleep disturbances, delusions, disinhibition, hallucinations, and elation)	Moderate behavioral symptoms commonly associated with dementia by offering remote access to products, activities, or services considered to be negative “triggers.”	



### 3. Reduce Scale

Reduce the perceived size and number of occupants within dedicated care/living areas

Dementia-Related Impairments	Contextual Influence	Proposed Solution
Comprehension	Increase cognitive functioning by mitigating common sources of overstimulation.	
Judgment	Increase quality of life through smaller, less restrictive settings that facilitate observation.	
Recall	Promote attentiveness by decreasing spatial complexity and contextual stimulation.	
Misinterpretation	Increase awareness through observation and understanding by decreasing stimuli.	
Hypersensitivity	Mitigate undesirable behavioral symptoms by reducing common sources of overstimulation.	
Spatial Awareness	Maximize orientation by affording visibility throughout a proportionately occupied space.	
Activities of Daily Living (ADLs) (e.g., eating, dressing, mobility, personal hygiene, and continence)	Improve self-sufficiency by decreasing travel distances between destinations (e.g., bedrooms to dining and living spaces).	
Instrumental ADLs (IADLs) (e.g., managing communication, medication, finances, transportation, meal preparation, shopping, and housework)	Promote functional abilities by facilitating the continuation of daily routines in smaller, "home-like" settings.	
Focus	Improve attention and awareness by reducing common sources of overstimulation.	
Communication	Promote interaction through proximity and familiarity in intimately sized settings.	
Withdrawal	Promote active and passive engagement through increased visibility and relationships.	
Personality Changes (e.g., apathy, appetite, abnormal movement, irritability, depression, agitation, aggression, anxiety, sleep disturbances, delusions, disinhibition, hallucinations, and elation)	Improve behavioral symptoms by reducing restrictions in smaller settings that facilitate observation.	



#### 4. Simplify Layout

Design intuitive room configurations, adjacencies, privacy, and affordances

Dementia-Related Impairments	Contextual Influence	Proposed Solution
Comprehension	Improve comprehension and navigation by using simple, intuitive, and familiar layouts.	
Judgment	Facilitate decision-making by reducing competing demands and conflicting messages.	
Recall	Support procedural memory for increased self-sufficiency through familiar environments.	
Misinterpretation	Enhance understanding and decrease confusion with intuitively designed spaces.	
Hypersensitivity	Promote focus and calm by reducing the complexity and overstimulation of a setting.	
Spatial Awareness	Facilitate orientation and navigation by maximizing familiarity and legibility.	
Activities of Daily Living (ADLs) (e.g., eating, dressing, mobility, personal hygiene, and continence)	Promote self-sufficiency, navigation, access, self-determination, and coordination of care through simplified settings.	
Instrumental ADLs (IADLs) (e.g., managing communication, medication, finances, transportation, meal preparation, shopping, and housework)	Promote functional abilities by facilitating the continuation of daily routines in settings that are easily navigated and understood.	
Focus	Promote attention and awareness by reducing the complexity and confusion of a setting.	
Communication	Eliminate the necessity for communication by promoting self-sufficiency in simpler layouts.	
Withdrawal	Offer opportunities for various levels of active and passive engagement in simple layouts.	
Personality Changes (e.g., apathy, appetite, abnormal movement, irritability, depression, agitation, aggression, anxiety, sleep disturbances, delusions, disinhibition, hallucinations, and elation)	Reduce maladaptive behavioral symptoms in less restricted, less complex settings that facilitate observation and care coordination.	



## 5. Include Destinations

Capitalize on local amenities, venues, and services

Dementia-Related Impairments	Contextual Influence	Proposed Solution
Comprehension	Increase comprehension with the novelty of easily accessible and memorable destinations.	
Judgment	Compensate for impaired judgment with on-site amenities that require assistance.	
Recall	Support recall by providing memorable and accessible products, activities, and services.	
Misinterpretation	Avoid giving the impression of involuntary captivity by offering places to visit.	
Hypersensitivity	Reduce overstimulation through remote but accessible products, activities, and services.	
Spatial Awareness	Improve orientation by remotely locating unfamiliar or confusing activities and services.	
Activities of Daily Living (ADLs) (e.g., eating, dressing, mobility, personal hygiene, and continence)	Promote safety and coordinate care with on-site education, therapy, and treatments.	
Instrumental ADLs (IADLs) (e.g., managing communication, medication, finances, transportation, meal preparation, shopping, and housework)	Promote safety and coordinate care with on-site education, therapy, and treatments.	
Focus	Increase attention and awareness by including noteworthy destinations and amenities.	
Communication	Encourage communication through a variety of outlets for interaction.	
Withdrawal	Provide opportunities for active and passive participation in a variety of settings.	
Personality Changes (e.g., apathy, appetite, abnormal movement, irritability, depression, agitation, aggression, anxiety, sleep disturbances, delusions, disinhibition, hallucinations, and elation)	Assist those experiencing behavioral changes in easily accessing beneficial products, activities, and services.	



## 6. Provide Access to Nature

Offer visual and physical access to natural features

Dementia-Related Impairments	Contextual Influence	Proposed Solution
Comprehension	Orient individuals to time, place, and season by providing views and access to nature.	
Judgment	Promote health by enabling all individuals to safely access the many benefits of nature.	
Recall	Aid recall by orienting people to time, place, and season with views and access to nature.	
Misinterpretation	Avoid giving the impression of involuntary captivity by enabling people to go outside.	
Hypersensitivity	Manage behavioral symptoms with exposure to natural light and horticultural therapy.	
Spatial Awareness	Support vision and orientation by enabling people to access outdoor environments.	
Activities of Daily Living (ADLs) (e.g., eating, dressing, mobility, personal hygiene, and continence)	Improve functional ability and safety through direct access to supportive outdoor spaces.	
Instrumental ADLs (IADLs) (e.g., managing communication, medication, finances, transportation, meal preparation, shopping, and housework)	Improve functional ability and safety using outdoor features as therapeutic treatments.	
Focus	Improve concentration and attentiveness by enabling engagement with therapeutic natural settings.	
Communication	Promote social engagement through a variety of features in supportive outdoor spaces.	
Withdrawal	Foster passive and active engagement in supportive outdoor spaces.	
Personality Changes (e.g., apathy, appetite, abnormal movement, irritability, depression, agitation, aggression, anxiety, sleep disturbances, delusions, disinhibition, hallucinations, and elation)	Manage behavioral symptoms with exposure to natural light and horticultural therapy in supportive outdoor environments.	



## 7. Maximize Familiarity

Emphasize a residential ambiance, character, and décor

Dementia-Related Impairments	Contextual Influence	Proposed Solution
Comprehension	Improve cognitive functioning and decrease anxiety with familiar residential features.	
Judgment	Facilitate decision-making by concealing unfamiliar and misleading institutional icons.	
Recall	Improve recall through settings that are intuitively understood and navigated.	
Misinterpretation	Increase interpretation accuracy by reducing competing demands and conflicting messages.	
Hypersensitivity	Reduce vulnerability by mitigating sources of excessive or unfamiliar stimuli.	
Spatial Awareness	Improve wayfinding in familiar settings.	
Activities of Daily Living (ADLs) (e.g., eating, dressing, mobility, personal hygiene, and continence)	Promote greater self-care, sufficiency, and determination through settings that feel familiar.	
Instrumental ADLs (IADLs) (e.g., managing communication, medication, finances, transportation, meal preparation, shopping, and housework)	Improve functioning through settings that include all the familiar comforts of “home.”	
Focus	Enhance alertness and attention by reducing competing demands and conflicting messages.	
Communication	Enable those with reduced communication to be more self-sufficient through predictable settings.	
Withdrawal	Provide opportunities for active and passive engagement in familiar places.	
Personality Changes (e.g., apathy, appetite, abnormal movement, irritability, depression, agitation, aggression, anxiety, sleep disturbances, delusions, disinhibition, hallucinations, and elation)	Enable people to exercise more predictable behavior through spaces that look and feel familiar.	



## 8. Prioritize Access to Everyday Items

Provide access to commonly used accouterments, equipment, and tools

Dementia-Related Impairments	Contextual Influence	Proposed Solution
Comprehension	Avoid confusing people by restricting visual access to commonly used everyday items.	
Judgment	Allow “risky” items to be used with assistance rather than restricting access for everyone.	
Recall	Capitalize on procedural memory by making commonly used items continually available.	
Misinterpretation	Increase understanding by including everyday items in the immediate environment.	
Hypersensitivity	Decrease anxiety by surrounding people with familiar items.	
Spatial Awareness	Maximize recognition by making commonly used items visually accessible.	
Activities of Daily Living (ADLs) (e.g., eating, dressing, mobility, personal hygiene, and continence)	Promote greater self-care, sufficiency, and determination by providing access to the items people are most accustomed to using.	
Instrumental ADLs (IADLs) (e.g., managing communication, medication, finances, transportation, meal preparation, shopping, and housework)	Improve functioning in settings that include all the familiar “hallmarks of home.”	
Focus	Promote active engagement in activities by providing the items commonly used.	
Communication	Enable self-sufficiency by providing access to, and use of, everyday items.	
Withdrawal	Avoid disempowering people by restricting visual access to, and use of, everyday items.	
Personality Changes (e.g., apathy, appetite, abnormal movement, irritability, depression, agitation, aggression, anxiety, sleep disturbances, delusions, disinhibition, hallucinations, and elation)	Allow items to be used with or without assistance on a case-by-case basis.	



## 9. Regulate Sensory Stimulation

Regulate the presence, absence, and/or control of contextual stimulation

Dementia-Related Impairments	Contextual Influence	Proposed Solution
Comprehension	Avoid confusion by eliminating or regulating sources of overstimulation.	
Judgment	Prevent poor decision-making by ensuring a calm and comforting setting.	
Recall	Promote reliable recall through settings that do not push people beyond their coping threshold.	
Misinterpretation	Encourage understanding by limiting the amount and type of stimuli in the setting.	
Hypersensitivity	Foster comfort and relaxation by limiting the amount and type of stimuli in the setting.	
Spatial Awareness	Prevent disorientation by avoiding stimuli that push people beyond their coping threshold.	
Activities of Daily Living (ADLs) (e.g., eating, dressing, mobility, personal hygiene, and continence)	Focus attention on daily self-care activities rather than excessive or undesirable stimuli.	
Instrumental ADLs (IADLs) (e.g., managing communication, medication, finances, transportation, meal preparation, shopping, and housework)	Enable people to focus on tasks and activities by limiting excessive or undesirable stimuli.	
Focus	Foster attention and awareness by eliminating or minimizing sources of overstimulation.	
Communication	Encourage communication by eliminating competing or debilitating stimuli.	
Withdrawal	Avoid causing people to withdraw inside themselves to cope with overstimulation.	
Personality Changes (e.g., apathy, appetite, abnormal movement, irritability, depression, agitation, aggression, anxiety, sleep disturbances, delusions, disinhibition, hallucinations, and elation)	Reduce the frequency and duration of behavior fluctuations through calm environments that do not push people beyond their coping threshold.	



## 10. Enhance Meals

Maximize involvement in meal planning, preparation, service, and atmosphere

Dementia-Related Impairments	Contextual Influence	Proposed Solution
Comprehension	Aid situational understanding and interest through calm, quiet, and pleasant dining settings.	
Judgment	Promote stable decision-making through settings that convey clear indications for usage.	
Recall	Capitalize on procedural memory by including familiar features and items.	
Misinterpretation	Clarify intent by offering opportunities to engage in meal preparation and service.	
Hypersensitivity	Reduce anxiety and improve intake through calm, intimate, and comfortable dining settings.	
Spatial Awareness	Improve awareness, orientation, and nutrition through settings that include the “hallmarks of home.”	
Activities of Daily Living (ADLs) (e.g., eating, dressing, mobility, personal hygiene, and continence)	Encourage nutrition and functional ability through meal preparation and delivery.	
Instrumental ADLs (IADLs) (e.g., managing communication, medication, finances, transportation, meal preparation, shopping, and housework)	Advance therapeutic objectives through engagement in meal preparation and delivery.	
Focus	Maximize enjoyment and minimize competing demands in the dining atmosphere.	
Communication	Foster a convivial dining atmosphere with supportive features and regulated stimuli.	
Withdrawal	Nurture active and passive engagement with a range of seating locations and configurations.	
Personality Changes (e.g., apathy, appetite, abnormal movement, irritability, depression, agitation, aggression, anxiety, sleep disturbances, delusions, disinhibition, hallucinations, and elation)	Decrease the severity of behavioral symptoms through calm dining venues that foster enjoyment.	



## 11. Afford a Spa Experience

Optimize bathing location, configuration, fixtures, décor, products, and storage

Dementia-Related Impairments	Contextual Influence	Proposed Solution
Comprehension	Improve understanding by affording intense moments of relaxation.	
Judgment	Promote positive and predictable actions through spaces that look and feel familiar and relaxing.	
Recall	Capitalize on procedural memory by including familiar features and items.	
Misinterpretation	Improve understanding through familiar settings that provide clarity for use and purpose.	
Hypersensitivity	Create moments of respite while bathing by removing excess stimuli.	
Spatial Awareness	Improve overall orientation by offering leisure activities that do not require attentiveness.	
Activities of Daily Living (ADLs) (e.g., eating, dressing, mobility, personal hygiene, and continence)	Encourage self-care through settings that include supportive environmental features.	
Instrumental ADLs (IADLs) (e.g., managing communication, medication, finances, transportation, meal preparation, shopping, and housework)	Encourage self-care by including personal items in bathing routines.	
Focus	Improve overall awareness by offering leisure activities that enable rejuvenation.	
Communication	Reduce the perceived need to communicate by promoting intense moments of leisure.	
Withdrawal	Provide opportunities to withdraw and relax to enable interaction at other times.	
Personality Changes (e.g., apathy, appetite, abnormal movement, irritability, depression, agitation, aggression, anxiety, sleep disturbances, delusions, disinhibition, hallucinations, and elation)	Promote expected behavior through spaces that look and feel familiar and relaxing.	



## 12. Personalize Bedrooms

Design bedrooms and bathrooms for comfort, privacy, and personalization

Dementia-Related Impairments	Contextual Influence	Proposed Solution
Comprehension	Reinforce understanding by providing private, personalized bedroom suites.	
Judgment	Reduce the impact of erratic decision-making on roommates by providing private bedrooms.	
Recall	Capitalize on procedural memory through private and personalized spaces.	
Misinterpretation	Avoid giving the impression of forced socialization by providing private “retreats.”	
Hypersensitivity	Provide opportunities for personalization and remove unpredictable stimuli in private bedrooms.	
Spatial Awareness	Capitalize on procedural memory through private and personalized spaces.	
Activities of Daily Living (ADLs) (e.g., eating, dressing, mobility, personal hygiene, and continence)	Promote greater self-care, sufficiency, and determination through private bedroom suites.	
Instrumental ADLs (IADLs) (e.g., managing communication, medication, finances, transportation, meal preparation, shopping, and housework)	Promote greater self-reliance through private bedroom suites.	
Focus	Improve attention and awareness by eliminating inherent roommate stressors.	
Communication	Enable people to socialize as preferred by providing private spaces for “retreat.”	
Withdrawal	Foster engagement by providing options for non-engagement in private bedrooms.	
Personality Changes (e.g., apathy, appetite, abnormal movement, irritability, depression, agitation, aggression, anxiety, sleep disturbances, delusions, disinhibition, hallucinations, and elation)	Allow people to de-escalate in spaces where they feel some sense of ownership.	

For more information, refer to the [Design for Memory Care Settings Issue Brief](#).

