Increased risk of injury in contact sports after prolonged training restrictions

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The new research looks at injury risk for players returning to contact sports such as rugby. (Credit:South_agency)

As professional sports look to make a phased return behind closed doors across much of Europe, researchers from the University of Bath caution that the prolonged individual training players have been exposed to for months is insufficient to help athletes maintain the physical fitness and mental strength they need for competition.

Writing in the *International Journal of Sports Medicine* the researchers and sports physicians express their fears that injuries could increase once competitions resume and make recommendations for resuming training.

Most athletes are attempting to overcome the current coronavirus crisis by undertaking individual training within their own four walls to stay fit. But this might not be enough for those involved in contact sports, writes Professor Keith Stokes.

This is because, in addition to physical fitness, such sporting activities require training in evasive maneuvers and contact situations. It is also near impossible to practice and hone the skills for game strategy when working alone. In addition, the researchers suggest, restrictions imposed on training and games also affects players' morale, which negatively impacts their mental health.

In the paper the researchers draw parallels with what happened with American football in 2011. Then, the American National Football League had a 20-week lockout when clubs and players could not agree on payment. On returning to competition, injuries were more frequent, especially in the Achilles heel area.

Professor Keith Stokes from the University of Bath's Department for Health and also England Rugby explains: "After months out of the game, without access to proper training facilities for much of that time, the return to playing matches must be carefully managed.

"Clubs must balance the need to prepare players for high levels of performance, the risk of injury after such a long lay-off, and the risk of infection with SARS-CoV-2. The key will be to build appropriate progression into training to give players the safest and most effective possible return."

In their paper the authors give practical advice on how athletes can protect themselves from injury once they resume sports activities suggesting that:

- Athletes should work on their individual weaknesses during the period of training restriction.
- Before return to full training a sports medical examination should be undertaken to inform training progression.
- Athletes who had COVID-19 themselves should be very carefully managed. Strength and muscle mass might be impacted, but there are also potential impacts of the infection on the heart.
- Reintroduction to training requires an individualized approach in these athletes.

In addition to their athletic abilities, players' nutritional condition and mental health may suffer during training restrictions. These two aspects would therefore also have to be taken into account when planning the return to training and games. The authors recommend a high-protein diet, supplemented with vitamins D and C and probiotics as appropriate.

They also point out that forced, abrupt cessation of activity is often even more stressful for athletes than it is for other people. It is common for athletes to develop what is known as "detraining syndrome," which is characterized by insomnia, anxiety and depression, can have a direct effect on their physical fitness and can delay their resumption of training.

Despite this, the authors are confident that most players will be able to play competitively again after a roughly six-week preparatory period. However, a great deal depends on how long the forced stop of competition has lasted and on what conditions training and games can resume.

More information: Keith A. Stokes et al, Returning to Play after Prolonged Training Restrictions in Professional Collision Sports, *International Journal of Sports Medicine* (2020). DOI: 10.1055/a-1180-3692