USF Available Technologies

Technology Transfer Office

Ergonomic Safety Steering Wheel

Researchers at the University of South Florida have developed an ergonomic steering wheel which allows the user's hands to be set in a more relaxed position for better comfort. This advanced steering wheel design was developed by a surgeon familiar with injuries resulting from improper hand position on the steering wheel.

A survey of 1000 drivers on highways in Tampa, Florida revealed almost 75% of the drivers place only one hand on the steering wheel while driving. During collisions where the airbag deploys that hand is forced into the face of the driver, causing more injury.

USF inventors have developed an ergonomic steering wheel. This steering wheel promotes a neutral position of the forearm and reduces stress by discouraging fixed wrist positions while holding the wheel. The specific effect of the design is to prevent chronic overuse and stress-type injuries in the arms of occupational drivers, as well as to prevent traumatic injuries that can result when a driver's arm crosses a deploying airbag. Adding this ergonomic steering wheel to any vehicle will not only afford the driver greater comfort, but also make them less prone to chronic as well as airbag related injuries.

US Department of Labor statistics shows that driving related chronic overuse injuries could cost in range from $10,000 to $20,000 for medical bills. By utilizing an ergonomic steering wheel these companies could save thousands of dollars on worker compensation.

ADVANTAGES:

- **Creates comfortable driving position**
- **Reduces injuries from airbag deployment**
- **Beneficial to those whose job involves extensive driving**

Ergonomic Steering Wheel

Demonstration of Hand Placement on Ergonomic Steering Wheel

Tech ID # 05B067 **Patent #: 7,895,918**

University of South Florida | Technology Transfer Office
813.974.0994 (office) | 813.974.8490 (fax)
patents@research.usf.edu
http://www.usf.edu/research-innovation/pl/