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Jofra Archer's elbow injury 'will need managing' for the rest of his career

Ashes fears grow as biomechanics expert says there is no guarantee England quick will be pain free even if he opts for surgery

By Tim Wigmore

17 May 2021 • 5:39pm



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Jofra Archer may have to manage injuries to his right elbow for the rest of his career, even if he opts for surgery, a leading biomechanics expert has warned.

[Archer will miss the Test series with New Zealand](#) after the issue with his right elbow flared up while playing for Sussex. [He has had a series of issues with his elbow over the past 18 months](#). With a five-Test series at home against India, the T20 World Cup and the away Ashes later this year, [England are now considering whether to send Archer for an operation](#).

Dr Paul Felton, a senior lecturer in biomechanics at Nottingham Trent University who has worked with the England & Wales Cricket Board, has told *Telegraph Sport* that [Archer's action may be the root cause of the issue](#). There is no guarantee that Archer would be pain-free after going under the knife.

“It’s a bit similar to backs and stress fractures – I expect it will need managing,” Felton said. “The elbow might adapt to a point where the bone is physically strong enough to handle this workload. But at the same time it might not.”

Analysis of Archer’s action suggests that his greatest weapon - how [he hyperextends his arm to generate extra pace, straightening his arm from beyond 180 degrees before releasing the ball](#) - is also his greatest curse, and the trait that makes him more susceptible to injury.

“The hyperextension gives him anywhere upwards of five per cent ball speed advantage over somebody without his hyperextension and all the other characteristics at the same time,” explained Felton. “From a biomechanics point of view, it helps his performance, but it probably is going to be one of these injury risks because it's a bit different to normal – the force on the elbow is likely to load the bone differently when hyperextended to what the human body has evolved to be adapted to. So while it aids him from a performance point of view, it could be his Achilles’ heel from an injury perspective.”

Shortly after Archer bowled 42 overs in New Zealand's first innings in Mount Maunganui in November 2019, his elbow problem flared up | CREDIT: MICHAEL BRADLEY/AFP via Getty Images

The nature of Archer's elbow injuries mean that he will require bespoke management throughout his career, especially in the Test game. [His elbow problems are bone issues related to bowling load](#) - meaning that the problem is triggered by the amount of bowling that he does. As such, Archer's elbow issues have come after bowling a higher volume of overs in the Test game, rather than in limited-overs cricket.

"Bones tend to get injured over a repetitive cycle - it's not like muscular injuries which can be less predictable. With bones, you can map their adaptation over time - if you bowl a lot over a short period of time then you can over-stress the bone. It's the same with back injuries."

Given his worth to the side, a tempting option for the England management is to limit Archer's bowling, with the hope that he will be fully fit for the most important fixtures - such as this winter's T20 World Cup and the series in Australia. But, paradoxically, this could actually increase the risk of injury when Archer does return.

Not using elbows enough causes the bones to lose density, Felton explained. "You can go through a cycle if you're not careful that you get injured, then it gets weaker, and when you come to rehab - it isn't where it was before, so you have to build it up slowly. While over bowling's an obvious danger, under bowling is also a danger. I expect that the same will be true for the mechanisms in the elbow potentially causing Jofra's elbow issues."

For all the improvements in the knowledge of fast bowling biomechanics in recent years, the uniqueness of Archer's action - especially his hyperextension - means that deeper understanding of how best to manage him is needed, Felton believes. "There's not that many people that have the unique characteristics that Jofra has," he says. Trying to understand and best manage the workload of these unique actions is a learning curve."

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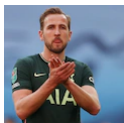
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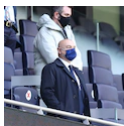
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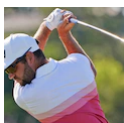
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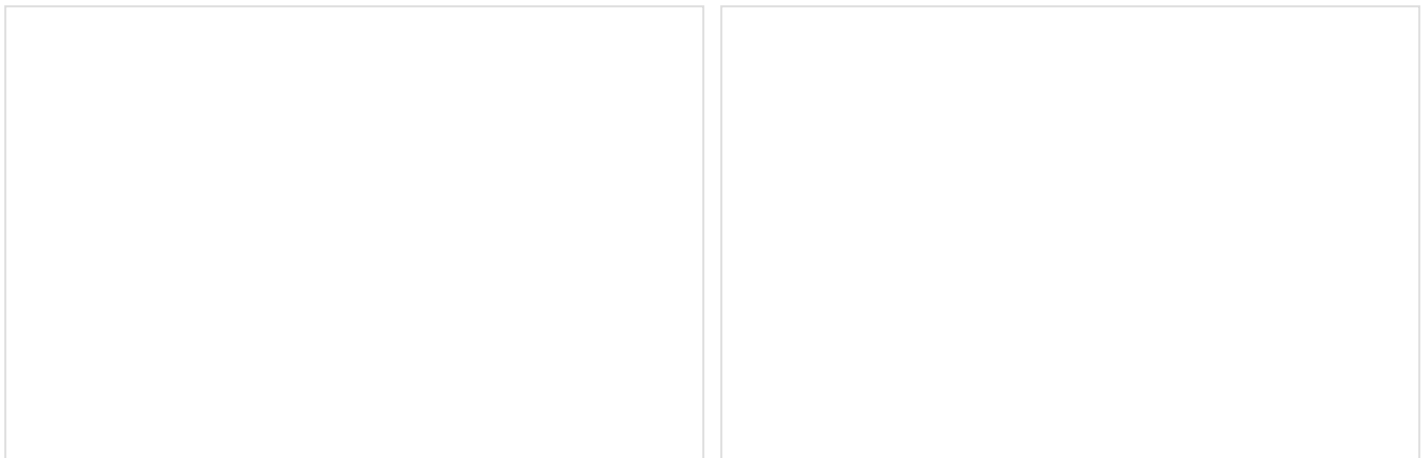
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