

Concussions can be fought from neck up



Concussions happen at a high rate at all levels of competition.

ALEX MARVEZ



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ORLANDO, FLA.

Head injuries in sports are an epidemic – and Mike Gittleson is sticking his neck out to do something about it.

Gittleson believes the concussion risk for men and women can be reduced through what should be a tenet of any training program: neck-strengthening exercises.

Gittleson, though, has learned first-hand that most schools don't place nearly the same emphasis on those muscles as he did during 30 years as the University of Michigan's football strength and conditioning coach. Since his retirement in 2008, Gittleson has visited more than 250 colleges of all sizes while representing a sports apparel company. He surveys weight rooms for neck machines and speaks with coaches about their regimens for male and female athletes.

"I assure you there are very few programs training the neck," Gittleson said. "It's unbelievable. In high schools, it's probably worse. We have these magnificent bodies, and we're not attending to the cylinder that protects the skull. We need to build to deflect and dissipate force."

To that end, Gittleson recently made a personal plea at the Collegiate Strength and Conditioning Coaches annual convention in Orlando. Gittleson hopes the CSCC makes knowledge of neck anatomy a must for certification and stresses that strengthening exercises are taught to their athletes.

"He's very concerned about football safety," said Dr. Chuck Stiggins, the CSCC's executive director. "The concussion issue is huge."

During a 30-minute presentation, Gittleson punctuated his point while also reminding roughly

MOOSE TALKS



With NFL commissioner Roger Goodell shining more light on concussions last season, NFL analyst Daryl "Moose" Johnston shares his strong opinions.

150 strength coaches this hot-button subject won't be going away.

"People are asking, 'Are sports too dangerous for our kids?'" Gittleson said. "Moms aren't going to have this."

Sports concussions are back in the headlines with U.S. lawmakers holding a hearing last Thursday about head trauma among high school players. James Schmutz, who is head of the American Sports Education Program, testified that 400,000 athletes in nine sports suffered concussions between 2005 and 2008. That figure is probably low, because coaches, athletes and parents often don't recognize concussion symptoms.

"Moreover, the study discovered a disturbing disregard for the seriousness of the injury, with athletes often returning to practice and competition before it was safe and appropriate to do so," Schmutz said.

Almost 4 million Americans annually suffer concussions in sports and recreational activities, according to estimates from the Centers for Disease Control and Prevention. Effects can include memory loss, depression, impaired speech, sleep disorders and reflex damage. The more concussions a player sustains – especially in a rough-and-tumble sport like football -- the greater the likelihood of permanent damage.

There are financial ramifications from the concussion issue as well. Eleanor Perfetto has filed a workman's compensation claim against the NFL in California because of brain damage suffered by her ex-husband, former Pittsburgh and San Diego guard Ralph Wenzel. If the court rules on her behalf, a flood of retired players with head-trauma claims could follow suit.

The NFL has taken bold steps to address concussions after decades of ignoring the warning signs. Shortly after speaking to a House committee last fall, NFL commissioner Roger Goodell instituted rules that bar players from re-entering a game if they show any concussion symptoms while being attended by the team's medical staff.

Goodell also sent letters to governors of 44 states last week urging the passage of concussion treatment and education laws for prep athletes. Only six states (Washington, Oklahoma, Connecticut, Oregon, Virginia and New Mexico) have legislation that bans a player who suffered a head injury from re-entering the game. In those six states, athletes need clearance from a health-care professional to play again. Goodell's letter will be read Monday as part of a government concussion forum being held in New York.

As concussion studies evolve, neck training may ultimately become mandatory on the high school level. Like Gittleson, Dr. Robert Cantu espouses that stronger necks can help defuse concussive forces. Cantu is co-director of Boston University's Center for the Study of Traumatic Encephalopathy, which recently received a \$1 million NFL grant to study brain injuries.

"It's just straight physics," Cantu said. "If you see the blow coming and you have a very strong neck and contract the neck muscles, you have a much greater chance to have significantly reduced the forces the brain will see."

Cantu and fellow concussion expert Dr. Dawn Comstock are completing research on neck length, diameter and strength in relation to head trauma as part of their latest project. Ralph Cornwell is conducting another concussion study in pursuit of his Ph. D. at Virginia Tech.

Cornwell plans to determine whether overall neck size can decrease concussive forces even if the affected party is unprepared when the blow occurs. To this end, Cornwell is fielding a study group of 24 college-aged men and women who have never done neck training. He will sit them inside an automotive-industry sled and unexpectedly stop its acceleration. This will allow Cornwell to film and digitally map how much head movement occurred. He will then repeat the experiment after half his group has completed neck training to see if there is a difference.

Cornwell, who is working without a grant, is appreciative of Virginia Tech's providing him the tools to complete his research. Cornwell, though, said he is shocked at how many schools ignore neck exercises in their training programs. He conducted anonymous surveys with 125 colleges and discovered it was "not a high priority or no priority whatsoever."

"It just doesn't make any sense from a business or medical standpoint," said Cornwell, a former

RETIRING MINDS



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college and pro strength coach who volunteered with the Washington Redskins in the late 1990s. “The neck is something that needs to be trained just like a biceps or your legs. It has to be prepared for competition. Otherwise, you’re not protecting the athlete.”

Minnesota Vikings strength coach Tom Kanavy is such a strong proponent of neck training that he calls it “probably the most important thing we do.” In his offseason workout program, Kanavy said, Vikings players train their necks twice weekly with four planes of movement. The supporting trapezius muscles are also built through shrugs and upright rows.

“Our primary responsibility as strength and conditioning coaches is injury prevention,” Kanavy said. “That’s a highly susceptible area to serious injury.”

Yet when Vikings rookies report each year to team headquarters, Kanavy said most have underdeveloped necks compared with the rest of their physiques.

Kanavy said the emphasis on exercises that catch the eyes of NFL scouts, like bench-press and squat repetitions, takes away from college neck training. Some schools don’t even have neck-training machines. The lack of such equipment was glaring even in the room next to where Gittleson delivered his CSCC speech. Only two custom neck-training devices could be found in a vast display area for strength-machine sales to college programs. Weight machines, though, aren’t essential for neck training. Strengthening can still be done through manual resistance exercises performed either alone or with a training partner. Cornwell said an effective program takes as little as seven minutes to complete.

There are other benefits to neck training besides concussion prevention. One of Ron English’s first tasks when becoming Eastern Michigan University’s football coach last year was telling his strength coaches to mandate more neck exercises. That included regularly measuring neck circumference to monitor player progress.

During five seasons as a Michigan assistant working on the same staff as Gittleson, English said he only saw two or three Wolverines suffer what are known as stingers – blows to the neck area that send temporary shocks and acute pain from the head area down through the arm. At Eastern Michigan, English inherited a roster that he described as having a “ridiculous number of stinger injuries, like 30-some-odd guys” from 2008. English said the number of stingers was greatly reduced in 2009.

“The proof is in the pudding,” said English, who estimated less than 10 percent of EMU’s incoming freshmen did regular neck workouts in high school.

One of Gittleson’s former charges said the neck training he received at Michigan has helped him avoid head injuries in college and the NFL despite playing a high-impact position.

“I haven’t had a concussion yet,” **Steelers** linebacker **LaMarr Woodley** said. “When you work your neck, you feel that much stronger. You feel confident. You’re not worried about (your head) snapping back.”

Gittleson wants every athlete to feel the same way.

“We need to protect our kids,” he said. “We need to protect their brains.”

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