

# SOME FACTS ABOUT BRAIN INJURY

In accidents the commonest site of injury is the head. Each year about 9,000 New Zealanders are admitted to hospital with head injuries which equates to around 170 per week.

Males are the most likely to have a head injury and the most frequent causes are car / motorcycle accidents, sports and home accidents. 50% of those injured are between the ages of 15 – 34 years old and alcohol is involved in a large number of severe head injuries.

## WHAT DOES OUR BRAIN DO?

### *Everything!!!!!!*

- Think
- Reason
- Speak and understand language
- Control basic bodily functions eg breathing, vomiting, heartbeat, continence, hormone release
- Plan
- See, hear, taste, feel
- Store memories
- Control physical and emotional reactions

The most common type of brain injury is the “Closed” head injury which happens when the head sustains a violent impact e.g. hitting the windscreen of the car. The primary injury happens when the brain is violently shaken and shock waves cause damage to the delicate connections between nerve cells, literally tearing them apart. Violent movement also causes the brain to collide with the inside of the skull where there are sharp bony ridges. This causes bruising especially in the temporal and frontal lobes.

There is also the chance of secondary injury if the person stops breathing and the brain become starved of oxygen. This makes the original injury much worse.

# THE BRAIN HAS AREAS DEDICATED TO SPECIFIC FUNCTIONS:

Although the brain has areas in it dedicated to specific functions, it works as a whole because no task can be seen in isolation e.g. in order to respond when someone asks to lift our arm we have to be able to:

- Hear the words
- Understand what they mean
- Know what an arm is
- Know where it is
- Send messages via the spinal cord to the muscles in the arm to get it to move
- Know whether it has moved and how far

