What is dementia?

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What is dementia?

Having a basic understanding of how the brain works, what causes dementia and how it affects the brain will help you understand your loved one’s behaviour and needs. It will also enable you to be objective and empathise with them. Understanding clearly demonstrates that they are not out to deliberately make life challenging for you, but are struggling to cope with the ever increasingly difficult situation they are experiencing.
Broken connections

The brain controls everything that we do. It is made up of billions of connected nerve cells. Messages are passed from one cell to another via chemicals called neurotransmitters. As Alzheimer’s and other dementias develop, the connections between cells are broken. Cells with broken connections stop functioning and die. Messages do not get passed on. The cells cannot regrow and heal themselves in the same way that the skin does when we cut ourselves. This damage to the brain eventually begins to cause problems with how it functions.

Different parts of the brain

1. Frontal lobe
2. Temporal lobe
3. Parietal lobe
4. Occipital lobe
5. Cerebellum
6. Brain stem

For a good visual brain-tour go to www.alzheimersresearchuk.org/brain-tour
What each part does and how it is affected by dementia

The main part of the brain affected by dementia is called the cerebral hemisphere. It is divided into two connected halves – left and right - and has four main sections: (1) Frontal lobe, (2) Temporal lobe, (3) Parietal lobe and (4) Occipital lobe. Each of these performs different functions. The outer layer of cells looks grey, hence it is often referred to as ‘grey matter’.

1 Frontal lobe. This area controls our behaviour. It is associated with reasoning, planning, movement, emotions, creativity and problem solving. It receives information from other lobes and utilizes this to carry out body movements. Damage in this area can lead to the person you are supporting experiencing changes in behaviour such as becoming aggressive, losing inhibitions or becoming withdrawn. If before they were quiet, they may become loud and noisy or, if relaxed and easy going, they may now be continuously anxious.

2 Temporal lobe. This area is important for interpreting sounds and language. The hippocampus - which is important for turning short term memories into long term memories - is also located in the temporal lobe. Impairment in this area can result in your loved one encountering communication difficulties such as being unable to remember or recognise words or sounds. You may notice them begin to experience difficulty when joining in conversations.

3 Parietal lobe. This area processes tactile and sensory information. It also enables us to do tasks such as spelling, reading and calculating. Once this area is affected the person will start having difficulty working out their finances, handling money or writing letters. They may need help understanding the printed word and paying bills.

4 Occipital lobe. This lobe controls vision, shape, colour and movement. It also produces the dreams we experience when asleep. Damage in this lobe means you loved may begin to have difficulty recognising objects and words or colour.

Below the cerebral hemisphere are two other important areas. These are the:

5 Cerebellum. This area controls balance, movement and posture. As this area has extensive connections to the cerebral hemisphere you may notice the accuracy of movement, posture etc., becoming affected. The person may start dropping items, knocking things over or misjudging steps, etc.

6 Brain stem. This controls body functions such as breathing, blood pressure and heartbeat and is connected to the spinal cord. As dementia progresses you may see impairment begin to affect the person’s digestion, respiration, sleep and circulation. There may be other complications too, such as difficulties with breathing and erratic blood pressure.
What causes dementia?

Dementia is the term used to describe symptoms and problems created by the broken connections which result in brain cells dying. This is initiated by different diseases or conditions. The most common are:

✔ **Alzheimer’s disease.** This is the most common form of dementia (62%)*. It is named after the psychiatrist and pathologist Alois Alzheimer, who first described the disease. It causes protein plaques and tangles to form in brain cells. These stop the cells working properly. Over time the disease spreads to more and more parts of the brain. Little is known about what starts this process.

✔ **Vascular dementia.** The second most common type of dementia (17%)*. It occurs because the blood supply to the brain is interrupted or not as good as it should be. It can be triggered by narrowing of the arteries, a stroke or a series of strokes. Symptoms can vary depending on which parts of the brain are affected by poor blood supply. It usually begins much more abruptly than Alzheimer’s disease and the person’s condition deteriorates in sudden steps rather than gradually.

✔ **Mixed dementia.** As the risk of vascular dementia rises with age it is not surprising that some people will have a mixed diagnosis of Alzheimer’s disease and vascular dementia. (10%)*

✔ **Rare causes of dementia.** Many other rarer diseases can initiate damage to the brain. (5%)* These include Parkinson’s disease, Multiple sclerosis, Creutzfeldt-Jakob disease, Huntington's disease and HIV related dementia.

✔ **Lewy body disease.** (4%)* So named because it was first described by a doctor called Frederic Lewey. In these instances there are microscopic lumps of protein, called Lewy bodies, deposited in the nerve cells. These disrupt normal functioning. Very little is known about what causes this to happen. Cells can also be damaged by plagues and tangles.
People with Lewy body dementia usually display similar symptoms to Parkinson’s disease – shaking, stiffness and reduced mobility. They may also experience hallucinations such as seeing people who are not there and may be prone to falls. Difficulties in thinking and memory are similar to Alzheimer’s disease.

✔ **Frontotemporal dementia.** (2%)* People who develop this type of dementia tend to be younger. It is difficult to spot because it can affect people in the 30 to 50 age range. It mainly affects the frontal lobe resulting in changes in personality such as uninhibited or odd behaviour. There may be problems concentrating or they may develop obsessional rituals. At first, memory may appear normal as it is only affected later in the disease. Symptoms may develop over a long period of time. Scans show that there is thinning of the frontal lobe. Other parts of the brain may look normal. It is thought that about 50% of people inherit this condition genetically. It is not known what causes the non-genetic form.
Conditions which display similar symptoms

There are a number of conditions which can produce memory loss and confusion and appear like dementia. Many of these are treatable and include:

✔ **Depression.** People with depression can often experience memory loss and become confused. In an older person it is very easy to mistake depression for dementia.

✔ **Stress.** This can also result in lack of concentration, forgetfulness and mood swings.

✔ **Mild Cognitive Impairment.** Sometimes referred to as late-life forgetfulness. Your loved one may forget phone numbers, where they left their keys, people’s names but it doesn’t stop them functioning or getting on with every-day life.
✓ **An underactive thyroid gland.** An over or underactive thyroid gland can launch symptoms of confusion and play havoc with thought processes.

✓ **Diabetes.** Low blood-sugar levels can initiate confusion and disorientation similar to that seen in dementia.

✓ **Vitamin B12 deficiency.** Being unable to absorb B vitamin from food can result in damage to nerves in arms, legs and the brain. Injections are available to sort out this deficiency.

✓ **Some infections.** This includes infections of the urinary tract or chest, meningitis and encephalitis. These can produce confusion and disorientation.
Important to consult a doctor

It can easily be seen from the above what a complicated picture all this presents and how important it is to consult a doctor when your loved one experiences these symptoms. Keep in mind that the majority - about 2/3 of the population over 65 years of age - do not develop dementia.

Living with dementia

If the person you are supporting is diagnosed with dementia it does not mean that they should suddenly make massive changes to their lives. Most people are able to remain at home and continue to live an independent life with support. However, while they are able, encourage them to think about and make known their wishes for their future and put their affairs in order. It is also helpful to adapt a positive attitude, persuading the person to do things they have always wanted to do. In addition, you should explore what support you can get as a carer from family and friends, as well as from medical professionals, your local authority and other independent services.
So, as you can see, different types of dementia will bring different problems and different experiences of the condition. One type may mean the person experiences hallucinations, another may mean mobility difficulties will develop. For all, as time progresses, there will be loss of memory and the ability to make sense of the world. This means the amount of support required will increase as the dementia progresses.

Living with dementia is not easy. Besides the practicalities there is the emotional impact on the person and yourself. However, it is usually possible to help people maintain independence for a surprisingly long period of time.

*Source: Alzheimer’s Society 2014

More help

If you need support and help with caring for a loved one living with dementia, Carewatch is more than happy to help you whenever you need it.

We can provide you with a home care assessment in advance of you needing our support service so that we can understand your loved one’s needs as well as your needs as a carer. You can then call upon Carewatch whenever you need us, you don’t have to use our service all of the time for us to help, it might be that you are not feeling too well, or just need a break from your caring duties. It’s important that you look after yourself too.
Organisations and sources of useful information

The following organisations provide a range of information, advice and support

**Alzheimer’s Society.**
Provides information and advice both for people with dementia and their carers.
- info@alzheimers.org.uk
- www.alzheimers.org.uk
- 020 7423 3500
- Helpline: 0845 300 0336

**AT Dementia**
Provides information on Assistive Technology that can help people with dementia live more independently.
- info@trentdsdc.org.uk
- www.atdementia.org.uk
- 01162575017

**Carers UK**
Provides information and advice to carers about their rights and how to access support.
- info@ukcarers.org
- www.carersuk.org
- 0808 808 7777

**Carers Direct** (Part of NHS Choices)
Provides free confidential information and carers. Calls are free from UK landlines.
- carersDirect@nhschoices.nhs.uk
- www.nhs.uk/CarersDirect
- 0808 802 0202

**Dementia UK**
Provides training for those who work with people with dementia as well as employing Admiral Nurses who specialise in dementia care and provide both practical and emotional support.
- info@dementiauk.org
- www.fordementia.org.uk
- 020 7697 4160
- Helpline: 0845 257 9406
  or e-mail direct@dementiauk.org

**Alzheimer Scotland**
22 Drumsheugh gardens
Edinburgh EH3 7RN
- 0131 243 1453
- info@alzscot.org

**Princess Royal Trust for Carers**
This one of the largest providers of carer support services. They provide information, advice and support.
- info@carers.org
- www.carers.org
- 0844 800 4361

**Royal College of Psychiatrists**
This website contains some excellent information on Alzheimer’s and treatments
- rcpsych@rcpsych.ac.uk
- www.rcpsych.ac.uk
- 020 72352351

**Solicitors for the Elderly**
This is an independent, national organisation of lawyers such as solicitors, barristers, and legal executives who provide specialist legal advice for older and vulnerable people, their families and carers.
To locate a solicitor near you:
- admin@solicitorsfortheelderly.com
- www.solicitorsfortheelderly.com
- 0844 567 6173

**Benefits Enquiry Line**
Provides advice and information on the benefits you can claim if you are disabled or a carer.
- www.gov.uk/benefit-enquiry-line
- 0800 882 200

**UK Homecare Association Ltd**
This is the national association for organisations who provide social care to people in their homes.
- enquiries@ukhca.co.uk
- www.ukhca.co.uk
- 020 8661 8188

**Memory & Alzheimer’s Cafés UK Directory**
- www.memorycafes.org.uk

**Dementia Friends**
- www.dementiafriends.org.uk