ALZHEIMER'S DISEASE

DEFINITION

Alzheimer's disease is one of the diseases which present a picture called "dementia" which includes confusion, memory loss and possible personality change. It is a progressive, irreversible disease which attacks brain cells and kills them. It accounts for 68% of all dementia cases.

As brain cells die, the substance of the brain shrinks or "atrophies". Abnormal material called "tangles" builds up in the centre of the brain cells and plaques outside the brain cells, disrupting messages within the brain and preventing the memory, for example, from recalling information. Memory of recent events is the first to be affected, but as the disease spreads, long−term memory is also lost. The disease also affects many of the brain's other functions and consequently, many other aspects of behaviour are disturbed.

The average time of life expectancy among those who have got the illness is between five and ten years, despite nowadays many patients survive fifteen years or more due to the improvements in the attention and medical treatment. The cure of Alzheimer has not been discovered yet, but there is a paliative therapy.

Things known about the causes

At this time, we do not yet know what causes Alzheimer Disease or how to stop its progression. Researchers have discovered that Alzheimer Disease:

− is not a part of normal aging

− affects both men and women

− is more common in people as they age−most people with the disease are over 65

− is not caused by hardening of the arteries

− .is not caused by stress

− is not contagious −− you can't catch it from someone else

KNOWN RISK FACTORS

− Increasing age;

− Being a first degree relative (defined as child, brother, sister...) of someone who has been diagnosed with Alzheimer's;

− being a person with Down Syndrome or a family history of Down Syndrome

− head injury.

CURE FROM THE DISEASE

− at present there is no proven medical treatment which will cure or slow down the disease;

− drug therapies to ease the symptoms or slow progression are under active study;

− although there is no cure, there have been many advances in support services for those with Alzheimer's disease and their carers.

PROGRESSION OF ALZHEIMER'S DISEASE

People who have Alzheimer's disease differ in the pattern of problems they have and the speed with which they become worse. The person's abilities may fluctuate to some extent from day to day, or even within the same day. What is certain is that the person with Alzheimer's or another progressive form of dementia will get generally worse. Sometimes a massive decline can occur rapidly over a few months; in other cases it may happen over a number of years.

PHASES OF THE DISEASE

Following are some of the features seen in some people with different levels of Alzheimer's disease and other forms of dementia. Not all of these will be present in every person, not every person will go through every phase; some people will show problems not mentioned here. The most severe problems will not necessarily occur with every person with dementia, as people die of other causes, e.g. heart failure, pneumonia, etc., before they reach the most severe phase of dementia.

Mild dementia − The Forgetful Phase

This phase may last from 2 to 4 years. The person may be:
***Apathetic, less sparkle**

***Less interested in hobbies, activities**

***Unwilling to try new things**

***Unable to adapt to change**

***Less able to make decisions or plans**

***Slower to grasp complex ideas**

***More self−centred, less concerned with others and their feelings**

***More irritable or upset if they fail at something**

***More likely to repeat themselves, or forget their line of thought**

***More forgetful of details of recent events**

Moderate Dementia − The Confusional Phase

This is usually the longest phase and may last from 2 to 10 years. The person may:

*Need assistance and supervision with tasks

*Forget saucepans, kettles; leave stove on

*Be very forgetful for recent events, memory for distant past generally seems better, but some details may be forgotten or confused

*Be neglectful of hygiene or eating; perhaps saying they had a bath
or meal when they have not

*Rapidly becomes lost if out of familiar surroundings

*Feel safer at home and avoid visiting places

*Become very repetitive

*See or hear things that are not there

*Become angry, upset or distressed very rapidly

*Forget names of friends or family,or confuseone family member with another

Severe Dementia

This is the final phase, which only ends in death. It can last for 3 or more years. During this phase, the person is

severely disabled and requires total care. They may:

*Lose ability to understand or use speech.

*Be incontinent

*Eventually immobility is permanent and in the final weeks or months the person is bedfast.

*Be aggressive,especially when feeling threatened or closed in.

*Have difficulty walking,eventually perhaps becoming confined to a wheelchair.

Alzheimer Disease and heredity

Researchers have identified two forms of Alzheimer Disease: Sporadic Alzheimer Disease and Familial Autosomal Dominant Alzheimer Disease (FAD).

Sporadic Alzheimer Disease may or may not be inherited, but FAD is clearly passed on from generation to generation.

In addition, research shows that people with a family history of Alzheimer Disease (for example, an affected parent or sibling) have a greater chance of developing the disease when compared to people with no affected relatives.

However, it can be very difficult to determine the exact chance or risk of a person developing Alzheimer Disease.

Separating the role of genes from other factors, such as toxic agents, viruses and head injuries, is difficult. It may well be that in most families an inherited susceptibility and a particular "trigger" are both required before

an individual develops the disease.

DEMENTIA

Dementia is a name given to a group of symptoms. People with dementia have memory loss and difficulties with speaking and understanding others. They will have problems with thinking, recognising people (even family members) and will forget what simple objects are used for (like a knife or fork). For a long time the person may look healthy on the outside, but on the inside their brain is not working properly.

There are several diseases which cause dementia. We hear more about Alzheimer's disease because it is the most common cause of dementia. Because of this we will refer to Alzheimer's disease more frequently in this brochure.

Dementia is not a mental illness. It is a disease of the brain. Our brain is our control centre and everything we do and say and think is controlled by our brain. When the brain is sick, we have problems with all our actions (remembering, speaking, understanding, learning new skills, walking, etc).

You can die from dementia. Unfortunately there is no cure for Alzheimer's disease and other dementias. Over time, the disease only gets worse. It is the fourth biggest cause of death in older people.

Problems people with dementia can have

− increased forgetfulness;

− not able to learn new information or follow directions;

− repeating the same story over and over and asking the same questions many times;

− difficulty finding the right words or completing a sentence;

− umbling words or phrases (not making sense);

− losing things, hiding them or blaming others for stealing;

− confusion about the time of day, where they are or who others are;

− fear, nervousness, sadness, anger and depression;

− crying a lot or becoming silly;

− forgetting how to do every day tasks such as cook a meal, feed themself, drive a car or take a bath.

ALUMINIUM

Aluminium is one of several factors scientists are investigating in the search for a cause of Alzheimer Disease.

Scientists disagree as to whether or not there is a connection between aluminium and Alzheimer Disease.

We usually think of aluminium as a light silvery metal used to make pots and pans, airplanes or tools, but it also has a non−metallic form. It is this form of aluminium that makes up eight per cent of the earth's surface.

Aluminium has been linked with dementia and Alzheimer Disease in particular by several studies. Like with

many scientific theories, there remain many unanswered questions.

− Some scientists have found more aluminium than normal in the brains of people with Alzheimer Disease. Much debate goes on about the specific techniques used for measurement:

− Are they sensitive enough?

− Because aluminium is so plentiful, are the tissue samples being contaminated by aluminium in the environment?

− Several studies report that people who live in areas with low levels of aluminium in the drinking water have less chance of developing Alzheimer Disease than those who live where levels of aluminium in the drinking water are higher.

- These studies have raised numerous questions:
- − How much water does each individual drink?

− How much aluminium do they ingest from other sources, i.e. food, cosmetics, drugs?

− How do scientists determine if people have Alzheimer Disease?

− How is the aluminium measured in the drinking water?

- − A form of dementia that developed in people on artificial kidney machines was found to be caused by high concentrations of aluminium in the fluid used by the machines. The dementia was eliminated by reducing the aluminium concentration in the fluids. This type of dementia was not Alzheimer Disease.

At present so little is known about the underlying cell changes in Alzheimer Disease that definitive statements about any toxic substance, such as aluminium, cannot be made with any certainty.

Treatment

We don't yet know how to cure Alzheimer Disease. But there are several medicins to try to slow down the process of the illness. Here are the most common examples.

Aricept

! (also known as Donepezil or E2020)

Aricept is one of a group of drugs called "cholinesterase inhibitors" which are used to treat symptoms in individuals

with mild to moderate Alzheimer Disease.

In brains of people with Alzheimer Disease there is a progressive degeneration of nerve cells. Particularly notable is a

degeneration of cells that make acetylcholine, a chemical thought to be important for learning and memory. People

with Alzheimer disease have lower brain levels of acetylcholine.

Cognex

(also known as Tacrine, tetrahydroaminoacridine, THA)

Exelon (also known as ENA 713 or Rivastigmine)

WAYS OF COMMUNICATION

Losing the ability to communicate can be one of the most frustrating and difficult problems for people with Alzheimer's disease or other dementias which affect language. As the disease progresses, the person experiences a gradual lessening of their ability to communicate. They find it more and more difficult to express themselves clearly and take in what is being said, and carers find it an increasing struggle to understand what the person with dementia is feeling or trying to say.

Here are some suggestions to help with communication problems:

− be Flexible

− preserve Self Esteem

− avoid upsetting arguments or allowing your own stress and exasperation to show

− encourage laughter