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**An ecologic study of protective equipment and injury in two contact sports.**

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**BACKGROUND:** Contact sports have high rates of injury. Protective equipment regulations are widely used as an intervention to reduce injury risk. The purpose of this study was to investigate the injury prevention effect of regulations governing protective equipment in two full-body contact sports. **METHODS:** Injury rates in US collegiate football were compared to New Zealand club Rugby Union. Both sports involve significant body contact and have a high incidence of injury. Extensive body padding and hard-shell helmets are mandated in collegiate football but prohibited in Rugby Union. **RESULTS:** The injury rate in football was approximately one-third the rugby rate (rate ratio [RR] = 0.35; 95% CI: 0.31-0.40). The head was the body site with the greatest differential in injury incidence (RR = 0.11; 95% CI: 0.08-0.16). Rugby players suffered numerous lacerations, abrasions, and contusions to the head region, but the incidence of these injuries in football was almost zero (RR = 0.01; 95% CI: 0.01-0.03). Injury rates were more similar for the knee (RR = 0.61; 95% CI: 0.43-0.87) and ankle (RR = 0.72; 95% CI: 0.46-1.13), two joints largely unprotected in both sports. **CONCLUSIONS:** The observed differences are consistent with the hypothesis that regulations mandating protective equipment reduce the incidence of injury, although important potential biases in exposure assessment cannot be excluded. Further research is needed into head protection for rugby players.

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