

Computer assesses sport injuries

Computers could soon decide whether Grand Prix drivers should be allowed to continue racing after a crash.

Scientists in the United States have developed software which can assess head injuries.

The software is already used by American football teams in the US and now looks set to be adopted by some Formula One racing teams.

It could be used after minor crashes to determine whether drivers have suffered concussion or other head injuries and should be stopped from racing.

The software has been developed by Dr Mark Lovell and colleagues at the University of Pittsburgh Medical Center.

They have called it ImPACT, which stands for Immediate Post-Concussion Assessment and Cognitive Testing.

Brain responses

It measures a range of brain activities, including memory, reaction time, mental speed and information processing. Many of these functions are adversely affected by concussion.

In the US, football teams using the software assess team players at the beginning of the season. This enables them to establish baseline readings.

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Dr Mark Lovell

The software can then be called into use if players collide or have an accident during a match. If the readings are not in line with the original recordings then the players are taken off.

In the past, players, like many competitive athletes, were inclined to say they were feeling fine and continue to play, potentially putting themselves at risk.

Dr Lovell said this test ensures that no longer happens.

"Before we had tests like ImPACT, a lot of it came down to what the athlete told you," he said.

"You'd ask 'do you have a headache? Do you feel nauseous? Do you feel dizzy?' They generally say 'no' to all of those.

"One thing we know about athletes is they're very, very competitive. So we weren't absolutely positive we were always being given an accurate picture of how they were feeling. With a test like ImPACT, you can't cheat it," he said.

Professional use

The software has recently been introduced by teams in the US Indy Racing League. All drivers will be required to take the test ahead of the Indianapolis 500 race later this month.

Dr Lovell said Grand Prix teams were now considering introducing it.

Dr Henry Bock, director of medical services at the Indy Racing League, said the test was not a substitute for drivers being honest about how they are feeling.

He said: "It's not a perfect test. There's no hard and fast rules. You have to look at the overall situation - the physical condition, how they are feeling, the tests, what a scan shows and more.

"If somebody doesn't feel right in their head, they're smart enough to know they shouldn't be out there for their own safety and the safety of others."

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<http://news.bbc.co.uk/go/pr/fr/-/1/hi/health/2992545.stm>

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