



# CAUSES, EFFECTS AND REHABILITATION

## STROKE FACT SHEET

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#### **WHAT IS A STROKE?**

A stroke is sometimes called a C.V.A. - a Cerebrovascular Accident, or more recently called a "Brain Attack".

It occurs due to a disruption of the blood supply to a particular area of the brain, causing damage to that area of the brain.(9) Although the damaged area of the brain is relatively small, there may be considerable effects on bodily function.(6)

"Stroke should be recognised as an emergency condition, similar to heart attack or major trauma". (11) It normally requires emergency hospital treatment, and assessment by a specialised stroke unit. Rapid assessment and treatment can prevent another stroke occurring in the short term. In addition, there is mounting evidence that certain therapies (drugs) given in the first few hours can minimise the effects of certain types of stroke.

#### **WHAT ARE THE CAUSES OF STROKE?**

The causes of stroke include:

1. A blood vessel within the brain becomes blocked. This causes damage to the tissue supplied by the blood vessel, due to a lack of oxygen and nutrients which are carried in the blood.
2. An artery bursts and bleeds within the brain, damaging surrounding tissue. Damage is usually caused through the released blood placing pressure on the brain tissue.
3. A blood vessel ruptures in the space surrounding the brain, which often causes spasm in the blood vessels nearby impairing blood supply to a particular area of the brain. (3)

The most common causes of stroke are a hardening of the arteries in the neck or the secondary effect of disease, both of which may result in clots or debris breaking away from blood vessels, and flowing upwards in the blood stream, blocking one of the arteries within the brain. (1)

#### **WHAT FACTORS INCREASE THE RISK OF HAVING A STROKE?**

Factors that have been investigated through research and have been found to increase the risk of having a stroke include:

1. An increase in age
2. High blood pressure
3. Smoking
4. Diabetes
5. Other factors such as a high fat and salt diet, obesity, lack of exercise, stress, and heredity.(3)

## **WARNING SIGNS:**

Some people experience warning symptoms or minor strokes referred to as Transient Ischaemic Attacks (T.I.A.'s). Warning signs can include:

1. Partial or complete blindness in one eye
2. Slurred, hesitant or garbled speech
3. Feelings of numbness or weakness in parts of the body
4. Dizziness
5. Loss of sensation (eg. pins and needles in the limbs)
6. Poor balance. (1)

These warning signs will often occur suddenly and recovery will be quick. To avoid the onset of a major stroke, such warning signs must be reported to a doctor at once. (1)

## **THE EFFECTS OF STROKE**

The functional effects of a stroke will depend on which area of the brain has been injured, and thus the effects of stroke on different individuals can vary dramatically. Some of the effects of stroke include:

- A loss of consciousness
- A loss of movement on one side of the body
- Muscle weakness on one side of the body
- Poor bladder and bowel control.
- Poor balance
- Difficulty coordinating movement
- Loss of sensation (this can include a loss of pain, temperature and touch sensation, decreased awareness of body position, a lack of awareness or neglect of one side of the body)
- Visual problems
- Difficulty interpreting visual information
- Difficulty understanding what others are saying.
- Difficulty finding the words to say.
- Weakness of facial muscles which may decrease the clarity of speech.
- Muscle weakness of the mouth and throat causing problems with swallowing, coughing and chewing.
- Difficulty thinking clearly, including loss of planning or organisational ability
- Loss of memory
- Depression, mood swings
- Difficulty controlling emotions
- Apparent change of personality
- Feelings of loss of control over life (2,4,7)

## **REHABILITATION AND RECOVERY FROM A STROKE.**

It is important to note that many people who have a stroke make an excellent recovery given adequate care and information. As mentioned previously, symptoms will depend on which area of the brain has been injured. Even if a person has had a severe stroke it does not mean that they will be unable to lead a comfortable and satisfying life. (2,4)

## **REHABILITATION OR RECOVERY FOLLOWING A STROKE.**

Numerous health professionals may be involved in the assessment, treatment and rehabilitation of a person who has had a stroke. In most rehabilitation settings a team approach is utilised, which may consist of the following team members:

**NEUROLOGIST:** - the Neurologist makes a detailed assessment of the type of stroke, and makes recommendations for early medical treatment.

**NEUROSURGEONS:** - If a stroke is caused through a rupture of an artery within the brain, surgery may be required to prevent further strokes. A Neurosurgeon is often responsible for performing this surgery. (4,7)

**REHABILITATION SPECIALIST:** The Rehabilitation Specialist is the doctor who usually heads the rehabilitation team. They assess the person's suitability for rehabilitation, set a rehabilitation plan, and review the person's progress in preparation for discharge.

**NEUROPSYCHOLOGIST:** The Neuropsychologist will assess such factors as memory, thinking and personality following stroke. Neuropsychologists are also involved in the treatment of behaviour and memory problems and give advice as to difficulties that may be encountered with daily living. (5)

**NURSES:** Of all the health professionals, nursing staff usually have most of the early contact with the person who has had a stroke. They will provide assistance with tasks such as feeding, bathing and dressing, and will monitor the person's general health status. Once the person has been discharged from hospital, the Royal District Nursing Service may provide assistance with medication, bathing etc. (5)

**PHYSIOTHERAPISTS:** - Physiotherapists assess the effects of stroke on movement. By re-educating normal movement patterns the Physiotherapist can assist the person to regain sitting and standing balance, to walk and to gain strength and range of movement in "floppy" or weak limbs etc.

The Physiotherapist may also be involved in chest care (ie. teaching coughing and deep breathing exercises to prevent chest infections.) (5,8)

**OCCUPATIONAL THERAPISTS:** Occupational therapists are concerned with the person's ability to independently carry out daily living activities following stroke. They will design a training and activity programme that will assist the person to independently carry out tasks in the areas of self care, work and leisure. Occupational Therapists will also visit the person's home to see if any modifications need to be made to make every-day tasks easier and safer to perform (for example if someone has poor standing balance, the Occupational Therapist may suggest the use of a shower chair or that bathroom hand rails be installed). (5)

**SPEECH PATHOLOGIST:** Speech Pathologists assist the person with problems with speech, understanding, reading, writing, chewing, and swallowing. Therapy may include practice pronouncing words, re-learning the names of objects and the meaning of words. For those with severe communication problems, Speech Pathologists may help to explore alternative communication methods (eg. use of communication board, and use of gesture and mime). (5)

**SOCIAL WORKER:** Social Workers will look at possible family, social and financial difficulties following stroke and give information as to how help may be obtained. They will also discuss the families ability and desire to provide support for the person who has a stroke, and can help the family to find alternative accommodation should the person not recover sufficiently to return home.(5)

*For a list of rehabilitation and therapy services in metropolitan South Australia, refer to the Stroke Support Directory available from Stroke S.A. There are also numerous social and support groups within the community which can be of assistance in the recovery of a person who has had a stroke. For information about these groups refer to the Stroke Support Directory or call Stroke S.A.*

## **REFERENCES:**

1. Australian Brain Foundation. *Facts about stroke: Six simple ways to reduce your risk.* Australia.
2. Australian Brain Foundation. (1992). *Living with Stroke.* Victoria.
3. Australian Brain Foundation *Stroke, background information.* Victoria.
4. Australian Brain Foundation. *Understanding and coping with Stroke.* Victoria.
5. Australian Brain Foundation. *Understanding stroke: a practical guide for stroke patients and their families.* Australia.
6. Australian Heart Foundation. *Stroke Fight Back.* Australia.
7. Neurological Resource Centre. *General Information on Stroke.* South Australia.

8. The Australian Physiotherapy Association. *Physiotherapy and stroke*. Australia.
9. The National Heart Foundation of New Zealand, & and The New Zealand Neurological Foundation (1991). *Striking back: A guide towards recovery from a Stroke*. New Zealand.
10. Willis, P. (1985). *Stroke, who cares?* Australia: Turner publication.
11. Australian Stroke and Neuroscience Institute, Stroke Australia Task Force 1995. *Stroke, National Goals, Targets and Strategies*.

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