

## **Aurora Sports Medicine Institute uses integrated approach in the Management of Concussion including the Biodex Balance System SD for objective balance assessment**

Aurora Sports Medicine Institute (ASMI) is the sports medicine branch of Aurora Sheboygan Memorial Medical Center, in Sheboygan, WI. As the premiere sports medicine provider in southeastern Wisconsin, ASMI is the premier choice of physically active individuals for preventative and rehabilitative care of orthopedic and sports injuries.

Adam Brill is an Athletic Trainer at ASMI and plays a large role in program development at the institute. He is also the head Athletic Trainer at Plymouth High School in Plymouth, WI, where he is focused on performance enhancement and injury prevention for all their student athletes.

“We knew the general parameters in the management of concussion, but we wanted to develop a formal system and put some strong policies in place,” explains Brill. “We met as an athletic training team to review the *Zurich Consensus Statement on Concussion in Sport* that was published in 2009. That’s where we drew a lot of our information from. We also had a great team of pediatricians who provided their expertise and who we shared our ideas with.

“The Zurich Consensus Statement explains that Concussion Management must be looked at as a system rather than individual parts,” say Brill. “I think that’s part of the trouble that we ran into in the past. Everyone looked at individual components in the treatment of concussion. Even in our small county, it seemed that different providers in our network were doing things a little bit different from each other. We felt it was important to bring consistency across the board. So, we decided to take a full system approach, which included objective balance [postural stability] assessment.

### **The Zurich Consensus Statement - 3.2 Objective Balance Assessment**

“It appears that postural stability testing provides a useful tool for objectively assessing the motor domain of neurologic functioning, and should be considered a reliable and valid addition to the assessment of athletes suffering from concussion, particularly where symptoms or signs indicate a balance component.”<sup>1-7</sup>

“We already had the Biodex Balance System SD in our therapy unit for a couple of years being used primarily for physical therapy and rehabilitation,” explains Brill. “It was like finding a hidden treasure, knowing that we had a balance assessment solution already in place and could now repurpose it for use in our concussion management program. However, I never like to follow anything blindly. It took us a good 3-4 months to fully research all components of our concussion program before we actually put anything into place.

“We decided to move forward with Biodex for objective balance assessment based on their reputation and the relationship we had with them and their product. The efficiency and quickness, the ease of reading reports, and the results that we got with the Balance System SD were phenomenal,” says Brill. “We knew we couldn’t get any better than what we already had.

“We’ve been using the Balance System SD for balance assessment in our concussion management program since June 2011. Since then, we’ve purchased two Biodex portable BioSway systems which are used off-site when we go to our contracted schools.

“The Balance System and BioSway have a CTSIB function which provides a sway index. There are four components of the testing. We put the athlete on the balance platform on a firm surface with their eyes opened for 20 seconds and then with their eyes closed for 20 seconds. Then we put the 3-inch foam pad [standard with the system] onto the platform, and have the athlete do the same thing; eyes open and eyes closed for 20 seconds. So the system measures four components of sway.

“We had downloaded a software update a few months ago where a lot of new normative data was provided. We have a lot of kids coming through for post-injury testing that didn’t receive a baseline. So having that normative data to compare to is really great.

### **Program Logistics**

“For Concussion Management, we offer free baseline screening for any athletes in the area, ages 10 and above,” states Brill. “For schools that we don’t have contracts with, we bring the athletes into the hospital for half-hour appointments which include neurocognitive testing using Axon Sports and neurophysical [balance] screening using the Biodex Balance System SD.

“For our contracted schools, we do all the testing on-site at each school. We do the neurocognitive testing in a computer lab or a library and do the neurophysical assessment on a portable BioSway that we bring to the school. All of the screening is done at no charge.

“When an athlete sustains a concussion, we bring the athlete in for post-injury testing where we conduct the exact same assessment as the baseline test. This is something that we do bill to insurance. In addition, we do a sideline SCAT 2 form with that athlete daily to monitor their progress. We take both the baseline test and after-injury results and forwards them to the physician for final clearance.

### **Marketing Support builds Program Referrals\***

“We get a lot of help from the pediatricians in our community to encourage baseline screening through ASMI,” explains Brill. “Our flyers are distributed to athletes when they come in for their yearly physicals. In addition, some of the clinics actually mail home early information packets which include our flyers. We have flyers in all of the schools and at all of our local sporting good stores. We do write ups in the school newsletters. We also reach out to the local area youth leagues—football, basketball, soccer, hockey—where we do a lot of parent informational sessions. I come in and speak at the meetings to discuss our concussion management program and the baseline screening services that we offer.”

“The ASMI Concussion Management Program is on the forefront in our county,” explains Brill. “We are very research and evidence-based on why we do things they way we do them. We give a total package of care. We don’t just try to fly people through to get them back on the field. We

have found time in and time out that if you can do things the right way, you are going to get athletes back a lot faster than if you just try to fudge your way along and try to push things prematurely. With the objective stats that Biodex is able to give us for the neurophysical piece and the objective stats that Axon Sports is able to give us for the neurocognitive component, there is no guesswork. For parents especially, you know that when your child comes in to get care from us, we have the objective results to determine when to return them back safely.”

*\*Editor’s Note: More than just a product, with the Biodex Concussion Management Pro and Varsity packages, you receive an assortment of marketing support materials including letters, brochures, press release, clinical vouchers, and posters to assist you in community outreach to athletic directors, coaches, administrators, parents and athletes, as well as referring physicians – all to help educate them and build awareness for your program.*

#### references

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