Second Impact Syndrome

Second impact syndrome occurs has a result of rapid swelling of the brain following a second head impact occurring before the symptoms of a previous concussion have resolved. This second impact may be relatively minor, even seemingly insignificant, and in some cases may not even involve a blow to the head. A slap to the back or chest bump may create enough force to snap the head back and create acceleration and deceleration forces on an already comprised brain. It is more common in patients 18 and under.

Even with the second blow the patient may not lose consciousness and only appear shaken. They can even leave the field of play under their own power. However within seconds to minutes their condition with rapidly worsen, often losing consciousness leading to coma, dilated pupils, loss of eye movement and respiratory failure. This is a life threatening and has 50% mortality rate.

Care must be given within approximately 5 minutes by dramatic life-saving measure performed in an emergency care facility. The best management is to prevent it from occurring. Return to any activity decisions must be made with care and honest communication on all sides.

Description above is from Prentice WE: *Essentials of Athletic Injury Mangement*, 8ed, New York, NY: McGraw Hill, 2010.

Preston Plevretes Story http://www.youtube.com/watch?v=f0xJT53SZqQ

Halstead ME, et.al.: Returning to Learning Following a Concussion. *Pediatrics*, 2013; 132(5): 948-957.