






Environmental Modifications

for Individuals with Dementia

Written by:
Abigail R. Taylor
Doctor of Occupational Therapy Student
Indiana University
March 2023

IN THIS PACKET:

-  Feeling Safe and Comfortable
-  Meaningful and Familiar
-  Sensory Enhanced Environment
-  Relaxing and Stimulating
-  Encourage Engagement Throughout the Day

One effective approach for helping seniors aging in place is to modify the home environment. A more specific and less common area of focus is environmental modifications for individuals diagnosed with dementia. Setting up the home environment in a way that accommodates the needs of individuals with dementia has shown to improve their behavior and the perception of their surroundings. Home modifications also have been shown to improve performance in daily activities and decrease caregiver stress.

Home modifications are adaptations to environments that are intended to increase use, safety, security, and independence. Home environmental modifications include strategies such as renovating the environment, using assistive devices, using visual cues and memory aids, rearranging or removing furniture and dangerous household items, and simplifying tasks.

A crucial but often overlooked modification is setting up the environment to meet the sensory needs of individuals with dementia. A person with dementia may have a decreased sensory threshold and can easily become overstimulated. Conversely, they might experience too little sensory stimulation, especially in the late stages of dementia.

For people with dementia, home modification is an ongoing process. Needs may change over time and home modifications will need to change as well to help the loved one remain comfortably and safely in their home.

The following information discusses tips and considerations for setting up the home environment appropriately for loved ones with dementia.

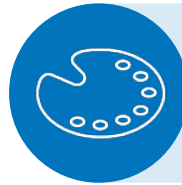


Feeling Safe and Comfortable



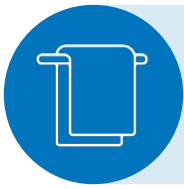
LIGHTING

- ❑ **Provide soft, indirect light** by using wall washers or translucent light fixtures/coverings to prevent irritating shadows. Avoid harsh overhead lighting.
- ❑ **Dimmer switches** allow for adjustments to lighting, which can create a more therapeutic environment that meets the individual's light preference.
- ❑ **Use natural daylight** to brighten the environment when possible.
- ❑ **Blinds and curtains** should properly cover windows to avoid any uncontrolled and disturbing light.
- ❑ **Use lights with motion sensors** or highlight light switches to make finding the light switch easier. A white light switch on a light colored wall can be missed.
- ❑ **Automatic night lights** help the individual find a clear path at night. Some automatic night lights activate when the person's foot touches the floor and can be used to reduce the incidence of falls.
- ❑ **Avoid very dark spaces** as people with dementia may fear darkness or become confused if they cannot see well.



COLOR WITHIN THE HOME

- ❑ **Use neutral and light colors** within the home, such as off-white or beige walls and light-colored furniture.
- ❑ **Use brighter colors within the room** as accents and to draw attention to an area.
- ❑ **Colorful items such as blankets and cushions** can help encourage stimulating engagement and help identify seating areas.
- ❑ **Dark/light color contrast** can be used to improve visibility and clarity, for example using a dark floor color with a lighter color for the furniture and walls.
- ❑ **Use soft colors for walls and curtains** to make the environment feel warm and comforting (e.g. blue, purple, green, and neutral colors). Red and orange colors are more stimulating, so be cautious with these colors.



FABRICS AND SOFT MATERIALS

- ❑ **Blankets that are soft and fuzzy** are comforting and also keep the individual warm.
- ❑ **Soft towels just out of the dryer** are a great option to use after bathing to help regulate their body temperature and keep them content.
- ❑ **Weighted blankets** provide deep pressure that can ground a person, making them feel secure and calm.

Blankets vary in weight; a good rule of thumb is to get a blanket that is about ten percent of the user's bodyweight. Those with respiratory, circulatory, or temperature regulation issues should not use a blanket without talking to their doctor.



FLOORING CONSIDERATIONS

- ❑ **Reflective flooring**, such as linoleum, tile, and wood, may cause some confusion and pose a slipping hazard.
- ❑ **Rugs and carpets** can also create a tripping hazard. Remove throw rugs if necessary. Using non-slip mats with edges taped down is a great option for creating a safer environment.
- ❑ **Carpets with bold patterns** can cause confusion. Plain carpet is simpler and may be better for individuals who have difficulty with perception.
- ❑ **Changes in flooring surface** can be confusing and potentially unsafe. Mark steps with bright tape to reduce the risk of falling.



FURNITURE

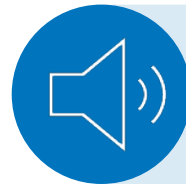
- ❑ **Use comfortable furniture** with soft surfaces and a relaxed position.
- ❑ **You can incorporate footrests, ottomans, recliners, or day beds** so a loved one with dementia can lie down and relax.
- ❑ **Make sure furniture is laid out well and is sturdy** when creating a dementia friendly environment.
- ❑ **Pad sharp corners on your furniture** or remove furniture with sharp corners.
- ❑ **Keep furniture in the same spot** to avoid causing any disorientation or distress.
- ❑ **Consider placing a rocker in the living space.** This provides linear movement, which promotes relaxation.

If using a rocker poses a safety concern for the individual when transferring out of the chair, avoid having the individual use the chair unless supervised.



HOME SETUP

- ❑ **Make the room easy to navigate.** Avoid clutter, as it may be confusing or create a tripping hazard.
- ❑ **Have a sturdy handrail on stairways.**
- ❑ **Reflections and mirrors may be distressing.** Some individuals do not recognize their own reflections. You may need to cover mirrors with thick fabric. Close blinds or curtains at night to avoid additional reflections from windows.
- ❑ **Store away items** and equipment infrequently used.
- ❑ **Lock away potential hazards** that may put the individual at risk as a result of their memory deficit. For example, if the individual is no longer able to manage medication safely, put pills in a secure spot.
- ❑ **Make sure electrical cords are out of the way** or tacked to baseboards.
- ❑ **Consider using timers,** lockable socket covers, and safety outlets to create a safer environment but still allow the use of appliances.
- ❑ **Reset the water heater** to 120°F to prevent burns.
- ❑ **Place smoke and carbon monoxide detectors in or near the kitchen** and all bedrooms.
- ❑ **Use safety knobs** and an automatic shut-off switch on the stove, if necessary.
- ❑ **Ensure the living space is a comfortable temperature** for the individual and has good air quality.



NOISE

- ❑ **Music is an effective tool** to reduce undesirable behaviors. Play the music they find soothing during activities they do not prefer.
- ❑ **Think about noises that your loved one finds disturbing.** If there is a noise that is confusing or irritating to them, have them watch you engage with whatever is making the noise or explain what you are doing.
- ❑ **Avoid multiple sources of sound at once when possible.** An example would be muting the television if you or visitors are trying to have a conversation with the person with dementia.
- ❑ **Limit the amount of people who visit at one time** to avoid the person becoming overstimulated.



Meaningful and Familiar



LIKES / DISLIKES

Consider what the individual likes and dislikes to personalize the environment. Use photos and a few personal items to make their surroundings more meaningful. Play music they enjoy.



SIGNS / PHOTOGRAPHS

Use photographs within their living space to help trigger memories. Use signs with graphics to help the individual navigate their environment.



EVERYDAY OBJECTS

Use everyday objects to trigger memories/ conversation. This could include things like old hats, favorite clothing, and objects that remind them of things they used to enjoy.



MEMORY BOOK

Create a memory book and keep it out in the open for them to look at. Label the book with their name to make sure they can easily make the connection that the book is about them.



VIDEOS

Personal video recordings from the past can facilitate reminiscence.



VISITORS

Keep visitors coming. Family and friends can help stimulate laughs and memories.



Sensory Enhanced Environment

Setting up the environment for an individual with dementia is important to make sure they get an appropriate amount of stimulation to increase engagement and create a pleasant experience for them.

Benefits of a sensory enhanced environment:

- Provides stimulation in a controlled way
- Sets the environment to be more stimulating or calming
- Leads to positive changes in mood and behavior, especially for late-stage dementia
- Facilitates interactions with others
- Reduces caregiver stress



Tactile stimulation (touch)

Use items that stimulate the sense of touch. This can help initiate conversations between the loved one and the caregiver or other friends and family.

Tactile stimulation may involve:

- Blankets, pillows, curtains, covers, cushions, and other fabric with different textures
- Fabric and textile objects made with various materials (e.g. zippers, ribbons, buttons, pockets, graphics)
- Blankets, pillows, or armchair covers with pockets (for “hiding” items)
- Everyday objects with different textures, such as hairbrushes, toothbrushes, tissue paper, carpet, faux plants, shaving cream, soap, buttons, and tiles
- Media with different texture, shape, and consistency that can easily be made into a sensory bin or station. This could include jelly, water beads, beans, rice, and flour.
- Items such as pine cones, plants, small trees, twigs, shells, feathers, pebbles, and stones, to bring the outdoors inside.
- Items with different temperatures



Smell

- ❑ Essential oil diffusers are an effective way to create certain smells throughout the home and are helpful for promoting relaxation.
 - Lavender for calming and relaxation
 - Lemon and mint for refreshing, uplifting, and stimulation
 - Bergamot for balancing and calming
- ❑ Cook foods that the individual enjoys while they are present so they can enjoy the smells. Let them taste the food being made to incorporate the taste element of the multisensory experience.
- ❑ Using lotion or massage oils during relaxation time can help to stimulate smell.
- ❑ Place fragrant items around the house (e.g. flowers, soaps, lotions).
- ❑ Do not include dramatic smells. Focus on familiar smells like chocolate, herbs, fruit, or wood.



Taste

- ❑ Food can trigger memories as well as emotions. Taste preferences are highly individual. Think about the foods your loved one prefers now, used to enjoy, or used to like cooking.
- ❑ Foods that have soft, creamy textures are known to be comforting. These foods could include chocolate, ice cream, yogurt, pudding, and mashed potatoes.
- ❑ Incorporate foods with different textures, such as crunchy, soft, melting, etc.
- ❑ Drinks with different flavors can encourage the individual to consume more fluids throughout the day and help them stay hydrated.

**Consider the care needs of individuals with specific dietary restrictions or swallowing difficulties. A healthcare professional might need to be consulted for further advice.*



Sound

- ❑ Try using stimulating, upbeat music in the morning and calming, soothing music in the afternoon.
 - Relaxing sounds include natural sounds, such as wind chimes, rainfall, ocean waves, and wind blowing through the trees.
 - Stimulating music includes upbeat music, classical music, music from a specific era, or the individual's personal preference.
- ❑ Play music at a moderate level. Music and noise that is too loud can be overstimulating and may overpower thoughts. Regulating noise to a moderate level (i.e., not too quiet and not too loud) has been shown to improve engagement in daily activities.
- ❑ Playing musical instruments can encourage participation and exploration of new sounds. Choose simple instruments like a xylophone, kazoo, rainmaker, shakers, bells, tambourine, and drums.
- ❑ Use things around the house as instruments or noise makers, like plastic bottles filled with beads or rice, boxes, cushions, storage containers, and empty trash cans.
- ❑ Common objects that have various textures, shapes, and weight can also create noise that is interesting to the individual. Examples of this would be:
 - Shaking a water bottle with ice inside
 - Rubbing sandpaper
 - Crinkling aluminum foil or tissue paper



Vision

- ❑ Play films showing natural themes and simple life scenes, such as playing children or people dancing.
 - Movies or shows that contain minimal narration are great because they do not require undivided attention.
 - Playing old films with simpler plots can prompt memories.
- ❑ Play a nature show or video in the background. Scenes from nature can include landscapes, water and sea life, forests, flowers, and animals.
- ❑ Objects, like crystals and kaleidoscopes, can also be used to provide additional visual stimulation when they illuminate in the light.
- ❑ Include materials within the home that catch the light in different ways.
 - Examples of shiny materials to include are satin and velvet.
 - Lace can be used to combine with other colors and used for layering.
- ❑ Use nature-based items to decorate the home. This could include pine cones, plants, small trees, twigs, and shells.
- ❑ Salt lamps can be used, as they have a natural shape and texture.
- ❑ Consider using technology, such as bubble columns, lava lamps, or combining translucent fabric with LED lights.
 - Use technology in moderation to avoid overstimulating the individual with too many foreign objects. It is best to use natural and familiar materials to create a more stimulating environment.
 - If using stimulating lights or technology to decorate, choose objects that change color slowly to avoid overstimulation.



Movement

Moving our bodies can either be stimulating or relaxing. Spinning or spontaneous movements tend to be stimulating, whereas linear movements, like rocking, are more relaxing.

Moving the head, arms, or legs can be encouraged through the positioning of equipment items so that the individual must reach out to access or use items or engage in activities. Interactive equipment can play an important role in stimulating arm movement.

A few activities and items that encourage movement include:

- ❑ Playing instruments
- ❑ Using interactive fabric and textile objects made with various materials (e.g. zippers, ribbons, buttons, pockets, graphics or pockets)
- ❑ Rocking in a rocking chair
- ❑ Interacting with different materials to explore feeling, sight, and sound



Stimulating and Relaxing

STIMULATING



SIGHT: lights of high intensity, color red, reminiscent images and objects



SMELL: citrus smells, peppermint



SOUND: loud music, quick tempo, sing-along tunes, abstract sounds



TOUCH: textured objects, unexpected contact with an object or person



TASTE: citrus fruits, peppermint, sour/tart food or sweets



MOVEMENT: spontaneous movements, rotation or spinning

RELAXING



SIGHT: soft lighting, slow changing lighting



SMELL: lavender, smell of baking cakes or bread



SOUND: quiet music, slow tempo, continuous background music, natural sounds (e.g. seashore, bird song)



TOUCH: deep pressure, such as hand massage, and stroking soft fabrics, such as velvet, silk, or fleece



TASTE: milky foods such as chocolate, pudding, or yogurt



MOVEMENT: linear movement such as gentle rocking



Encourage Engagement Throughout the Day

It is key to encourage engagement throughout the day. Multisensory experiences support a person's ability to comprehend their surroundings.

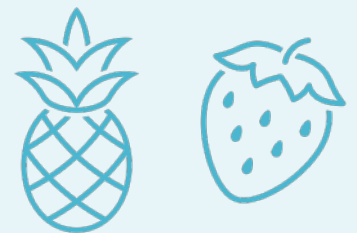
As noted previously, a good way to encourage multisensory experiences is to use equipment, items, and material that are multisensory in design. For example, scented cushions with pockets made from various materials provide an opportunity to stimulate vision, touch, sound, and smell and encourage movement. Many types of food are also multisensory because they can incorporate taste, smell, texture, and color.

Allow the individual to engage in sensory stimuli of their choice. Follow their lead and pay attention to their comfort level to find a balance between sensory-simulating and sensory-calming activities. It is important to remember that everyone's nervous system and personal preferences are different. What can be stimulating to one person may be relaxing to another. Focus on the person's interests and needs when setting up the environment to get the best outcomes.

Multisensory example:

Many types of food are multisensory because they can incorporate:

- Taste
- Smell
- Texture
- Color



For additional information about sensory stimulation, please see the resource, *Sensory Stimulation for Individuals with Dementia*.

For more information regarding activity ideas for individuals at each stage of dementia, please see the resource, *Fun Activities for Seniors with Dementia*.

Sources

Bresley, J., Gunesch, A., & Foidel, S. (2022, February 1). New dementia care tool benefits caregivers. AOTA. Retrieved October 14, 2022, from <https://www.aota.org/publications/ot-practice/ot-practice-issues/2022/dementia-care>

Cheng, C., Baker, G. & Dursun, S. (2019) Use of multisensory stimulation interventions in the treatment of major neurocognitive disorders, *Psychiatry and Clinical Psychopharmacology*, 29:4, 916-921, DOI: 10.1080/24750573.2019.1699738

Jakob, Anke and Collier, Lesley (2014) How to make a sensory room for people living with dementia: a guide book. (Manual) Kingston upon Thames, U.K. : Kingston University. 70 p.

Jakob, A. & Collier, L. (2017). Sensory enrichment for people living with dementia: Increasing the benefits of multisensory environments in dementia care through design. *Design for Health*, 1:1, 115-133, <https://doi.org/10.1080/24735132.2017.1296274>

Jensen, L., & Padilla, R. (2017, July 24). Effectiveness of Environment-Based Interventions That Address Behavior, Perception, and Falls in People with Alzheimer's Disease and Related Major Neurocognitive Disorders: A Systematic Review. *The American Journal of Occupational Therapy*, 71(5), 7105180030p1-7105180030p10. <https://doi.org/10.5014/ajot.2017.027409>

Padilla, R. (2011). Effectiveness of Environment-Based Interventions for People With Alzheimer's Disease and Related Dementias. *The American Journal of Occupational Therapy*, 65(5), 514–522. <https://doi.org/10.5014/ajot.2011.002600>

Piersol, C. V., Jensen, L., Lieberman, D., & Arbesman, M. (2017, December 7). Occupational therapy interventions for people with Alzheimer's disease. *The American Journal of Occupational Therapy*, 72(1), 7201390010p1-7201390010p6. <https://doi.org/10.5014/ajot.2018.721001>

Rhodus, E., Hunter, E. G., Rowles, G., Bardach, S., & Jicha, G. (2021). Using a Sensory-Based Approach to Environmental Assessment for Community-Dwelling Older Adults With Mild Cognitive Impairment or Dementia. *The American Journal of Occupational Therapy*, 75(Supplement_2), 7512500042p1-7512500042p1. <https://doi.org/10.5014/ajot.2021.75s2-rp42>

Sánchez A, Millán-Calenti JC, Lorenzo-López L, Maseda A. Multisensory Stimulation for People With Dementia: A Review of the Literature. *American Journal of Alzheimer's Disease & Other Dementias*®. 2013;28(1):7-14. doi:10.1177/1533317512466693

Struckmeyer, L. R., & Pickens, N. D. (2015, November 30). Home modifications for people with Alzheimer's disease: A scoping review. *The American Journal of Occupational Therapy*, 70(1), 7001270020p1-7001270020p9. <https://doi.org/10.5014/ajot.2015.016089>