

Memory Loss: Challenges and Strategies

Understanding memory loss and strategies to use in your daily life

One of the main symptoms of dementia is memory loss. We all forget things from time to time, but the loss of memory with dementia is very different. It is persistent and progressive, not just occasional. It may affect the ability to continue to work, or carry out familiar tasks. It may mean having difficulty finding the way home.

Changes in the brain

In Alzheimer's disease and other dementias, nerve cells or neurons in the brain are destroyed and the connections, or neural pathways, between the nerve cells are reduced. When these brain cells die and neural pathways are cut off, the person will have difficulty interpreting new information as well as retrieving memories that are stored.

How memory works

Our brain is made up of at least 100 billion neurons. As we grow and develop, these neurons become 'wired' to each other, and communicate through millions of connections. It is through the neurons and these connections that we interpret our environment, remember things, and control our actions. Memory is how we store and recall things we've sensed, learned or experienced. There are two types of memory: short term and long term. Our memory is the brain's filing system and contains everything we have learned.

There are three main processes involved in forming memories:

- **Interpreting new information** through our sight, hearing smelling, tasting and touch sensors. Interpretation of this information is located in different parts of the brain. For example, when we bite into a red apple, the colour red, the sound of biting into an apple, the sweet taste, and the

general good feeling of eating the apple are all filed in different places of the brain. The new information gets stored in our short-term memory for a few seconds.

- **Storage** of information then moves to different parts of the brain for long-term memory. There is no single file in your brain for long-term memories. Instead, different parts of the information are stored in different areas of the brain. So for a complete memory (composed of sights, sounds, etc.) to be retrieved, all the different parts must be brought together.
- **Retrieval** is the action of recalling information whether stored as short-term or long term memory. Recalling a memory is a brain-wide process. As we age, it may take longer to retrieve specific memories but retrieval will happen.

To learn more about how the brain works, please take a look at *"The Brain Tour"* at <http://braintour.alzheimer.ca/>

Dementia and memory loss

In the earlier stages of dementia, as nerve cells die, memory loss and confusion may be mild. The person with dementia may be aware of, and frustrated by, the changes taking place, such as difficulty recalling recent events, making decisions or processing what was said by others.

In the later stages, with progressive nerve cell damage and reduction in neural pathways (the connections between neurons), memory loss becomes far more severe. A person may not recognize family members, may forget relationships, call family members by other names, or become confused about the location of home or the passage of time. These changes are some of the most painful for caregivers.

Persons with dementia differ in the patterns of memory loss they experience, and the speed with which their abilities deteriorate. It will depend to some degree as to which parts of the brain are affected by the disease. The person's abilities may change from day to day, or even within the same day. What is certain though, is that as dementia progresses, the person's abilities will deteriorate over time.

Stages of Alzheimer's disease

The progression of Alzheimer's disease is commonly classified into early, middle, late and end stage. Not all of the symptoms listed below for early, middle and late stages will be present in every person, and they might occur at different stages for some people.

Early Stage:

- Symptoms include forgetfulness, communication difficulties, and changes in mood and behaviour. They may become more forgetful of recent events, become confused or disoriented to time and place, become lost if away from familiar surroundings, be more likely to repeat themselves or lose the thread of their conversation, or be slower to grasp complex ideas and take longer with routine jobs.
- What to try: Reminders will help, such as written notes on the fridge to remind the person to eat, labelling cupboards, using "To Do" lists, grocery lists, appointment books or day-timers (written or electronic). Encourage brain function activities such as reading, crosswords, puzzles, and so on. Encourage physical activity as exercise helps memory. Socializing with friends and family and reminiscing also helps with memory.

Middle Stage:

- Symptoms include inability to remember current or recent events such as forgetting they just had a meal or where they live, confused recognition of

friends and family, difficulty remembering how to do daily tasks such as making coffee, failure to recognize everyday objects, difficulty starting tasks such as getting dressed, losing ability to understand or use speech, or becoming incontinent.

- What to try: If there is difficulty understanding words, try using colour cues or pictures. Use cues as reminders such as leaving a toothbrush on the counter. Try laying clothes out in the order they are to be put on to make it easier for getting dressed. Use regular bathroom reminders. Break tasks down into steps with reminders for each step. Take things slowly, try to be patient, and take breaks. Be encouraging, and try to maintain your sense of humour. Make sure that any reminders or instructions are simple. Use short sentences, with gestures and body language to add meaning.

Late Stage:

- Symptoms include decreased mental ability, inability to recall important events or facts from their early life, failure to recognize everyday objects, losing ability to understand or use speech, confused recognition of family and friends. Eventually, the person will be unable to look after themselves and will require 24 hour care.
- What to try: Try pointing, demonstrating, or guiding an action rather than giving a verbal explanation. For example, hand the person a hair brush and they may be able to brush her own hair if you gently guide their hand. Use non-verbal communication techniques. Be reassuring and encouraging.

In closing

It is important to remember that as the dementia progresses and changes in function and behaviour occur, it is the disease that is causing these changes to happen. Contact your local Alzheimer Society to learn

about dementia so that you will be better prepared.
They will provide you with the support you need.

Further information on this topic

Visit the following websites:

- Memory Changes Fact Sheet: May 2014
<http://www.fightdementia.org.au/understanding-dementia/section-1-about-dementia.aspx>
- Memory Loss and Confusion Fact Sheet:
<http://www.alz.org/care/dementia-memory-loss-problems-confusion.asp>
- www.alzheimer.ca
- <http://www.alzheimer.ca/en/pei>
- <http://thebrain.mcgill.ca/>

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