



*Invited Editorial*

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## **Nontraumatic Injuries in the NCAA: Collegiate Football Strength Coaches Should Exercise Caution this Off-Season**

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### ABSTRACT

*International Journal of Exercise Science* 14(6): 980-983, 2021. Strength and conditioning coaches were allegedly involved in pre-COVID-19 nontraumatic injuries/deaths (e.g., exertional heat illness, exertional rhabdomyolysis, cardiorespiratory failure) of NCAA (mainly football) student-athletes during off-season training sessions. During the COVID-19 health crisis, non-pharmaceutical interventions against the SARS-CoV-2 virus included suspension of NCAA seasons, which led to student-athletes exhibiting lower levels of mental health. All NCAA championships have now been reinstated. This summer the off-season is unique, because as several programs had stopped practicing/competing for several months, it may foster additional threats to the wellbeing of the student-athletes. Immediate supplementary action may be necessary this collegiate football off-season in order to lower the probability of potential tragic/catastrophic events due to physical and psychological side-effects stemming from the prolonged inactivity period.

**KEY WORDS:** Strength and conditioning, military-style training, non-pharmaceutical interventions, mental toughness, student-athlete

Recent, pre-COVID-19 tragic events resulted in serious nontraumatic injuries/deaths of student-athletes playing for National Collegiate Athletic Association (NCAA) programs (e.g., the University of Oregon, the University of Maryland, the University of Houston). Most of these types of incidents took place during off-season football conditioning programs. Strength and conditioning coaches (SCC) were allegedly involved (2, 7, 8).

Professional organizations directly related to the strength and conditioning vocation have acted. The National Strength and Conditioning Association (NSCA) and the Collegiate Strength and Conditioning Coaches association (CSCCa) created the "Joint Consensus Guidelines for Transition Periods: Safe Return to Training Following Inactivity" (4). Both organizations also endorsed the "The Inter-Association Task force for Preventing Sudden Death in Collegiate Conditioning Sessions: Best-Practices Recommendations" (3). Additionally, the National Athletic Training Association (NATA) developed the "Consensus Statement: Sick Cell Trait and the Athlete" (9) and the NCAA now offers relevant resources through their Sport Science

Institute, such as “Preventing Catastrophic Injury and Death in Collegiate Athletes” (10). Nevertheless, the media have repeatedly turned against the “hypermasculine” subculture SCCs purportedly create and/or maintain, especially in football programs, and have called for more regulation of the profession (e.g., 12).

According to media reports (2, 7, 8) about serious nontraumatic injuries and deaths, strength and conditioning programs usually foster military-style training (MST). In that type of subculture in sporting contexts, extreme behaviors, such as undervaluing rest and overvaluing playing injured, are frequently rationalized and normalized. By conforming to these types of “standards,” MST is supposedly efficient in creating the “toughest” athletes/teams both physically and psychologically (e.g., mental toughness). However, adopting such expectations without critical thinking has been identified by practitioners and scholars as potentially unhealthy and unethical (e.g., 6).

The magnitude of the possible effect of these unhealthy/unethical cultural sporting contexts is significant, especially considering the current circumstances found in US collegiate athletics. For instance, one group of measures against the COVID-19 crisis has been non-pharmaceutical interventions (NPIs; e.g., lockdowns, curfews, social distancing). Various forms of NPIs have been implemented in the US since March 2020. In some states/conferences (e.g., New Jersey Athletic Conference, Little East Conference), NPIs included suspension of NCAA athletic seasons. As a result, there are collegiate teams that stopped practicing/competing while others did not.

All NCAA championships have now been reinstated based on the new standards of the “Resocialization of Collegiate Sport: 2021 Summer Activities” (11). However, the unexpected additional inactivity that took place due to COVID-19 combined with the current accumulated excitement for coming back to practice/competition may increase the probability of potential tragic and/or even catastrophic events this current off-season due to physical and psychological reasons. For example, SCCs (whose teams were not training/playing due to COVID-19 NPIs) should be extra cautious on the volume, intensity, and work:rest ratio during this current transition period because their athletes may be extra vulnerable to exertional heat illness, exertional rhabdomyolysis, and/or cardiorespiratory failure. Additionally, SCCs may need to combine several scientific approaches of performance, such as strength and conditioning and psychology (inter-disciplinary approach), since there is already preliminary evidence demonstrating that the loss of athletic identity that came with the suspension of collegiate championships has led many student-athletes to exhibit lower levels of mental health (5).

Interestingly, our current research (not yet published) in collegiate strength coaching has not found evidence to support the media claims that MST is popular; few SCCs are supportive of it. However, when it does take place, off-season football is the most popular choice. Further, how it exists in college sports likely varies considerably from how it is portrayed by the media. For instance, while the media often depict MST through a narrow, negative lens, SCCs operationalize it as a safe and effective way for promoting leadership and mental/physical/team development. This is partly why NCAA collegiate SCCs believe that the

media backlash the profession recently suffered was unjustified. Along with a biased media and public about MST (e.g., “horn effect,” “availability cascade”), college SCCs think that unqualified coaches (e.g., Do you remember how the University of Oregon event and the 21-hour course through the U.S. Track and Field and Cross Country Coaches Association revived the debate about the effectiveness of several SCC certifications?; 13) and poor oversight (e.g., strength coaches reporting directly to the sport team coach) are two of the main reasons that most contributed to that media backlash.

Our findings also reveal several viewpoints held by collegiate SCCs on what they believe can be done to prevent such problems in the future. Of note, they believe problems with MST could be prevented in the future if SCCs are more autonomous to do their work, if they keep becoming better educated (a clear indication of SCCs’ altruism and accountability, in our opinion!), and if the sport coaches, athletic administrators, and the general public reach a deeper understanding of their roles, responsibilities, and accomplishments. Still, in terms of the well-being of the collegiate athlete, this off-season is unique because COVID-19 NPIs may have fostered additional threats. Therefore, immediate supplementary action may be necessary this collegiate (football) off-season.

The long-term effects of NPIs are not clear. Since 2000, an average of two student-athletes have died per year (81.9% of them from nontraumatic injury; 1). The goal of this editorial is to raise awareness for all the stakeholders in collegiate athletics, especially SCCs in football, in order to lower the probability of potential tragic/catastrophic events this off-season due to physical and psychological side-effects stemming from the prolonged inactivity period.

## REFERENCES

1. Anderson S. NCAA football off-season training: unanswered prayers... a prayer answered. *J Athl Train* 52(2): 145-148, 2017.
2. Britto B. UH launches investigation into rhabdo cases as new details emerge related to life threatening condition, 2019. Retrieved from: <https://www.houstonchronicle.com/news/education/article/UH-launches-investigation-into-rhabdo-cases-as-13992419.php>; 2021.
3. Casa DJ, Anderson SA, Baker L, Bennett S, Bergeron MF, Connolly D, et al. The inter-association task force for preventing sudden death in collegiate conditioning sessions: Best practices recommendations. *Strength Cond J* 37(6): 113-116, 2015.
4. Caterisano A, Decker D, Snyder B, Feigenbaum M, Glass R, House P, et al. CSCCa and NSCA joint consensus guidelines for transition periods: safe return to training following inactivity. *Strength Cond J* 41(3): 1-23, 2019.
5. Graupensperger S, Benson AJ, Kilmer JR, Evans MB. Social (un) distancing: teammate interactions, athletic identity, and mental health of student-athletes during the COVID-19 pandemic. *J Adolesc Health* 67(5): 662-670, 2020.

6. Hughes R, Coakley J. Positive deviance among athletes: The implications of overconformity to the sport ethic. *Soc Sport J* 8(4): 307-325, 1991.
7. Kirschner A. What we know about Jordan McNair's death and Maryland football's role in it, 2018. Retrieved from: <https://www.sbnation.com/college-football/2018/8/11/17678652/jordan-mcnair-death-investigation-maryland>; 2021.
8. Martin J. Oregon suspends strength coach after football players hospitalized, 2017. Retrieved from: <https://edition.cnn.com/2017/01/18/sport/oregon-suspends-strength-coach/index.html>; 2021.
9. National Athletic Trainers' Association. Consensus statement: Sickle cell trait and the athlete, 2007. Retrieved from <https://www.nata.org/sites/default/files/SickleCellTraitAndTheAthlete.pdf>; 2021.
10. National Collegiate Athletic Association. Preventing catastrophic injury and death in collegiate athletes. Retrieved from: <https://www.ncaa.org/sport-science-institute/preventing-catastrophic-injury-and-death-collegiate-athletes>; 2021.
11. National Collegiate Athletic Association. Resocialization of collegiate sport: 2021 summer activities, 2021. Retrieved from: [https://ncaaorg.s3.amazonaws.com/ssi/COVID/SSI\\_ResocializationSummerActivities.pdf](https://ncaaorg.s3.amazonaws.com/ssi/COVID/SSI_ResocializationSummerActivities.pdf); 2021.
12. Solomon J, Dodd D. The unregulated world of strength coaches and college football's killing season, 2017. Retrieved from: <https://www.cbssports.com/college-football/news/the-unregulated-world-of-strength-coaches-and-college-footballs-killing-season/>; 2021.
13. Stamatis A. The "unregulated" world of collegiate S&C: Are CSCCa coaches the most effective?, 2018. Retrieved from: <http://csccamonthly.com/the-unregulated-world-of-collegiate-sc-are-cscca-coaches-the-most-effective/>; 2021.

