

### Anxiety & Getting Injured.....

One of my colleagues at work sent me a research paper the other day. This followed on from a conversation we had in the previous week in relation to players sustaining injuries following illness. We have started to gather some decent information that our players are at a much greater risk of injury; both contact and non-contact up to a month after illness.

In short, the study looked to determine preparticipation predictors of injury and illness before the 2015 International Association of Athletics Federations World Championships in Beijing. A total of 307 athletes completed a preparticipation health screen, whilst new injuries and illnesses that occurred at the championships were prospectively recorded.

116 athletes (38.3%) reported an injury symptom during the month before the championships, while 40 athletes (13%) reported an illness symptom. 20 (6.5%) of the participating athletes sustained a health problem during the championships. Endurance athletes were almost 10-fold more likely to sustain an in-championship illness than speed/power athletes (OR, 9.88; 95% CI 1.20 to 81.31;  $p=0.033$ ). Participants reporting a preparticipation gradual-onset injury symptom were three times more likely (OR, 3.09; 95% CI 1.08 to 8.79;  $p=0.035$ ) and those reporting an illness symptom causing anxiety were fivefold more likely (OR, 5.56; 95% CI 1.34 to 23.15;  $p=0.018$ ) to sustain an in-championship injury.

The link for this study can be found at the bottom of this page.

Whilst this is to be expected given what we know about the what happens to the nervous system when we suffer illness we are looking at revising our return to training protocols for the elite athletes we work with following illness.

Similar to any physical injury i.e. muscle tear, fracture, tendonopathy, following injury we progressively load tissue using a logical and systematic approach to return our athletes to full health and enable them to return to the training and match-day field.

Despite evidence regarding illness and its effects of physical performance there is little guidance out there as to how to integrate athletes back into training post illness.

That said the biggest standout for me regarding this particular research paper is the evidenced link between heightened injury risk and psychosocial issues.

**Those athletes reporting an illness symptom causing anxiety were fivefold more likely (OR, 5.56; 95% CI 1.34 to 23.15;  $p=0.018$ ) to sustain an in-championship injury.**



For me this is obvious.

Injury of any type is the result of our bodies being unable to tolerate stress. When we reach failure point any tissue, be it bone, ligament, muscle, fascia etc, will break. This could manifest itself in a muscle tear, tendonopathy, bone fracture, ligament tear etc etc.

What we often don't consider is other stressors, non-physical stressors that contribute towards an athletes overall 'stress' level. Ultimately the more are athletes are 'stressed' via physical and non-physical parameters there more likely to break down. Obviously, recovery strategies or for a better term 'de-stressing activities' play a big part in this process, given what we know about physical stressors, recovery and the principle of supercompensation. In short, if we progressively load, we adapt, assuming adequate recovery is observed.

But, how often do we really observe and acknowledge the non-physical stressors that may have contributed towards an athletes injury?

In most environments, this happens very infrequently if ever!!!

If it does it's usually reactive i.e. an athlete is injured, then we review why it has happened, then we discover some of these non-physical stressors have potentially contributed towards that athletes injury.

For an athlete these non-physical stressors could be financial, contract related, include player selection, issues with family or friends.

We often forgot about athletes lives away from the training and match-day environment.

We often forgot or fail to acknowledge the effect these stressors have on physical preparation and injury risk.

Rather than a reactive system, wouldn't we be better at trying to screen and observe these stressors frequently, to pick up any possible issues that might predispose injury, to try prevent injury before it happens. A more proactive approach seems reasonable rather than reacting to injuries after they have occurred.

Like I say, as simple as this sounds, it doesn't happen.

In the monitoring system, I have developed to monitor athlete's physical and wellbeing status as part of their pre-training testing, we include psychosocial scoring.

Without this there is no way for us to regularly monitor psychological status. Without such a system by the time we find out about these other off-field issues athletes may have, its often too late, as often they have already contributed towards injury and/or reductions in performance.

Performance for me is the product of fitness minus fatigue.

**Performance = Fitness – Fatigue**

These non-physical stressors ultimately affect fatigue, in not allowing our nervous system to down-regulate. If we are always in 'fight or flight' and never in a 'rest and digest' state how can we expect to relax and recovery from physical exercise. As such our level of fatigue will be much greater and linking back to the equation above would result in a detriment in performance. So not only are de-stressing activities injury prevention based but they are also performance based.

By failing to look out for stressors, not just the physical stressors, we are missing a big trick!!!

Hope you enjoyed reading this post,

AB

Article Reference: Timpka et al (2017) Preparticipation predictors for championship injury and illness: cohort study at the Beijing 2015 International Association of Athletics Federations World Championships. *British Journal of Sports Medicine*, 51 (4), 271-276.