

Oral Health Status of Academy Players

Dr Daire Rooney: interviews Dr Saul Konviser:

(This podcast has been transcribed to provide a convenient text-based version for readers)

Daire Rooney:

Welcome to this Football Medicine and Performance podcast.

I'm Daire Rooney, an editor for the FMPA and your host for today's podcast.

Today I'm delighted to be joined by Doctor Saul Konviser. Originally from Cape Town, South Africa, Saul is a general dentist with a special interest in sports dentistry based in London working to promote oral health amongst the sporting community. He also was a Master's in International Health Policy from the London School of Economics. Saul is no stranger to the podcast series featuring back in 2022 when we explored at that time the growing field of sports dentistry and the implications for oral health on training and performance football.

In this podcast, we will discuss how things have evolved in the world of sports dentistry three years on from our last discussion, as well as Saul's recent research looking at the oral health status of Academy footballers.

Thanks very much for joining us, it's great to have you back on the podcast.

Saul Konviser:

Thank you very much for having me and inviting me back on.

Daire Rooney:

No, my pleasure.

Just to start our lessons we [should] probably go back and listen to the 2022 podcast, but can you give us a snapshot of how the field of sports dentistry has evolved since we last spoke in 2022?

Dr Saul Konviser:

Well, I think we need to probably have a look back 10/12 years or so to sports medicine conferences and football medicine conferences where dental wasn't on the table.

It wasn't really included, not that we were excluded, but they weren't really sort of front of mind and there weren't many lecturers, lectures or workshops about oral health in sports being included.

And now at the last FIFA Sports and Exercise and Excellence conference, we were included and at more sports medicine conferences around Europe.

There are dental lectures and dental workshops and collaborations on an academic level especially as well.

So, it's definitely evolving and it's definitely making progress at that level, which is great to see.

This is not just here in the UK, it's across Europe, which is very encouraging.

Daire Rooney:

And from a club point of view, have you seen any particular developments in that field and how clubs and athletes are approaching oral health as part of their overall performance strategy? The importance of oral health in football

Saul Konviser:

Well I think, again, just to take a look back, the original research done by my colleague, Professor Ian Needleman at the Eastman Dental Institute in 2015, published 2016, looked at the oral health of first team football players in the UK.

That did show that there was a high incidence of oral disease, tooth decay, gum disease and inflammation amongst these players. The call to action and the recommendations was that change needed to happen.

There needed to be more inclusion of oral health across the board from an education point of view and routine dental screening.

And although, yes, there has been some changes, it's not necessarily been as widespread or as up taken as much or as well as we would have wanted or have expected, to be honest.

But, we'd like to think that's part of the reason why we wanted to do this study, which did to give us further data and evidence back up these calls for action as well.

Daire Rooney:

And, particularly amongst the athletes themselves, have you seen a shift in in their attitudes towards prioritising their own dental care? Is that something that education has improved from that perspective?

Saul Konviser:

Well, again, I think and we'll address it in a moment.

I'm sure with regards to the actual study that we did, there's definitely an awareness by players of the importance of oral health, on their general health well-being and their sporting performance.

I don't believe it necessarily translates into action at this point.

I think there is certainly a growing trend amongst sports people across the board, not just in football with more of an interest in things like cosmetic dentistry, for example, whether it be rehabilitations or a lot of restorative work or things like orthodontic work to correct the position or the appearance of the teeth.

Whilst we understand that one would like to think if they are prioritising the cosmetic and the aesthetic side of things, there is also an understanding of the importance to have the health coincide with that.

But unfortunately, that doesn't always happen.

And having a lot of players that have this work done, whether it be home or abroad, a lot of the time there is a lot of materials put in there for example or things are moved and it still needs to be maintained.

Unfortunately, what we do find is that there is this trend for cosmetic dentistry, for example, like we said, and players or athletes are not maintaining it, which therefore puts them at greater risk of periodontal issues, so gum disease, tooth decay, potential occlusal issues. The way the bite is balanced of course has knock on effects.

I think maybe there's a misconception that it might look all lovely from the outside, you've had all these lovely veneers or crowns or orthodontics to correct everything and it's and it's fixed, but actually, in many ways, that's when the work starts for patients and they really need to maintain it because there are additional materials, additional surfaces in the mouth and they need to be looked after. And so, ensuring that players oral hygiene is looked after is, is really, really important.

Just to come back to the original question, I think there's a trend in patients and players and athletes understanding the importance of it but not necessarily putting into practice the necessary things to maintain things.

Daire Rooney:

That's, that's really interesting.

So, I suppose these footballers here perhaps, you know, seeking artificial work to improve the appearance of their teeth, is it fair to say that or potentially that they could be putting their teeth at increased risk by doing this, this kind of work?

Saul Konviser:

I mean, if it's not maintained, and it's not to say that the work being done is bad work, that's far from that. It's the work that needs to be looked after. If you have one filling or if you have 10 fillings or crowns you still need to be brushing. We still need to be flossing. We still need to be seeing the hygienist. We still need to be going for dental check ups because routine screening itself will only show us the clear and obvious issues.

Whereas a checkup in a dental practice, for example, will show if there is decay creeping in underneath crown or filling margins, for example, it's not just a quick fix, we want to maintain patients [oral health].

Some treatments may be slightly more invasive, which can potentially put patients or the teeth at risk of devitalizing the tooth, for example, which means the potential for the nerve dying off and root canals and things like that.

Patients and players and athletes, of course they can do these things. It's nothing, it's not saying don't do that, but what we're saying is, whatever is done, you need to look after it.

Otherwise, there is of course a risk that problems can arise which ultimately will or can affect the general health and well-being and potentially sporting performance because we know that oral health is associated with systemic health.

If we can maintain that, then you know, we can obviously try to make sure that that general health and well-being is well looked after as well.

Daire Rooney:

That leads us on to the next question quite nicely and that's, I'm afraid to do, is your recent publication in the BMJ Open Sports and Exercise Medicine Journal regarding the oral health status of Academy footballers.

Can you tell our listeners a bit more about the study and particularly what motivated you to study the script in particular?

Saul Konviser:

So again, like I've mentioned that previous studies done by at the Eastman Dental Institute looked at first team players and there was a call to action for more screening to be done and to be looking at younger players as well.

And, with my sort of public health hat on and doing a lot of work with oral health programs and education in schools as well, these are the next generation of elite athletes.

So, we wanted to look at the elite Academy set up, the 16 to 18 year olds, men's and women's to see what is the prevalence of oral disease essentially.

We know our criteria, we did look at required specifics looking at different indices which we were screening for:

- DMFT, which is decayed missing and filled teeth, teeth which have experience of decay are missing due to decay or have been filled due to decay.
- We looked at the presence of actual decay and, and the sort of the extent of that.
- We looked at the gum health.
- Periodontal health something called the basic erosive wearing examination and which looked at the extent of tooth wear as well in the athletes and the football players.

We also looked at the prevalence of dental trauma and then wanted to also get an idea as to their perceptions of the importance of oral health on their performance and ability to train and compete and overall well-being.

Daire Rooney:

And that's really interesting.

So, on how many participants did you have in the study?

Saul Konviser:

[We] had 160 participants, we very pleased with that and we had a great response from the clubs when we approached them and [we were] extremely appreciative of that. As soon as we spoke with the sports medicine teams, they understood the importance and the value of what we were doing. [They] were, of course, very keen to participate and the players were keen to participate, which allows us to collect more data to give a bit of representation, so that was very helpful. The numbers, I think you know, across the board, give us a good idea as to the representation of what is actually going on at the Academy level in elite football clubs.

Daire Rooney:

And are you happy to share some of some of the key findings of that research?

Saul Konviser:

I must say it was somewhat surprising the level of oral disease which we identified. Because when we look at it specifically, some of the players have been at the club since they were 9/10 years old.

But by the time they get to age group, they're in a very sort of structured environment. And there is access to excellent facilities and medics and sports scientists and physios and the whole team.

We were quite surprised to see quite high levels of tooth decay amongst this cohort. In addition to that, we also were comparing to national averages, equivalent age cohorts with other national epidemiological studies which have been published in England. When we say 'tooth decay', this is decay that we can actively see when we were doing the screening in the physiotherapy room, for example. So, this wasn't with X-rays, this is clear and obvious decay. For us to see it, it's, it's already quite extensive. We had over 30% of players who had active decay requiring treatment.

There was a very high proportion of players that had gingivitis, over 75% of players. When we say gingivitis, we're talking about the soft tissue inflammation. So, the gums are notably inflamed, bleeding, presence of plaque there.

And then also over 20%, about 22 1/2% had periodontitis. Now periodontitis is once the gingivitis has progressed and that is starting to affect the underlying supporting structures. So, essentially the bone which is holding teeth in place. That is an irreversible destructive disease process and these are young players, we're looking 16/17/18-year-olds.

Again, we also just need to, I think, remind people that the bacteria which is gotten to the point that it's destroyed the bone, is very aggressive bacteria. And, it's not just

sitting in the mouth. This is bacteria which is travelling in the bloodstream. It's travelling around the body. This is why we're talking and, and emphasizing the fact that oral health is, is associated with systemic health as well.

And it's really, really important that this is understood and in addition to that, the one thing which actually did probably surprise us the most was the instance of tooth wear that we saw.

We know that tooth wear, though it's multifactorial, there are a number of different ways that it can develop.

One is stressing induced clenching and grinding. Again, we fully appreciate that these players are under a huge amount of pressure and stress to make it to compete at a very, very high level. That is certainly evident in the patterns of tooth wear that we identified in the mouth in terms of where it is on the particular teeth. Other sources and causes of tooth wear could be gastric acids in the form of acid reflux or potentially even eating disorders.

And then, of course, there is the other cause, which is acid erosion. This is often from fizzy drinks, carbonated energy and sports drinks as well and then also you have the sugars in there as well. So that was the one which I think caught us off, it did surprise us that for such a young cohort to have such extensive levels of tooth wear that we would certainly not expect to see in this age group in the general public.

We were there to identify these things and flag them up with the participants, the players and with the clubs and highlight the issues that we're identifying so that of course, next steps can be taken to address them and ultimately prevent them.

Daire Rooney:

That's interesting.

So, would you say, just to clarify, that the oral health of these Academy footballers was on par with the general population, worse than general population or where?

Saul Konviser:

We would say that it's worse than the general population of the equivalent age cohort for where the studies are. I think actually apart from the actual clinical findings themselves, we also did a questionnaire and we did a clinical screening which looks at all of these things.

Again, there were some players when we were screening that had active [issues], they were in pain at that point in time. There were dental abscesses visible and there were gross, clearly large cavities there.

But also, oral health behaviours were also surprising for some. I think over about 75% did brush their teeth twice a day, but over 15% brushed once or less a day.

I think we need to just also look at the fact that these are athletes that are looking after every aspect of their body or every aspect of their body is being assessed and treated and looked after. The mouth is not being necessarily, you know, prioritized in the same level that that everything else is.

Daire Rooney:

And why is that?

Saul Konviser:

That's when it comes to the education side of things because, as a bare minimum, they should be brushing their teeth twice a day. There should be incidental cleaning with dental floss or incidental brushes, for example, to clean the gums and prevent decay and plaque collecting.

But then in addition to that, there was also over 20% hadn't attended the dentist for two years or more. So that is quite a lot of people that hadn't had a professional dental checkup.

We're not just talking about screening on site at a club. we're talking about those who haven't been to a dentist for a check-up or a hygienist, haven't had X-rays.

So, there would have been a lot of potential issues sitting there just waiting and these are the things which are just slowly progressing until eventually the night before a game, the night before training or during training or during a game, something may escalate and the inflammatory process takes place and they're in pain and they can't compete.

That's ultimately going to affect their ability to perform as well.

Daire Rooney:

And given this high level of decay that you saw in your study, when you were collecting your data, did you find that clubs had any structured oral health programs in place for their comedy players? The lack of structured oral health programs in football clubs?

Dr Saul Konviser:

So, in our experience, we didn't find that there was a huge sort of very well-established programs in place that we that we came across, which I think is based on the fact that about 10 years ago the previous study did call for this.

There is, like we mentioned at the start of the podcast, dental is being included more and more in say the academic side of things. We're not necessarily seeing it translating into the practical side and in play and at clubs.

There wasn't really as much as we would have liked in terms of formal oral health education, oral health screening protocols and plans in place. But, I think it's important to say, and I did touch on it before, that once we're having the conversations with the clubs and the sports medicine teams, there has been great interest in in following up as

a more routine protocol, ie pre-season screening to try to incorporate dental health, oral health education.

We have done oral health education webinars for clubs and gone in to see players to do workshops with players as well. So there's definitely been a very, very positive response, which is what we what we wanted.

I think it's really important to keep up the momentum on this because you've got the data and yes, previous data and research has been done, but ultimately, change does have to happen on the ground.

I think it's also, like we said in the research, the different parties have a role to play. And, there's a duty of care for clubs to incorporate oral health education within their education programs in the same way that they incorporate across the spectrum, ensuring that players health and well-being is being looked after.

But there's also the other side from a grassroots level and getting players to take responsibility as well, because they are older. They're not small children that have to have their parents brush their teeth for them or someone, you know, they are able to do these things themselves.

Just going sort of up a level from a football authority point of view, there is a responsibility, like a set duty of care for football authorities to look at taking [action on] this data and various other specialties as well.

If this can make an improvement to the health and well-being and ultimately sporting performance of players and even if you call it the one percenters, there needs to be leadership and guidance and guidelines and protocols put in place so this can then obviously filter down across the sport.

Daire Rooney:

You already spoke there about some of the changes that that can be made on a club level and education being a simple one, practical changes that clubs can make.

What do you think clubs can do practically, particularly in the upcoming pre season period and how can members of the of the medical MDT collaborate?

Will that be for doctors, physios, S&C nutrition to put positive changes in place?

Saul Konviser:

I think it's a great question.

So as we've mentioned, as a sort of basic sort of first step we would be doing pre season oral health screening. This is what we did for the research, but that's something which really should be factored in. We understand there is a huge amount for clubs and the sports medic medicine teams to factor in to in the diary.

Logistically, we understand it is difficult, but I think it is important now that we've got the data.

There is research. There is evidence. We want to make sure that players are as well looked after and as healthy and fit as possible. So, a pre-season screening as is certainly recommended.

In addition to that oral health education workshops, be that for players, either dentist coming in, in-person and doing this or, or a webinar or actually utilizing the full breadth of the dental team. The dental hygienists or the dental therapists are in an excellent position to be able to disseminate this type of oral health information to athletes and then football players and also not just players, but similar education workshops and webinars for the sports medicine teams.

Ideally pre-season is always obviously ideal because once the season starts, it becomes incredibly busy. I think it's also important, whilst we've got the screening, and we've got the education, players and athletes and the MDTS, they do need to understand that players still need to be physically seen in a dental practice.

There are guidelines based on risk as to sort of their recall intervals. So for example, some of these players actually should be seeing a dentist and a hygienist 3, maybe even 4 times a year based on their risk level. There are some which just need to be seen twice a year, which is fine. But again, they do need to be going into a dental practice.

I know that some clubs have dentists associated with them already and they have relationships there, which is great. It's important to bring those dentists into the conversation with the broader sports medicine teams, the doctors, the physios and nutritionists.

Whilst we've sort of touched upon different types of energy drinks and things like that. Diet, of course, has a big, big role to play in oral health. We're not nutritionists, we're not saying don't consume these things. What we are saying is, let's make sure we are communicating with your nutritionists in the sports medic teams to all understand how our different roles have a part to play in the bigger picture of player well-being and wellness.

Daire Rooney:

That's some really useful tips for the new season, which is fast approaching. And so, if we were to sit down again in another three years, what would you, what would you hope the landscape of sports industry would look like, particularly in an Academy sport where you've studied?

What would you hope the landscape of the sports industry would look like in 3 years?

Saul Konviser:

I think we would love to see that there would be, from a top-down approach, that authorities have started to put together some kind of official guidance and guidelines to incorporate oral health education within a framework of the duty of care for players.

Then I'd love to see that there is a routine pre-season oral health screening.

And I keep saying the word oral health because I know obviously when we talk about dentists, people go straight to the teeth but actually there is a lot of other stuff. It's not just the teeth.

Like we mentioned before, the mouth is part of the body and we need to sort of put it back in there. So, I think pre-season screening should be routine.

I think oral health education workshops, even if it's once a year for the medics and for the players, that should be routine.

Also, I think, there should be regular dental check ups in a dental practice with hygiene appointments for players and this should be regularly monitored by, by clubs if, if they're not doing it already. I'm aware that some are doing it.

That is my idealistic sort of three-year goal, which I think is actually very doable.

Daire Rooney:

And fingers crossed next time we sit down, whether that's 2028 or 2030, that the landscape looks a lot different than what it does now.

Finally, for any listeners who want to learn more or even get involved with promoting oral health and sport, where should they start?

Saul Konviser:

So by all means, share my contact details and directly contact myself or my co-authors on the paper.

We can come and do screening. We can come and do education workshops for players, for sports medicine teams, even organising, for example, CPD days where you go slightly beyond just sort of localised local clubs actually going sort of slightly more, more broader to bring together MDTs really.

Again, that is something we'd love to be able to support clubs, to be able to support players because obviously they're at the heart of why we're doing this.

Daire Rooney:

I think that that's a good place to end the podcast but thank you again for sharing such valuable insights into the evolving world of sports dentistry.

It's been fascinating to hear about the progress that has been made and your important research, which we will attach to the material that goes along with the podcast.

And I'm sure that our listeners will take a lot from today's conversation. I am looking forward to seeing the impact of your work and further developments in the years to come.

Saul Konviser:

Thank you very much for having me.

It's been lovely to join you again.

And like we said, hopefully in a few years' time there will be even more developments.

Daire Rooney:

Now for our listeners if oral screening from Saul is of interest to your club, please get in contact with Saul via his e-mail, which we will attach on release the podcast.

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Thanks for listening.