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SMART MOUTHGUARD ALERTS WEARERS OF DANGEROUS HEAD INJURIES

 SPORT & FITNESS

In the event of a collision, the FITGuard will indicate the severity of impact through a colored strip on the front of the mouthguard.

Detecting head injuries early is of vital importance when playing sport at any level, and we've already seen a few [efforts looking to combat the issue](#). Now, by making use of a piece of equipment many athletes in contact sports wear already, the **FITguard** is designed to indicate the severity of impact immediately, through a colored strip on the front of the mouthguard.

Undetected concussion can pose a serious threat to players of any contact sport, and although there are tests which can be carried out by medics to detect early signs, this relies on medical staff spotting a collision in the first place. According to FITguard, there are 3.8 million sports-related concussions per year, with 47 percent of athletes not self-reporting concussions symptoms. The FITguard removes this problem altogether. The device contains motion sensors which, upon detecting impact, trigger the illuminated strip on the front of the mouthguard to change color. Blue represents a safe level of impact, while red is an indication that concussion may have occurred and action is required. You can see the mouthguard in action in the video below:

The FITguard is also personalized. While it tracks peak linear and angular acceleration, as well as biometric data, it is able to provide particularly accurate readings by calibrating to a pre-determined threshold based on the wearer's age, weight and gender. The device is also bluetooth-enabled and smartphone compatible, meaning that data generated by a collision can be analyzed after the event, and uploaded to the FIT database to help work on improving the product. Early adopters can become a part of the beta program for USD 50.

How else could new, smart technologies be integrated seamlessly to help improve safety on the playing field?

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