

A Child's Age at the Time of Injury: What Do We Know?

Source: Produced by Victoria Tilney McDonough and Brian King

Video Link: <http://www.brainline.org/content/multimedia.php?id=3171>

Dr. Deborah Little: So what we see predominantly in children with brain injury, and this is different depending on the age of the injury. So children who are, and there's still a lot of debate as to the effects of age on injury, so is it better to have an injury when you're young and the brain is still developing and can recover? Or is it better to have it when it's older so that you're not interrupting development? So we have to talk about those in 2 different ways. In older children who have brain injuries you see slightly more subtle effects. It depends. If we're talking milder injuries, which are the majority, you'll see problems with timed test taking, so problems in school having to do with concentration or memory. Many report problems in these higher order executive functions when they come online, so even in small children you'll see that maybe the injury won't show itself until they reach 13, 14, 15 years of age when all of these complex cognitive functions that we start requiring in high school; so working memory. So having to do multiple things at a time, dividing your attention. We really don't ask children to do this until they get into high school. And once they get into high school, kind of that additive effect of that brain injury plus adding this load onto what we're asking them to do, then manifests itself. So the work of Sandy Chapman in Dallas has clearly shown, over multiple studies, that you actually get almost a cognitive... she calls it the stall. So as you get to a certain point in your educational structure around that early high school year, you actually see a significant drop.

So these children might have been right around the normal developmental trajectory, doing great in school, until those executive functions are required to come online and then it either takes longer for them to come online, or that's when services are needed. It becomes a big challenge, because if you're a parent and your child had a head injury 10 years ago, why would you think that a problem now is related to something that happened 10 years ago, and everything's been fine throughout. And this is where the work of education and outreach and developing programs to educate school nurses and parents, and school teachers and coaches in high school and middle school become the frontline for assessing what this is; and that's really what the target of a lot of the education is.