


In-between the Ears: how concussion reshaped my life

Christopher Luff,^{1,2} Gill Cowen ³

BEGINNING

Life was good, playing football, going out with friends and working as a boilermaker! Even after my first two concussions this pattern continued; I had no idea what was ahead.

FIRST CONCUSSIONS

My first concussion was in 2012 playing football. I took a big hit, was disorientated and confused, but recovered quickly. I went out drinking with friends the next day and played, symptom free, the following week. A year later I was involved in a scuffle while intoxicated outside a club. I received a blow to the back of the head, vomited for the next 48 hours and had headaches for a week. My symptoms then resolved and I thought no more of them.

FURTHER CONCUSSIVE INJURIES

Four years later, I was sling-tackled during a game. Unable to brace, my head slapped the ground. I played on, but postgame felt confused, unsteady and like an outsider watching in on what was happening around me. On this occasion my symptoms persisted. One week later, I still did not feel 'quite right' and I sat out for 6 weeks due to visual disturbance, light hypersensitivity, headaches and disturbed mood.

DESCENT TO ROCK BOTTOM

After 6 weeks on the bench I was desperate to return to football. I convinced myself that I was well and reported to the medical team that I was asymptomatic; I was not. At the start of that year my goal had been to play Senior Finals, and this was my driving factor to return. During my first game back I sustained a further knock to the back of my head and had immediate intensification of my symptoms; I did not play on.

Four weeks later, driving home from work early one day due to a migraine, it

suddenly hit me that things were not right. I broke down crying but could not grasp why I felt so emotional. I felt like I was fighting a silent battle with no obvious physical injury which would allow me to explain my emotions to others. I kept this from everyone closest to me, spiralling into a dark hole. I could no longer continue work as a boilermaker; symptoms of blurred vision and migraine headaches were preventing me from accurately reading the plans; it was unsafe for me to be there. I knew had to think of a career change. I also knew I needed help!

I started to study to become a personal trainer. I struggled; my concentration was poor and I felt like I had 'brain-fog'. I was very sensitive to light, with fluorescent light globes triggering headaches. I was advised to sit in a dark room, but this was no good for my self-worth; I wanted to get better, to retrain and move forwards. My stress and anxiety levels began to increase. I was unable to tell what were postconcussion symptoms and what was stress-related. I had my first panic attack driving on the freeway. I had to pull over. I did not know what was happening. A feeling of death rush over my body, I was sweating profusely and felt like someone had punched me in the chest.

DILEMMA OF MANAGEMENT

There was no 'right pathway' to recovery. I had visited general practitioners and neurologists on numerous occasions, with

all of them saying the same thing, 'wait it out, it will get better'. They recommended rest, offered me antidepressants to improve my mood and anti-anxiety medication to improve the anxiety I had started to experience, but, for me, these did not help. I felt helpless and alone with no one really knowing, nor understanding, what I was going through. Melatonin was offered to help me sleep but, again, for me, this was ineffective. I decided that I had to take my recovery into my own hands. I started researching the latest science relating to concussion.

I discovered evidence supporting medication for symptom management,¹ vestibular-ocular rehabilitation,² supervised exercise,³ neuropsychology, clinical psychology⁴ and dietary modification⁵ to reduce neuro-inflammation.⁶ I stumbled across a podcast by an American Physician who treated war veterans with concussions from shock blast trauma,⁷ and this was the first time I had felt that someone else understood my journey. Even though I was not a soldier, the symptoms he described clearly resonated with me and I decided to seek the support of an Australian doctor affiliated with his US practice. This required me to fly interstate and receive a private consultation. I was fortunate enough to receive financial support from my football club to allow me to pursue this. Many people suffering from prolonged symptoms of concussion do not have private funding and have limited recovery pathway options. This is wrong.

LIGHT AT THE END OF THE TUNNEL

After 9 months of pain and struggle, I worked, using the new advice I received, on reducing foods that induce inflammation, drinking less alcohol and monitoring

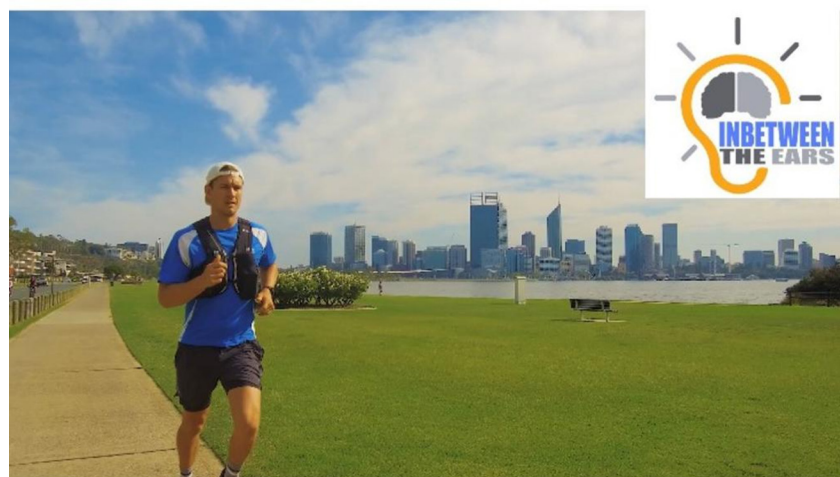


Figure 1 Chris Luff: personal trainer.

¹Southside Strength and Conditioning, Alfred Cove, Western Australia, Australia

²In-between the Ears, Perth, Western Australia, Australia

³Curtin Medical School, Curtin University, Perth, Western Australia, Australia

Correspondence to Dr Gill Cowen, Curtin Medical School, Curtin University, Perth, WA 6102, Australia; Gill.Cowen@curtin.edu.au

links between my gut and brain health. I gradually increased my levels of exercise and focused on being more grounded. Within 2 weeks of returning home I could see an improvement. I returned to football in June 2018, playing country league, and we won a premiership that year. I am working as a qualified personal trainer and feel like I have come full circle (figure 1).

Along the way, I have met many who have had their own struggles with concussion. I have learnt that there is no 'one way' for concussion to be managed. Everyone has a different set of overlapping symptoms and individual requirements. We have created a foundation, In-between the Ears, to provide advice and support to people through their concussion journey. The foundation aims to educate sporting clubs and the broader public about concussion, its management, and how to support those who have sustained such an injury.

Acknowledgements SH, PhD, Bsc Exercise & Sport Science, Bsc Preventive Health Research Fellow, ACRISP, Edith Cowan University.

Collaborators GC: senior lecturer, Curtin University, Curtin Medical School. SH: research fellow, Edith Cowan University, ACRISP.

Contributors Content of submission: CL. Support with editing and submission: GC.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Obtained.

Provenance and peer review Not commissioned; internally peer reviewed.

© Author(s) (or their employer(s)) 2020. No commercial re-use. See rights and permissions. Published by BMJ.



To cite Luff C, Cowen G. *Br J Sports Med* Epub ahead of print: [please include Day Month Year]. doi:10.1136/bjsports-2019-101848

Accepted 6 February 2020

Br J Sports Med 2020;0:1–2.
doi:10.1136/bjsports-2019-101848

ORCID iD

Gill Cowen <http://orcid.org/0000-0002-7092-4589>

REFERENCES

- Mullally WJ. Concussion. *Am J Med* 2017;130:885–92.
- Kontos AP, Deitrick JM, Collins MW, *et al.* Review of vestibular and oculomotor screening and concussion rehabilitation. *J Athl Train* 2017;52:256–61.
- Leddy J, Hinds A, Sirica D, *et al.* The role of controlled exercise in concussion management. *Pm R* 2016;8:S91–100.
- Leddy JJ, Baker JG, Willer B. Active rehabilitation of concussion and Post-concussion syndrome. *Phys Med Rehabil Clin N Am* 2016;27:437–54.
- NCT02723344. Biological signatures, probiotic among those with mTBI and PTSD, 2016. Available: <https://Clinicaltrials.gov/Show/Nct02723344>
- Kawa L, Arborelius UP, Yoshitake T, *et al.* Neurotransmitter systems in a mild blast traumatic brain injury model: catecholamines and serotonin. *J Neurotrauma* 2015;32:1190–9.
- Gordon M. *Traumatic brain injury – a clinical approach to diagnosis and treatment (SN-978-0-9904630-1-6)*, 2015.