Letter to the Editor: Is Golf the New Football or Have We Made It So?

Sir,

We read with interest the article by Goebel et al. [1] (Goebel D, Drollinger F, Drollinger A. Lumbar Spine Injuries: Primary Prevention in Amateur and Professional Golf Players. *Sports Med Int Open*. 2018; 2:179–184). We have been deeply interested in this sport and delved on the musings of competitiveness causing athletes to put un-natural strains on their bodies and vice-versa. While we do understand the cause of Lumbar spine injuries caused by athletes putting undue stress on their bodies, we need to understand that the reason for the same.

If we have a look at the driving distances of pro-golfers over the years [2] (► **Table 1**) we will notice that Dan Pohl held the lead averaging 274.3 yards per drive with the tours average being a paltry 256.89 yards. Since then the average distance has kept on increasing with the maximum increase being in the year 2003. What is even more striking is that despite his numerous PGA titles, Tiger Woods never features on the leader board. So are we missing something here which is not entirely explained by just the golf swing of the players as has been beautifully explained by the author?

There are many factors that we might have overlooked. The physical condition of the golfers is now better than before. The clubs they use are no longer wooden. In fact, they are now made using titanium or zirconia and are now computer designed for greater durability, accuracy and balanced weight distribution, the driver's heads have become larger for better distance and accuracy. Golf courses are now better maintained. They are regularly mowed and grass is kept trim to allow minimum friction and ensure maximum driving distance.

Another big reason for the increased driving distances is the golf ball. The earliest golf balls were likely wooden made from Beech or Boxroot and were later replaced by "Featheries" or "Hairies", which were leather sacs filled with feathers or hairs respectively. In 1848, Rev. Dr. Robert Adams

created golf balls out of the tree Gutta Percha called as "Gutty" balls. The Gutty golf ball was created from the dried sap of the Sapodilla tree. Soon after it was noticed that balls with marks or 'dimples' on them fly farther as the air turbulence reduced the relative weight and thus they flew further. Further evolution came with the 'multilayered' ball which was marketed as 'Titleist 1™'. It replaced the liquid in the wound ball with two cores- rigid inside core which allows it to fly further and the flexible outer layer that ensures accuracy. This was introduced in the year 2000 and became widely accepted within 2–3 yrs, around the same time that driving distances skyrocketed [3].

However, the major point of this article is that due to all these advances and because the players are now putting undue stress on their body to hit farther, the courses have had no choice but to increase the course length. In the 2014 masters tournament at the 14th hole (named 'Chinese Fir') of the Augusta National, Bubba Watson was able to cut the corner at an L shaped course and fly his ball over the trees, directly in front of the green, thus reducing a Par 4 hole to a two shot one. This was not possible before. During the same time, the Augusta National course increased its length from a measured 6 985 yards in the year 2000 to 7 435 yards in a 10 year span [4]. As for the 14th hole the club decided to buy land behind the L shaped course and many like it, making it more difficult to 'cut-the-corner'. Thus the golfers now had to hit farther and again put undue stress on their bodies, leading to RTD, as the authors have so beautifully explained.

What we need to understand and advocate is how much is too much?

There are many precedents in sports where regulating authorities have neglected the health of their players in the face of the public's demand for increased competitiveness. A precedent, which bears similarity with golf, is tennis. With a similar swinging action needed to hit the ball like that described by the author

for golf, similar injuries were bound to be seen. Andre Aggasi lost his final match to 25-year-old Benjamin Becker, a German who'd turned pro the year before and was ranked 112 and announced retirement just 4 weeks before Wimbledon. In his biography 'Open', he describes a tough childhood with rigorous training by his father, a factor which later led to his success and his spondylolisthesis. He was taking steroid injections along with other anti-inflammatories during his final years of tennis. When it was all over, the crowd at Arthur Ashe stadium gave Agassi a four-minute standing ovation as he rested in a court-side chair before making his goodbyes.

There is a debate on whether the golf ball size needs to be increased and whether dimpling needs to be removed. All these would only lead to further stress in the already traumatized spines of golfers and increase in Lumbar spine injury rates. What we need to propagate as aptly pointed out in the article is the need to take care of the athlete's body and not push it over the breaking point. Alas the fate of golf should not be that of football with Lumbar spine injuries being compared to that of Chronic traumatic encephalopathy and adjacent segment disease dictating the lives of these professional athletes.

Disclosure

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References

- [1] Goebel D, Drollinger F, Drollinger A. Lumbar spine injuries: Primary prevention in amateur and professional golf players. *Sports Med Int Open* 2018; 2: E72–E73
- [2] How driving distance has changed over the past 40 years on the PGA tour. Available at: <https://www.pga.com/news/pga-tour/how-driving-distance-has-changed-over-past-40-years-pga-tour> Accessed on March 15 2019

► **Table 1** The Average driving distance on the PGA tour for the past 40 years along with the leader and his average¹.

Year	Average Distance	Leader	Leader's Average
2018	295	Trey Mullinax	318
2017	292	Rory McIlroy	316
2016	291	JB Holmes	314
2015	290	Dustin Johnson	317
2014	289	Bubba Watson	314
2013	288	Luke List	306
2012	290	Bubba Watson	315
2011	291	JB Holmes	318
2010	287	Robert Garrigus	315
2009	288	Robert Garrigus	312
2008	287	Bubba Watson	315
2007	289	Bubba Watson	315
2006	289	Bubba Watson	319
2005	288	Scot Hend	318
2004	287	Hank Kuehne	314
2003	286	Hank Kuehne	321
2002	279	John Daly	306
2001	279	John Daly	306
2000	273	John Daly	301
1999	272	John Daly	305
1998	270	John Daly	299
1997	267	John Daly	302
1996	266	John Daly	288
1995	263	John Daly	289
1994	261	Davis Love III	283
1993	260	John Daly	288
1992	260	John Daly	283
1991	261	John Daly	288
1990	262	Tom Purtzer	279
1989	261	Ed Humenik	280
1988	263	Steve Thomas	284
1987	262	John McComish	283
1986	261	Davis Love III	285
1985	260	Andy Bean	278
1984	259	Bill Glasson	276
1983	258	John McComish	277
1982	256	Bill Calfee	275
1981	259	Dan Pohl	280
1980	256	Dan Pohl	274

- [3] The Augusta National Course. Available on: http://www.masters.com/en_US/course/index.html Accessed on March 15 2019
- [4] The Golf ball that made golfers too good. Available on: www.vox.com Accessed on March 15 2019

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