

Airbag Cycling Helmets Have Arrived



Source: <http://news.stanford.edu/2016/10/03/stanford-researchers-show-air-bag-bike-helmets-promise/>

Image created by Kurt Hickman

I am always looking for new safety advances. This one is not as crazy as you might think. Keep in mind the industry standards for bicycle helmets have not changed since the 1990's. The primary function of the design was to prevent skull fractures. Since then we've seen the introduction of MIPS (Multi-directional Impact Protection System) technology which is designed to minimize a concussion in a crash. MIPS is only now gaining widespread acceptance even though it's been out for over a decade. I personally wouldn't ride without a MIPS helmet as it increases the odds of not becoming disabled from a crash-related concussion.

Cycling is much more common in Europe than here. Hövding is a Swedish company which has developed an airbag helmet. They have a cool video which shows the device being worn like a kind of collar around the neck. Upon impact, it inflates similarly as an airbag in your car and envelops the entire head. In their videos they demonstrate a

variety of situations in which the bag instantaneously inflates before the head strikes.

I've heard of these before but dismissed the concept before giving it real look. I've changed my mind and think they deserve thoughtful attention. They are clearly more than a novelty and provide substantially more cushioning for the skull than anything available to date. Intuitively, they look like they would provide more concussion protection because of the increased cushioning.

Some Stanford bioengineers published a paper in the *Annals of Biomedical Engineering* earlier this month finding that airbag cycling helmets can significantly reduce brain injuries. They noted that cycling is the leading cause of sports-related concussions and brain injuries in the US. They found that "airbag helmets, with the right initial pressure, can reduce head accelerations five to six times compared to a traditional bicycle helmet."

My initial reaction was not to take seriously something around my neck that required activation to inflate. Then I realized we all rely on airbags in our cars which operate the same way. Many fishermen also wear inflatable life jackets that only activate if they enter the water. The idea isn't far-fetched at all.