Sports Medicine Man

At around 14, Brant Berkstresser realized he wasn't much of an athlete. “I grew up in a large high school,” he says, “and I was very small.” His goal was to graduate weighing more than 100 pounds. “I started my senior year at 98,” he says. “I graduated five-foot-seven, 105 pounds.”

And his stature never kept Berkstresser—now Harvard's associate director of athletics for student-athlete help and performance—away from sports. “I came from a musical family, not an athletic background,” he says, “but I just naturally loved it.” Growing up in State College, Pennsylvania, the home of Penn State, certainly contributed. He loved football, but stuck to baseball, soccer, basketball, and cross-country.

As his athletic career ended during freshman year, Berkstresser discovered an adjacent path: sports medicine. In the mid 1980s, he volunteered with his high school's athletic trainer and saw the position's value in keeping athletes healthy and strong. “The way I looked at it, this was a way I could still be involved in athletics,” he explains. His skills in math and science, unhelpful in dunking a basketball, were well suited for sports medicine.

After earning a bachelor's degree in education, with an emphasis in athletic training, from athletic-powerhouse West Virginia University, Berkstresser looked for a graduate program where he could have an immediate impact. He picked Kansas State partly because of the head athletic trainer's reputation, and partly because it was severely understaffed. “I knew I would have more responsibility as a graduate assistant than I would elsewhere,” he says. “It worked out beautifully. I was a 23-year-old working men's basketball and helping out with football in the Big 12 Conference, which is pretty rare.” He spent five years at Kansas State, and five more at Georgia Southern University, before receiving an offer in 2008 to run the sports-medicine program at Harvard: “Too great of a challenge to pass up.”

Berkstresser enjoys the challenge of sports medicine, the constant adjustments a program must make to keep current as the science and practice advance. He says the best thing about athletics and medicine is that they're always evolving. “If you look at what we do from a sports-medicine perspective now, compared to 10 years ago, it's just night and day,” he points out. “A lot of that has to do with technology advances, research advances.”

One example: concussions. Twenty years ago, the connection between symptoms—headaches, blurred vision, and difficulty concentrating—and head injuries was hazy. Now, it's clear. Before the season starts, students undergo baseline testing through the Micheli Center for Sports Injury Prevention (a Waltham-based research center that seeks to reduce risk of athletic injury) to measure processing speed, visual and verbal memory, and reaction time. If a student sustains a concussion, she or he gets back on the field only after these levels return to normal. “We've found out that cognitively, and from a balance standpoint, our brain is taking longer to recover from a concussion episode than what we may have thought 15 years ago,” Berkstresser says. Harvard's athletics department partners with the Micheli Center, Boston's Children Hospital, and Harvard Medical School on a longitudinal study that tracks students who have sustained concussions. The results, though preliminary, have already changed the way trainers perform the balance assessment in baseline and post-concussion testing, allowing staff to judge when specific indicators of balance and vision have returned to normal levels. At student athletes' subsequent reunions, they hope to follow up, looking for certain biomarkers in urine, among other factors, that would help elucidate concussions' long-term effects.

The athletic department, along with Aar- on Baggish of the Massachusetts General Hospital Heart Center, are also studying the impact of anaerobic activities, like heavy weightlifting and short sprints, on the heart. They're studying football linemen, whose role makes them especially susceptible to conditions like high blood pressure and hypertension. “Most of what they do is within 10 yards,” Berkstresser explains. “It's a whole lot of power and press and strength” (as opposed to cardiovascular conditioning). A current hypothesis is that a few brief aerobic sessions per week on a stationary bike could greatly decrease heart-remodeling changes that result from high-intensity, quick-burst activities. They've tested it out, with encouraging preliminary results. “You may be implementing something that could have a pretty significant change in their quality of life moving forward,” Berkstresser says, adding that potential conclusions could also help non-athletes. “That's a pretty incredible find.”

Nor is the program focused solely on physical health. When Berkstresser arrived at Harvard, there were no mental-health counselors who focused on athletes. Now there are two. Students are free to meet with the dedicated counselors individually, or coaches can decide to invite a counselor to speak to a whole team to discuss an issue like work-life balance. “I think it just completely changes an individual's outlook and how they process themselves,” he explains. “It changes how they process information, how they compartmentalize feedback they are getting, so that information becomes

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The push for mental-health resources falls under the new “Crimson Mind and Body Performance Program,” launched by the athletics department and the University Health Services’ counseling and mental health services. The program coordinates the services of physicians, athletic trainers, and strength and conditioning coaches, as well as mental-health clinicians and a sports dietitian. It’s Berkstresser’s job to make sure each unit works in tandem. “It’s somewhat of a big moving piece,” he says, “but it works.”

The program is especially effective for issues that require the help of different specialists. For athletes with body-weight goals, for instance, the training staff, strength and conditioning coaches, and the sports dietitian work in tandem. This kind of coordination wasn’t possible when Berkstresser arrived, when there was only a quarter-time nutritionist on staff. Students with eating disorders—especially common among women student-athletes—can now seek help from a team that focuses on that particular issue, which includes mental-health professionals.

As Berkstresser walks through the athletic training room on an autumn afternoon, much resembles what he likely saw as a skinny high-schooler. Student-athletes lie on tables, awaiting taping, stretching, and massaging from a team of athletic trainers. Powerade® coolers, stretch bands, and rolls of athletic tape are splayed across the room. What Berkstresser couldn’t have predicted was the increasing importance of nutrition and mental health to the success of student-athletes. As he looks at how often students use these services, he knows the demand will only grow. “The great thing is, if you build something and have good things coming, people will come,” he says. “And people are coming.”

~JACOB SWEET