



"Psychology Works" Fact Sheet: Environmental Adaptations to Dementia

What are the cognitive and behavioural effects of dementia?

Psychological research helps us understand how dementia affects how people think and behave. Research also helps us identify what changes we can make to the environment, or environmental adaptations, to meet the needs of the person with dementia. Persons with dementia experience change and loss in several areas including:

- sensory sensitivity (hearing, seeing, smelling, touch);
- visuospatial abilities (how we see and manipulate objects);
- memory;
- other cognitive functions (concentration, attention, judgment, decision-making, managing and organizing ideas and activities); and
- behaviour.

How can we help people and caregivers cope with dementia?

Adapting a home for a person with dementia requires changes to the physical space as well as changes to activities and the ways in which we interact with the person. To create an environment that is as safe and pleasant as possible, we need to take into account any behavioural problems the person might experience as well as his or her likes, dislikes and habits.

1. Sensory sensitivity and visuospatial abilities

In addition to the changes in vision or hearing that come with aging, people with dementia often have more difficulty perceiving depth, discriminating among colours, or seeing contrast. Some changes to the home environment may help the person manage these difficulties. They include:

- eliminating confusing clutter or unneeded furniture that hinder easy movement;
- installing railings on stairs to reduce falls;
- increasing lighting in active areas of the home, particularly stairways;
- reducing glare (i.e., non-glare flooring, adjustable window blinds);
- colour-coding rooms; and
- in the event that a door must remain locked to prevent the person from exiting unsafely, it may help to hang a curtain over the locked door that is the same colour as the surrounding walls. In this way, the door is less noticeable so the risk of exit can be lessened.

2. Memory and other cognitive functions



Memory and cognitive functions enable us to find our way in the environment, know the time, date and where we are, and carry on conversations, etc.

For the person with dementia, losses in these functions can lead to confusion, agitation and a loss of independence and control over the environment.

There are strategies and cues we can use to help the person with dementia better accomplish some of these activities, maintain some independence and control over the environment and reduce the need for him or her to repetitively ask for missing information. These include:

- the use of labels or pictures on cupboards to show content (e.g., coffee cup);
- pasting familiar signs or images on doors to identify room function (e.g., toilet sign, picture of a bed);
- creating a "memory box" that contains small personal items that can trigger meaningful conversation (e.g., pictures of family members, pets or possessions);
- setting and maintaining the same daily schedule to provide a sense of control over the environment; posting the schedule on a picture board may also reduce often repeated questions;
- prominently displaying clocks and calendars;
- posting a list of favourite television programs with their times and channels near the TV to increase autonomy and decrease repetitive questions;
- setting-up computer function keys, with meaningful stick-on labels, to facilitate easy Internet and e-mail connections; and
- using velcro fasteners on clothing instead of buttons.

3. Behaviour

Behavioural problems are a major cause of stress and safety concern for persons with dementia and their caregivers. They are also the number one reason why persons with dementia are cared for in institutions.

Behavioural problems include agitation, aggression, repetitive questioning, and wandering unsafely. Feelings of frustration, confusion, insecurity, boredom, and feeling overwhelmed can underlie behavioural problems.

There are a number of environmental adaptations that can successfully reduce or eliminate some of these behaviours.

a) Verbally Agitated and Aggressive Behaviour.

Angry and hostile outbursts, verbal harassment, screaming, cursing, or using obscene and/or profane language are the most common kinds of behavioural problems in persons with dementia.

Such behaviour can result from frustration due to difficulty communicating or understanding what is being said, feeling overwhelmed by too much information or too much noise (particularly at sundown),



trying to do a task that is too difficult, uncertainty or fear that comes from the lack of control over the environment, or even boredom, fatigue or hunger.

Environmental adaptations that can help include:

- using picture boards that encourage pointing at pictures to express needs;
- using computers as a two-way communication aid;
- simplifying instructions;
- reducing noise or other stimulation;
- designating a room as a quiet place for retreat;
- playing soft music;
- following a routine to decrease uncertainty; and
- providing cues to help with transitions (e.g., smell of cooking helps prepare for meal time, bringing out a lap blanket can signal rest or quiet time).

b) Physically Agitated and Aggressive Behaviour.

Although far less common, these behaviours are highly stressful for the caregiver. They include assault or violent behaviour, throwing objects, hitting, kicking, biting, hair pulling, pushing, scratching, tearing things, damaging property and/or making threatening gestures.

Physical aggression may result from the same kinds of difficulties and feelings that underlie verbal aggression. They include over-stimulation, feeling overwhelmed if a task is too difficult, or not recognizing someone or something the person is being asked to recognize.

The environmental adaptations listed under verbally aggressive behaviour may be of help here as well, particularly the use of a quiet room as well as simplifying tasks and instructions.

c) Verbally Agitated and Non-Aggressive Behaviour.

These include such behaviours as repeating sentences or questions, making strange noises, muttering, complaining or being negative, and frequent requests for attention – all of which can be irritating and stressful for the caregiver. These behaviours often reflect a need for reassurance.

- Provide reassurance – particularly if the person can no longer recognize you;
- play soft music in the background;
- introduce a familiar physical object or activity;
- post a daily schedule, and point to it when moving to the next item on the agenda;
- adhere to the schedule;
- use timers to remind the person of plans or activities; and
- try some of the adaptations suggested above under the section titled Memory and other cognitive functions.



d) Physically Agitated and Non-Aggressive Behaviour.

These behaviours are less frequent in persons with dementia and include wandering, pacing aimlessly, elopement, inappropriately following people, hyperactivity, robing or disrobing, repetitive mannerisms or actions, and restlessness. They can result from boredom, under-stimulation, or a need to feel useful.

- Provide new or more activities and things to do;
- increase the variety of activities provided to include the different senses (e.g., particularly things that can be touched);
- provide opportunities for more involvement in day-to-day activities (e.g., safe aspects of meal preparation, clean-up); and
- provide more social opportunities.

Short videos on this topic, demonstrating solutions to problems such as repetitive behaviours or difficult behaviours, can be viewed at: <http://www.theonlinequilt.com>.

4. Personal preferences and habits.

In order to enhance quality of life and reduce problem behaviours that can occur in dementia, it is important to find the right balance of environmental stimulation and support.

For example, people who are under-stimulated may feel bored and restless. On the other hand, people who are over-stimulated may feel overwhelmed and can act out.

The environment should be carefully adapted to the changes and losses faced by the person with dementia while preserving the memories, experiences, interests and habits unique to that person.

Where do I go from more information?

The Canadian Psychological Association has other fact sheets that deal with dementia namely Cognitive Disorders & Dementia and Dementia in Seniors.

For more information visit the Alzheimer Society of Canada at <http://www.alzheimer.ca>.

You can consult with a registered psychologist to find out if psychological interventions might be of help to you. Provincial, territorial and some municipal associations of psychology often maintain referral services. For the names and coordinates of provincial and territorial associations of psychology, go to <http://www.cpa.ca/public/whatisapsychologist/PTassociations/>.

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Your opinion matters! Please contact us with any questions or comments about any of the *Psychology Works* Fact Sheets: factsheets@cpa.ca

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