

# » THE BONE DOCTOR

Our bone-doctor **MIKE MULDER** delves deeper into brain injuries with the help of a Capetonian neurosurgeon.

**A**lthough the skull is a made of bone, dealing with injuries to it does not fall in the skill set of orthopaedic surgeons. So for this month's column I am going to enlist the help of Dr Zayne Domingo, a neurosurgeon at Mediclinic Constantiaberg. I have picked his brain on what to do in case of an injury to yours.

Because of the size of your head, your posture on a mountain bike and the terrain we ride, it is common for one's head to hit the ground (or other obstacle) when things go wrong. Fortunately helmet technology has evolved such that very few injuries end in disaster, but I asked Dr Domingo a few questions about what one should do in case you get a bang on your pip.

## WHAT TO DO AFTER A FALL?

If you hit your head hard enough to feel dazed, have disorientation or amnesia for the event, or to lose consciousness, then it is best to get checked out at the nearest emergency unit. Even though you may start to feel okay, you need to be assessed for signs of bleeding on the brain. Signs that this is happening may appear only after injury. If this happens to someone with whom you are riding, do not allow them to get back on the bike and ride on. Once you have sustained a blow to the head you will likely have compromised co-ordination and slowed reaction speeds. This can result in another fall. Brain trauma is additive, and while the first injury may result in a concussion, the second injury can cause devastating bleeding on the brain. So if you have hit your head once, do not ride on.

Problems arise when solo riders fall; you may not have insight, or be able to think clearly to judge how bad the injury was. You may also have amnesia of the event. So if you are in that position – or think you may have been, play it safe, call for help and walk yourself off the mountain. You will thank yourself later.

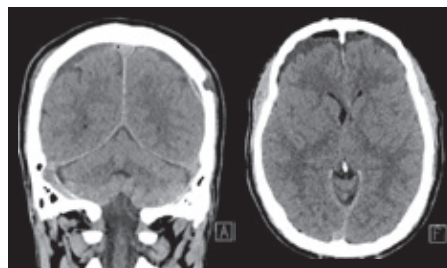
## WHAT TO DO WITH AN UNCONSCIOUS RIDER

Encountering an unconscious rider, particularly if it is your partner who has just fallen spectacularly in front of you, can be one of the scariest

moments on (or off) a bike. Most importantly, do not panic: you need to turn them onto their side in the "recovery position". This allows them to continue breathing without their airway becoming blocked. Be aware that head injuries are frequently associated with neck injuries, so keep their head gently in line with the body as you turn them into the correct position. Once you have done this, call for help and stay with the rider to ensure they continue breathing.

# HEAD INJURIES

**"YOU DO NOT HAVE TO HAVE HIT YOUR HEAD TO SUSTAIN A CONCUSSION."**



**ABOVE:** Recovery position for an unconscious rider  
**LEFT:** Brain CT scans showing bleeding following a fall.

## WHAT IS CONCUSSION?

Concussion is form of traumatic brain injury, or bruising to the brain. It follows a bang to the head or from the acceleration/deceleration effect of your brain moving inside your skull. You do not have to have hit your head to sustain a concussion. I commonly encounter it in many patients who have fallen and injured themselves and not necessarily hit their heads.

The symptoms are vague and may include lack of concentration, dizziness,

headaches, difficulty in balancing, blurred vision, sleep disturbances and tiredness. Often there is an emotional component; people are not quite themselves; frustrated, irritable, forgetful or even tearful. Often your spouse or family will notice these changes before you do.

There is no specific treatment and like any other injured area, the brain needs rest. During this time it is best to avoid physical and mental activity. This may involve time off school or work and gradually

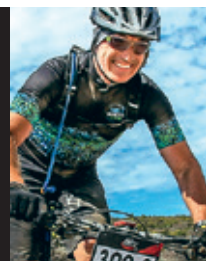
return to them once symptoms subside. Do not go back to work early; you may feel and look fine but you are not thinking clearly and this can have serious consequences in terms of making bad decisions.

If you have had symptoms of concussion it is wise to rest until the symptoms are completely resolved. While you are recovering you can turn your legs over on a stationary bike, but keep the intensity low. A second injury during the recovery period can be very serious.

## WHEN DO I NEED TO SEE A NEUROSURGEON?

If during the aftermath of an injury you experience a deterioration of symptoms; worsening headaches, vomiting, cognitive problems, disturbances to vision, you should seek advice. Remember to take advice from friends and family as they may see the signs before you do. **fs**

**Dr Mike Mulder** is an orthopaedic surgeon specialising in the treatment of shoulder, elbow and hand disorders and injuries. He is based at Constantiaberg Mediclinic, and is a member of The Cape Shoulder and Elbow Unit. He has a wealth of experience in fixing injured cyclists and is an avid mountain biker. He rides as often as his wife and family let him.



## DO HELMETS PREVENT INJURY? THEY MOST DEFINITELY DO!

**There is an enormous amount of evidence that they can reduce the degree of injury to the brain. And frankly anyone who chooses to ride without one is flirting with disaster. Remember that most helmets survive a single impact and so check yours regularly (especially after a fall) and replace it if it shows any cracks or damage.**