Parents May Rethink Football For Kids Under Twelve

By Julianna LeMieux — October 20, 2017

Repetitive head injuries are par for the course for football players. And, more head injuries (with or without concussions) are associated with more long-term neurological damage.

What remains murky is how much is too much? Do factors such as the number of years played or the age when the athlete first started playing have long-term effects?

A new study from the Boston University School of Medicine (the leaders in this field of research) entitled "Age of first exposure to American football and long-term neuropsychiatric and cognitive outcomes" and published in Translational Psychiatry, suggest that when children start playing football, or their age of first exposure (AFE), is an important factor in long-term neurological health.

More specifically, the researchers show that people who had an AFE before twelve years old have more neurological issues (both cognitive and behavioral) as adults. With some children starting to play youth football as young as five years old, this finding is a game changer for youth football.

The study looked at a large group (214) of former amateur and professional football players who did not have a history of playing other contact sports. The average age of the participants was 51 with varying amounts of football experience. Sixty-eight had played in the NFL, 103 played in college and 43 only played in high school.

In order to assess neurological function, the players completed a Brief Test of Adult Cognition by Telephone (BTACT) in addition to self-reporting their levels of executive function and behavioral regulation, depression, and apathy*

The study shows that the number of years that the participants played football was not a factor in their performance on these tests or surveys. In all three groups (pro, college, high school only) the
people that showed the most neurological impairment were those that started playing football before the age of twelve.

When the players' information was controlled for age, education, and duration of play, the data showed that the players with younger AFE to football, in general, had worse behavioral regulation, depression, apathy and executive function.

Players with an AFE before age 12 had greater than 2× increased odds for clinically meaningful impairments in reported behavioral regulation, apathy, and executive function, and greater than 3× increased odds for clinically elevated depression scores, compared with those who began playing at 12 or older.

This study is certainly far from perfect. First of all, the data came from the participants' self-reported answers in phone interviews and surveys taken online. Also, participants ranged in age which brings with it variability in how the game was played and how effective helmets were, between players. However, this study supports similar findings from a previous study [2] with a similar conclusion.

In the last eight years, participation in youth tackle football has declined among boys aged 6-12 nearly 20% [3] - an unsurprising statistic given reports such as this one. As a parent, it is hard to know what choice to make when a child has a deep desire to play football. But, this study and others like it say that, if tackle football is going to be played, waiting until the teenage years may be doing your kids a favor that they may even end up thanking you for down the road.


*Note: The tests used to assess these were the Behavior Rating Inventory of Executive Function-Adult Version Metacognition Index (MI), Behavioral Regulation Index (BRI), Center for Epidemiologic Studies Depression Scale (CES-D) and Apathy Evaluation Scale (AES).