

The accident

During a training ride on Garden Highway just south of the Sutter County line, as Collin Samaan moved to take the lead, his bike was struck from behind by a car attempting to pass the cyclists.

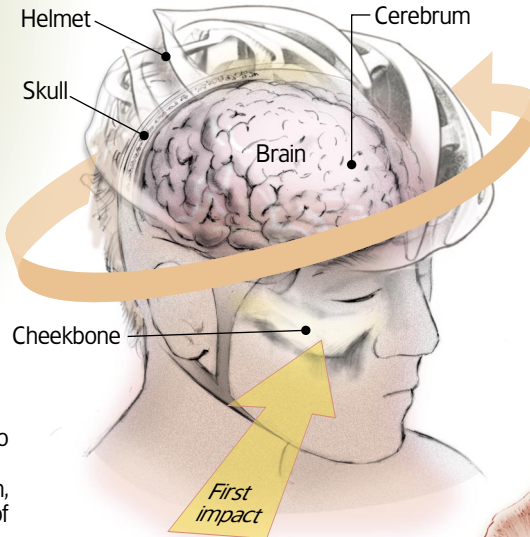


Immediately losing control of his bike, he fell, hit the right side of his face, then tumbled some 30 feet.

Collin sustained broken bones and a punctured lung in the accident, but it was a brain injury that sent him into a days-long coma and months of recovery.

DIAGNOSIS: Moderate to severe diffuse axonal injury causing confusion, memory loss and loss of motor function

Inside a brain injury

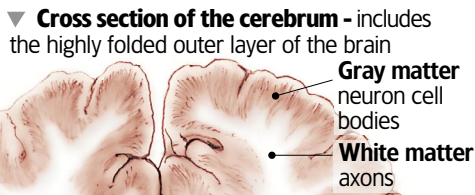


In Collin's case, his friends and family have been startled by his amazingly fast recovery.

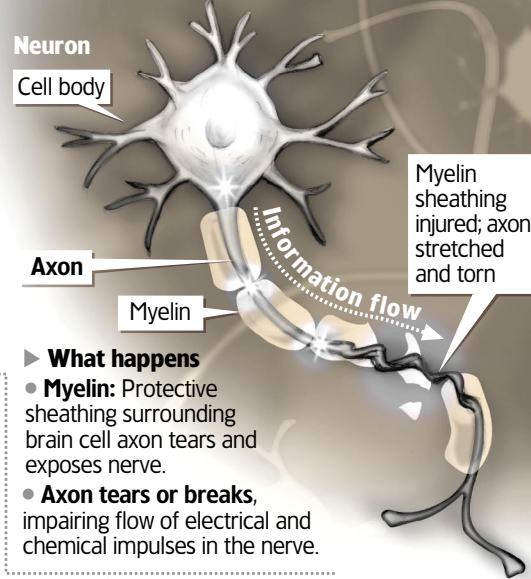
Tiny pathways: The brain contains billions of cells called **neurons** that communicate to each other via electronic impulses passing through thin extensions called **axons**.

Diffuse axonal injury: Rapid and violent shaking and rotation of the head creates shear forces that tear apart brain cells and possibly whole sections of brain.

This injury generally occurs at the juncture between the brain's gray and white matter. The severity of damage and specific neurological problems are related to the degree and location of the injury.



Broken microscopic connections



- **What happens**
- **Myelin:** Protective sheathing surrounding brain cell axon tears and exposes nerve.
 - **Axon tears or breaks,** impairing flow of electrical and chemical impulses in the nerve.