Reducing risks after head injuries

F or years, Steve Marshall, PhD, associate professor of epidemiology, has studied the consequences of sports injuries and how to prevent injuries to athletes and others.

Partly as a result of his efforts, in collaboration with Drs. Kevin Guskiewicz and Jason Mihalik, researchers based in the UNC College of Arts and Sciences' Department of Exercise and Sports Science, 11 states have passed laws requiring special protocols for managing high school athletes who suffer concussions. Pending federal legislation would require concussed high school athletes to be cared for by professional clinicians skilled in concussion care.

Marshall knows the serious and long-term effect head injuries can have on athletes. In 2005, the team's study of retired professional

athletes found that prior concussions are linked with an increased risk of mild cognitive impairment and with earlier onset of Alzheimer's disease. Since then, other studies about athletes' injuries have received a great deal of attention from media and the public.

"A history of concussion is not necessarily a true independent risk factor for neurodementia," Marshall says, "but rather appears to act as an accelerator."

In a separate study, Guskiewicz and Marshall found a link between concussion and depression, but that link needs further study, he says.

"We're continuing to follow this cohort of retired professional athletes because they've



Dr. Steve Marshall

had a lot more exposure to concussions than the average person. That allows us to see the relationships more clearly," he says.

Marshall and colleagues also examine reliability of athletes' reports of their inju-

ries. Zachary Kerr, first-year epidemiology doctoral student, works at UNC's Matthew Gfeller Sport-Related Traumatic Brain Injury Center (http://tbicenter.unc.edu) to study how increased media focus on concussion has affected retired professional athletes' recall of concussions during their careers.

- Angela Spivey

