

## Stroke

### Stroke: what is it and what is its impact on patients and the community?

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In terms of developing an illness, there are not too many situations where in a matter of seconds to minutes someone can go from being apparently normal to being severely neurologically compromised. However, stroke is once such disorder in which this can occur. Interestingly, it is thought that the name stroke has been derived from the Greek word “apoplexy”, which means to be “struck down”. Not surprisingly, the symptoms of stroke range from being paralysed in one, or more limbs, difficulty in speaking, hearing and breathing, or being confused and disorientated. In the preceding minutes, hours, days and even months in about 30% of cases a stroke victims will succumb to the devastating consequences of the brain damage they have suffered and the resulting neuropathological effects.

Stroke is now considered by many to be the second leading cause of death in the Western world, after heart disease and before cancer. Worldwide, it is estimated that stroke affects  $\approx 15$  million people annually, causing death or disability in about 10 million. In Australia, stroke affects  $\approx 60,000$  individuals every year and is the second most common cause of death, and a leading cause of disability. The cost of stroke to the Australian community is estimated to be over \$2 billion annually. Worse still, the incidence of stroke is increasing as the population ages, a process exacerbated by lifestyle factors, notably obesity. Against this background, any treatment that can minimise ischaemic brain injury is likely to improve patient outcome, and in doing so, reduce both the social and financial burden of stroke and cerebral ischaemia globally.

A stroke occurs when the blood supply to part of the brain is suddenly interrupted or when a blood vessel in the brain bursts. Brain cells die when they no longer receive oxygen and nutrients from the blood, and/or due to the damaging effects of blood into or around the brain. A stroke caused by a blockage in a blood vessel due to a blood clot is called an ischaemic stroke or thrombo-embolic stroke. A stroke caused due to a burst blood vessel in the brain is called a haemorrhagic stroke.

Some interesting facts and figures about stroke:

- Often stroke patients do not realize that they are having a stroke
- Every other second, an adult or a child, a man or a woman, old or young, suffers a stroke
- Every six seconds, someone somewhere will die from a stroke
- Stroke claims the lives of nearly six million people each year
- It is the second leading cause of death for people above the age of 60, and the fifth for people aged 15 to 59
- Stroke is the principal cause of long-term disability irrespective of age, gender, ethnicity or country
- It is responsible for more deaths annually than those attributed to AIDS, tuberculosis and malaria put together
- There have been over 1000 trials to find a drug that can reduce the brain damaging effects of stroke. Besides tPA, which is a drug that lyses blood clots none have proven effective
- “The global burden of stroke has reached epidemic proportions and the situation will not improve until strong actions are taken” – World Stroke Organisation President Bo Norrving