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A call to change our vision on sports injuries and their prevention: adopt a salutogenic approach! See the half-full glass!

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Pr Pascal Edouard; Pascal.Edouard@univ-stetienne.fr All sports stakeholders, athletes, coaches, health professionals, researchers and leaders are concerned with sports injury prevention. They all do their best to implement injury risk reduction strategies to make sporting participation as safe as possible—understanding that injury risk is still present. Whatever the injuries (location, type, severity) and the athletes (sport, level, country), given the current injury rates and burden, there is a clear need to improve injury risk reduction strategies.

At the same time, complementary approaches could also be relevant to help athletes and their entourages to live with Damocles' sword of injury. We fully endorse the need to improve injury risk reduction strategies. We also think that, in addition, it would be relevant to change our vision of injuries and injury prevention. Thus, in this editorial, we discuss the interest of a more positive vision of injuries and their prevention and provide practical suggestions to help athletes and their entourage to better live and cope with them.

TOWARDS A MORE POSITIVE VIEW ON INJURY PREVENTION

Despite injury prevention efforts, injury rates are stable or increased, which can be seen as a failure of injury prevention. Sporting performance gradually increases (eg, better world records, increase of match numbers, increase in training load). Thus, increased performance with stable or increased injury risk could be hypothesised as injury prevention would be at the service of the performance.³ Injury prevention allows athletes to perform more in sports with stable or increased injury risk.² This view is perhaps more positive than the usual acknowledgement of injury prevention failure, showing that injury prevention can improve one aspect of sports; if there is no injury risk reduction, performance

improves. However, we are not claiming that if performance improves, there is no problem regarding the injury occurrence. We are not claiming that injury is good and that nothing should be done to reduce injury risk because sporting performance is increasing. We believe in athletes' health protection and the need to continue these efforts. We are just trying to have a more optimistic view of all the efforts to encourage all stakeholders to continue to improve injury risk reduction strategies.

DEVELOP RESILIENCE IN INJURY EVENTS

Sports injuries lead to negative experience that physically and psychologically affects the athlete (and their entourage). Once the injury has occurred, nothing can be changed. We cannot go back to avoid the event or cannot change what happened. All we can do is manage and cope with it. One of the challenges is how the athlete (and their entourage) will react. They could have been not responsible for the injury occurrence, but they are responsible for its management and coping.

The American Psychological Association defines resilience as 'the process and outcome of successfully adapting to difficult or challenging life experiences, especially through mental, emotional, and behavioural flexibility and adjustment to external and internal demands' (https://www.apa.org/topics/resilience). A resilient approach aims to accept that injury happened, to make sure that this event is not devastating for the athlete, and to allow to continue life with better well-being rather than rehash the past. A resilient approach was associated with improved recovery and clinical outcomes in musculo-skeletal pathologies.⁴⁵

Then, after acceptance, the athlete could see in the injury episode opportunities to





move forward and improve other aspects (eg, recovery, developing new skills or engaging in injury prevention) that can positively impact their future performances.^{6 7} The injury could be seen as a step in the sporting career and life rather than a break.^{6 7}

We, of course, have to continue improving injury prevention. But in the case there are still injuries, this resilient approach could be a way to improve athletes' quality of life concerning injury events. The idea would be not to block the problem but rather to try to live with it.

LIVE IN THE PRESENT MOMENT AND LET YOURSELF BE GUIDED BY OPPORTUNITIES

Mindfulness could be a relevant strategy to support the proposed vision change. It consists of living in the present moment and not thinking about what we want or hoping for a better situation (https://www.apa.org/topics/mindfulness). We thus suggest managing athletes based on what they can do and not on what they cannot do. In practice, it would also be a shift from an approach centred on restrictions ('I cannot do that...') to an approach centred on possibilities ('I can do that').

This is close to the salutogenic approach, which is a resource-based approach that focuses on building individual resources to protect health. This contrasts with the pathogenetic approach, which poses a diagnosis and is often associated with a negative connotation and activity restrictions. In salutogenisis, we evolve towards solutions, and not from problems as in the pathogenetic approach. We think the two approaches are complementary: the diagnosis is important to guide athletes' care, and the salutogenic approach allows us to manage athletes on the capacities of the day and what they can do to better prepare them early to the return to sports.

In this way, putting the athlete actively at the centre of the project⁸ could also be a relevant strategy. Transformational and non-dictatorial leadership seems relevant⁶⁸ and has been reported to influence injury risk.⁹ It is therefore important that the sporting project, performance and injury prevention, is co-constructed between the athlete and all the stakeholders.⁶⁸

A CALL TO SEE THE HALF-FULL GLASS!

We thus suggest changing our view of injuries and their prevention with a more positive view by looking at what injury prevention can bring to sports performance. We also propose to develop a more resilient approach, which could help to accept injury better when it occurs, and a salutogenic approach, which could also make it possible to better cope with the episode, to see it as a step and not a break, to be in the present moment, and to do and exploit everything that we can do, seeing the half-full glass.

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REFERENCES

- 1 Guex K, Svensson F, Edouard P. Blessures et prévention dans le sport: Pourquoi ne pas changer de vision et voir le verre à moitié plein? *Journal de Traumatologie Du Sport* 2023;40:57–61.
- 2 Ekstrand J, Spreco A, Bengtsson H, et al. Injury rates decreased in men's professional football: an 18-year prospective cohort study of almost 12 000 injuries sustained during 1.8 million hours of play. Br J Sports Med 2021;55:1084–91.
- 3 Edouard P, Pollock N, Guex K, et al. Hamstring muscle injuries and hamstring specific training in elite athletics (track and field) athletes. Int J Environ Res Public Health 2022;19:10992.
- 4 Liu JJW, Ein N, Gervasio J, et al. Comprehensive meta-analysis of resilience interventions. Clin Psychol Rev 2020;82:101919.
- 5 Porter A, Hill MA, Harm R, et al. Resiliency influences postoperative outcomes following rotator cuff repair. J Shoulder Elbow Surg 2021;30:1181–5.
- 6 Edouard P, Bolling C, Chapon J, et al. What does not kill us can make us stronger': can we use injury experience as an opportunity to help athletes and their teams engage in injury risk reduction BMJ Open Sport Exerc Med 2022;8:e001359.
- 7 Bonell Monsonís O, Verhagen E, Kaux J-F, et al. "'I always considered I needed injury prevention to become an elite athlete': the road to the Olympics from the athlete and staff perspective". BMJ Open Sport Exerc Med 2021;7:e001217.
- 8 Edouard P, Caumeil B, Verhagen E, et al. Maximising individualisation of sports injury risk reduction approach to reach success. Braz J Phys Ther 2022;26:100394.
- 9 Ekstrand J, Lundqvist D, Lagerbäck L, et al. Is there a correlation between coaches' leadership styles and injuries in elite football teams? A study of 36 elite teams in 17 countries. Br J Sports Med 2018;52:527–31.