Why Woodpeckers Do Not Get Concussions

Concussions are always a hot topic in the fall as the fall is football season. But the fall is also soccer season. Girls’ soccer is the sport with the second most concussions, second only to football. In soccer, we head the ball. I played soccer from age three to age sixteen, my career coming to an end due to repetitive and severe concussions. On my high school team, my coach would have the goalie and our top senior (committed to Penn for soccer) punt balls at us for three hours. We would stand at midfield and have to head the ball forward, and the ball never bouncing before heading it, or else the entire team would be forced to run a lap around the track holding a ball over our heads. Nobody wanted to be THAT person. We would do whatever it took to get our heads on the ball. I would always feel like water shot up my nose and have a pounding headache after practice. When we asked our coach why we had to do so much heading because it could not be good for us, he would respond with a non-coherent answer about woodpeckers and then we’d have to run.

Despite our high school coach also being the AP Biology teacher, he could not differentiate human anatomy versus woodpecker anatomy. Woodpeckers haven hypoid bones in their skulls which wrap around the skull and act as a seatbelt or shock absorber for their brains. Woodpeckers also have more flexible skulls due to plates being able to move. This allows the skull and gelatinous brain to move together. In humans, the brain collides into the skull which causes the injury. The skull of a woodpecker acts as an internal bike helmet for its brain. The woodpecker has very strong neck muscles and a very strong beak. These also help to absorb the impact of pecking.

Coaches have been using the woodpecker argument for far too long. Humans do not have hypoid bones to protect their brains and the human skull has no give. Instead, the brain in a human is like jello sloshing in fluid. Humans also, quite obviously, do not have beaks. When you head a soccer ball, you are supposed to strike the ball with your hairline because that is the thickest part of the skull. The only thing humans can do to be more like woodpeckers would be to do strength exercises for the neck. Having a stronger neck means that there is more shock absorbance. However, there is no way to prevent humans from getting concussions and comparing humans to woodpeckers is irresponsible.

Due to my coach forcing us to do headers and justifying it with the woodpecker argument cost me the rest of high school soccer, division one soccer, and almost my life. I missed my entire junior year of high school and did not get to graduate with the people I grew up with. Instead, I transferred schools and became a cross country athlete. Even to this day I still have headaches. I wake up with one and go to sleep with one. I now have ADHD. Woodpeckers do not get concussions and fMRI evidence shows that they may not even experience headaches.