Parliamentary Submission - Concussions and repeated head trauma in contact sports

My name is Julie Speight. I was Australia's first female track cycling Olympian, a multiple state and national champion, Commonwealth Games Silver medallist and Australian Cycling Hall of Fame member. Before I address the Terms of Reference, I would like to point out that concussions are prevalent in cycling which is not strictly considered to be a contact sport. However, due to the prevalence of crashes during training and racing, most cyclists have suffered more than one concussion and innumerable sub-concussive knocks to the head. Crashes, falls, and knocks to the head are all a part of the life of most elite-level cyclists.

My experience with concussion predated my cycling career when I experienced three serious concussions requiring medical intervention between the ages of 11-13 years during play time at school. My cycling journey started at age 14 and I competed at the highest levels both in Australia and America until my retirement in 1997. During those 17 years of competition, I racked up over 30 serious concussions, receiving medical attention for 8, though in hindsight I now know that I should have received medical attention for all of them. Since retirement from racing that tally has climbed to over 60 with 14 in total requiring medical attention, usually to treat associated broken bones.

Over the course of my cycling career I was never prevented from racing due to concussion, my helmet was never inspected for suitability, and I was never advised by coaches to refrain from training. The mentality was to push on at all cost. At 56 years of age, I suffer from chronic migraines, daily headaches, imbalance issues, partial deafness, short attention span, pronounced memory problems, and bouts of depression and extreme anger, attributable to my history of head trauma. I am an ambassador for the Australian Chronic traumatic Encephalopathy Bio bank, a current research patient for lead CTE researcher Dr Rowena Mobbs, and have pledged donation of my brain to the Australian Sports brain Bank to be examined for signs of CTE after I die. Untreated sports concussions have seriously impacted my life in every aspect. I would like to address the following Terms of Reference:

a. **the guidelines and practices contact sports associations and clubs follow in cases of player concussions and repeated head trauma, including practices undermining recovery periods and potential risk disclosure;** - During my years of racing (1981-1997) concussion protocols did not exist, and if they did, it was not evident. As long as a rider had not broken a bone and his or her bike was still in working order, they would be encouraged to continue racing. No enforced rest periods following head injuries were observed or enforced. The governing body for Australian cycling, AusCycling, now has an embedded Concussion Protocol policy which states that riders with suspected or diagnosed concussion will be suspended from racing until they provide AusCycling with a medical clearance.

However, anyone watching the Tokyo Olympic track men's team pursuit qualifying race would have seen the horrific crash of Alex Porter when his handlebars broke. Alex crashed face-first onto the track at speed and instantly reached for his head once he stopped sliding. He appeared agitated and distressed following the crash. Limited footage of any medical assessment was broadcast but what we did see was Alex re-joining the team less than an hour (20 minutes) after the crash to qualify for the next round. Alex did not race any further rounds. It was clear from his facial injuries and footage of the crash that he had sustained a significant blow to the head, yet he was not sidelined as a precaution immediately after the

crash, but was allowed to continue for the race re-start, and was only sidelined after qualifying. It would appear that an immediate assessment of concussion was deferred to allow the team to qualify.

I note that Alex retired from professional cycling less than six months after this crash.

b. **the long-term impacts of concussions and repeated head trauma, including but not limited to mental, physical, social and professional impacts;** I experienced constant headaches following my racing career but at age 47 I started to experience severe headaches that were later diagnosed as chronic vestibular migraine. Over the course of the next 9 years my symptoms intensified with an associated loss of hearing that is classified as profound hearing loss in my left ear and moderate to severe hearing loss in the right. Along with the chronic migraines, I also experience frequent bouts of confusion, depression, and severe anger. I have impaired short-term memory and issues with long-term memory, both of which are worsening.

My ability to maintain focus and attention has severely impacted my career as a federal government employee where I have been forced to reduce my working days to just two days per week. I work in a screen-based position and due to extreme nausea, I am unable to work for long periods without taking regular screen breaks. My symptoms continue to escalate as I age and as such, I face an uncertain future and limited ability to continue working at the same level of competency. The financial impact on my reduced work life span will most certainly have a dire effect on my ability to fund my retirement.

In short, my symptoms resemble that of a person with early-onset dementia.

Research has shown that someone that has experienced more than one concussion is more likely to experience more. The likelihood percentage increases with the number of concussions. The AusCycling concussion protocol states that all concussion events will be recorded on individual member profiles and while it states that riders will be medically suspended until they provide a medical clearance for individual concussions, it does not state whether any longer-term suspension or intervention happens for riders that may have multiple concussion events recorded.

I believe that there needs to be a record of total concussions on the appropriate sports code registers for all athletes that have experienced multiple concussions and that regular testing is introduced once that number passes an agreed limit such as perhaps 10, though in reality less would be better. It should be noted at this juncture that CTE is not only the result of full-blown concussions, but also from the accumulation of sub-concussive knocks to the head. In short, any injury to the head should be assessed and addressed.

c. the long and short-term support available to players affected by concussion and repeated head trauma; In 2021 the Australian Olympic Committee partnered with the Australian Institute of Sport to announce an athlete well-being program which provides mental health support services for current and previous Olympic and AIS athletes. While this support provides mental health services it does not mention any financial support for the costly medical tests required for diagnosing and monitoring decline in cognitive function as a result of multiple concussions.

I have had to pay thousands of dollars for tests and procedures that are only partially covered by Medicare and am still waiting to hear of any progress on an application to be

included in the National Disability Insurance Scheme (NDIS). Changes to Medicare and NDIS that would allow for the recognition of ex-sports people to be treated for the long-term effects of repeated head trauma with nil to minimal cost would be very helpful. Also introducing sports players to be eligible for workers compensation mechanisms would also alleviate the financial burden (h. **workers, or other, compensation mechanisms for players affected by long-term impacts of concussions and repeated head trauma)**

d**. the liability of contact sports associations and clubs for long-term impacts of player concussions and repeated head trauma;** I believe that the liability of the sports associations sits firmly with how rigidly they follow their concussion protocols even when at big events such as grand finals and Olympic Games. If procedures are not followed at these times, then the association should be held accountable for not enforcing its own protocol and policies.

e. **the role of sports associations and clubs in the debate around concussion and repeated head trauma, including in financing research;** All Sports associations, community clubs and coaches have a role to play in educating their teams on concussion and the effects of repeated head trauma. It is negligent to not address it. I believe that a percentage of membership fees should go towards CTE research and funding education programs for sports people on how to care for concussion and head trauma. There is no doubt that not resting after any of my concussions, no matter how serious, has contributed to my current symptoms. At the time that I was racing there was intense pressure to continue on racing no matter what, for fear of losing your place in the rankings. Individual sports should look at ways to negate this so that players that must spend injury time away from play are not penalised by being dropped from the team.

i. alternative approaches to concussions and repeated head trauma in contact sport, and awareness raising about its risks; As far as cycling is concerned, there is an awareness of the dangers of head injury but not for after-care of head injury or replacement of helmets. I believe that we need to take more care with our helmets. We wear helmets that have been tested and rated to the AS/NZ 2063.2020 standard and international equivalent. The mandatory marking on these helmets states that “if the helmet shows signs of damage, destroy and replace it; and If the helmet receives a severe blow, even if apparently undamaged, destroy and replace it”.

The World cycling governing body, the Union Cycliste Internationale (UCI) technical regulation Article 1.3.031 states in part that “the helmet must be approved in accordance with the prevailing safety standards, must not have been modified and must not have suffered an impact or been involved in an accident”.

The AusCycling technical regulations are guided by the UCI regulations and note that all rider equipment may be subject to inspection prior to racing. This equipment includes helmet inspection. I propose that the government work with helmet manufacturers to provide reasonable costing to allow for racing cyclists to be able to purchase two helmets at the beginning of the racing season and a scheme whereby they can send damaged helmets back to the manufacturer and be able to buy a replacement at a reduced price.

Certainly, helmet inspections prior to racing need to be rigorous, and if the helmet is found to be damaged it should be confiscated and the spare helmet used. The challenge is to be able to determine when the helmet has suffered a substantial blow and should be replaced, when it is doubtful that an eager rider will divulge this information if it means having to destroy his or her expensive helmet that may look fine.

There are currently shock indicator devices on the market that can record the number of impacts. There is a device called the ANGI which is produced by the Specialized bike company. The device attaches to the rear of the helmet and detects substantial linear and rotational forces that cause your brain to slosh around inside your skull and may leave you unable to help yourself. Paired with a smartphone app, if the ANGI detects force consistent with head impact, it sends an alert to the phone, which triggers an alarm and starts a countdown. If the rider is hurt and unable to stop this countdown, the app sends a text and email message to the rider's designated emergency contacts with the location of the rider.

Above all I strongly advocate for increased awareness of after-concussion and head trauma care. Media reporting on cycling races and coaching staff should take care not to praise the "toughness" or "bravery" of riders that get back up and continue racing after a concussion, but rather should warn of the dangers that continuing with a concussion may present for that rider's future health and well-being. Recovery periods off the bike and screen and device restriction protocols need to be advertised more widely. Riders should also be made aware of the post-concussion depression that often occurs in the days and weeks following head trauma, with appropriate support tools provided by sports associations and teams.

If I could change one thing about my cycling career, it would be that I would have taken as much care to rest my brain following a concussion, as I took to rest my various broken bones. This is the one thing that absolutely needs to be enforced.

Thank you for your time.

Julie Speight OLY