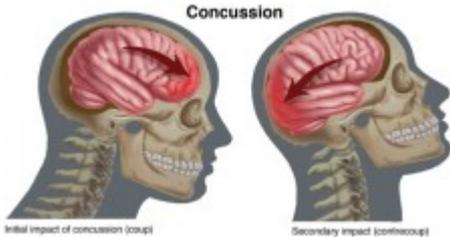


Movie Review: 'Concussion'

By Gil Ross — January 4, 2016



Reviewing the movie *Concussion* requires me to wear three

hats, no easy chore. They are: movie critic, doctor-scientist and NFL fan. Unfortunately, these roles are at times in conflict.

The movie, starring Will Smith as Nigerian-American forensic pathologist Dr. Bennet Omalu, is good, well worth spending a couple of hours in the dark. If you like forensic procedurals, e.g. TV's *CSI*, *NCIS*, etc., or even *House*, you'll find few surprises here. Along with the step-by-step unraveling of the main mystery why did several young men only a decade or so past the prime of their hyper-athletic life dramatically deteriorate mentally and socially, often associated with anger, depression and even suicide some extra melodrama and heroism gets thrown in the mix for spice, as is Hollywood's wont.

(Note: while based on actual events, no claim to specific chronological verisimilitude is made, so don't expect it: This is not a documentary.)

It starts fairly slowly. After a few moments spent re-creating a ceremony honoring the Pittsburgh Steeler's Hall-of-Fame center, Mike Webster (played by David Morse), we next see Webster's corpse in the autopsy room of the University of Pittsburgh Hospital. His rapid decline, without obvious cause, concerns Dr. Omalu, and in a somewhat annoying habit (which is repeated), he first talks to the deceased as though the departed spirit might help him come up with an answer.

Since Webster the indomitable center of the offensive line was adored in the city in the 1970s as a key member of the four-time Super Bowl champs, the Steel Curtain Steelers, his bizarre lifestyle in the years before his death at age 50 attracted some attention. But at his death, most wanted to do the eulogies and burial as quickly as possible.

Not Dr. Omalu. His persistence in the face of antipathy from his colleagues and the financial overseers of his department were prompted by his deep desire to seek the truth about Webster's final illness. Albert Brooks played his immediate boss, whose sympathies for Dr. Omalu's quest became equal to his subordinate's, despite putting both their jobs at risk. In fact, Dr. Omalu had to pay out of his own pocket for the special stains of the brain tissue he needed. But when he got the slides and the Eureka moment occurred, it was clearly all worth it.

The brain tissue showed evidence of abnormal protein deposition, the likely cause of the patient's

deterioration. The doctor called it Chronic Traumatic Encephalopathy (CTE), and attributed it to the repetitive concussive forces applied to the cranium (skull) and thence to the brain, by the collisions inherent in football. In cases like Webster's, these collisions can begin in the peewee leagues at age 7 or 8. A particularly dramatic sequence shows Dr. Omalu showing a villain-turned-hero physician (played by Alec Baldwin) a film replete with the sickening clatters of helmet-on-helmet impacts, informing his colleague that Webster may well have had about 170,000 of these collisions over a lifetime of football.

The good doctor's main obstacle is none other than the National Football League, which transfixes the nation for nearly half of every year, on Sundays. As his boss notes when warning him to be careful, "You're going up against an organization that owns a day of the week."

The league's committee set up to evaluate the dangers of concussions has decided, despite evidence from four other similar well-known cases, that football trauma is not responsible for the brain damage and neither therefore are they. Dr. Omalu persists, and another meeting is set up, where he believes he is going to get his long-sought chance to present his findings to the League. But at the last moment, he is stood up, and the status quo seems to prevail.

Do not despair, however. Slow progress in making both equipment and blocking and tackling techniques safer for tender heads is alluded to, even though the powerful rulers of pro football would rather choke on their words than give Dr. Omalu credit. (The real-life doctor recently took to the pages of the *New York Times* to plead his case for forbidding kids in their teenage years from playing tackle football.)

As a scientist, I say this cuts both ways. Other sports have similar issues, including hockey, boxing (of course), lacrosse, even basketball. Banning young people entirely from any risky contact will not help our obesity problem.

On a related note: as a long-term NFL fan, I think that those players who were brain-damaged before the issue became widely appreciated, i.e. before say 2000, should be compensated for the harm done to them without their knowledge or consent.

There is evidence that the NFL committee knew more about concussive brain damage than it let on publicly, or to the players union. More recently, however, I believe the players are aware of the risks, plus the newer equipment; newer on-field evaluations for concussive effects by professionals trained in this area; and more penalties for head-hunting make them less vulnerable to the types of injuries that caused CTE in Webster, and others named in the movie. They include Andre Waters, Junior Seau, Justin Strzelczyk and especially Dave Duerson, who suffered from CTE and shot himself in the chest so that his brain could be donated and evaluated at the Boston University CTE Center. (And, they are very well compensated for their skills.)

In sum, this is an important and entertaining movie, which takes a few well-worn dramatic tropes instead of trying to take on new cinematic approaches. But is worth seeing for fans of such movies, as well as for scientists and football fans (although it will make the latter uncomfortable).

Early in 2016, ACSH will be publishing our peer-reviewed comprehensive evaluation of youth participation in contact and collision sports regarding concussions.

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