



# NEWSLETTER

VOL. 34, NO. 1

## ASD Symposium

June 25-27,  
2020

*Nashville,  
Tennessee*



### Officers, Board & Committees

Page 2

### President's Message

Page 3

### Editor's Report

Page 4

### Second International Workshop on Sports Dentistry

Page 5

**Mouthguard use in  
youth ice hockey and the  
risk of concussion abstract**

Page 6

### European Academy for Sports Dentistry (EA4SD) in Paris

Page 7

### New Resource Available

Page 8

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Lakewood, Oh 44107

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Box 836  
Portage la Prairie, MB R1N 3C3  
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*The Academy for Sports Dentistry Newsletter* is published tri-annually for its members. Comments and suggestions regarding the newsletter should be directed to Dr. Steve Mills, Editor.

### MANAGING EDITOR

Sandi Steil  
P.O. Box 7317  
Springfield, IL 62791-7317  
OFF: 217-241-6747  
Email: info@academyforsportsdentistry.org



## Academy for Sports Dentistry 38th Annual Symposium

June 25-27, 2020

### Prepare, Protect and Treat: Sports Oral Injuries

Hilton Nashville Downtown  
121 Fourth Avenue South  
Nashville, TN 37201  
Phone: 615-620-1000  
[www.hiltonnashvilledowntown.com](http://www.hiltonnashvilledowntown.com)  
\$299.00 Single/Double/Triple/Quad



Please watch our website in late February  
for online registration information.  
[www.academyforsportsdentistry.org](http://www.academyforsportsdentistry.org)  
Email info@academyforsportsdentistry.org or call (217) 241-6747

The Hilton Nashville Downtown is the only all-suite, full-service hotel in downtown Nashville, celebrated for its unrivaled location, grand atrium lobby and distinct residential ambiance. Continuously earning the prestigious AAA Four Diamond Award since 2004, the hotel offers 330 spacious guest suites that were collectively renovated, 20,000 square feet of ballroom and flexible meeting space, a stunning grand atrium lobby, and four dining venues.

Situated in the bustling center of Music City, the Hilton offers an unparalleled location adjacent to the Country Music Hall of Fame and Museum, Schermerhorn Symphony Center, and Bridgestone Arena. The hotel is at the epicenter of the entertainment district, which offers a mix of historic honky tonks, top restaurants and high-energy nightclubs, and is just steps from the Music City Center and the Tennessee Titans' Nissan Stadium.

The sounds coming from Nashville are those authentic, soulful, powerful and unpretentious sounds that can only come from the place where music is inspired, written, recorded and performed.

There is only one Music City. And today, Nashville continues its emergence as a cultural, artistic and entertainment-rich destination, filled with unique music and event venues, a myriad of art galleries, botanical gardens and greenways, plantation homes, honky-tonks, professional sports and fine dining.

With an orchestra of options to satisfy every taste, you'll be encouraged to dance to the beat of your own drummer. So whether it's listening to live music, soaking in the art scene, exploring history or just relaxing, we know you'll find many ways to enjoy Music City and learn for yourself why music calls us home.

Click here to view the 2020 Visitors Guide.  
<https://bit.ly/2V830oq>

### Highlights will include:

**Presentations**  
**Hands on Workshops**  
**Social Events**



Academy for Sports Dentistry is designated as an Approved PACE Program Provider by the Academy of General Dentistry. The formal continuing education programs of this program provider are accepted by AGD for Fellowship, Mastership and member maintenance credit. Approval does not imply acceptance by a state or provincial board of dentistry or AGD endorsement. The current term of approval extends from 4/1/2018 to 3/31/2022. Provider ID#211120

**Dr. Laubmeier**

As I sit here writing this president's message it's hard to believe that our next symposium is right around the corner. Punxsutawney Phil just predicted an early spring so getting outdoors and enjoying the nicer weather will hopefully be soon upon us. Since our last meeting many of our members have been representing the ASD at events around the world. The ASD was represented at the 2<sup>nd</sup> International Consensus Statement meeting in Osaka, Japan. We also had several members represent the ASD at the 1<sup>st</sup> International Symposium of EA4SD in Paris, France. This meeting came shortly after the ASD and EA4SD agreed to a mutually beneficial affiliation that will hopefully continue to foster the sharing of ideas and information with our friends across the pond. Last but not least, Rick Knowlton has continued his endless and tireless pursuit of maintaining an affiliation with the USOC by organizing a mouthguard workshop for bobsledders in Lake Placid, NY.

The ASD Symposium in Nashville will be here soon. Walter Chitwood and his team have been working very hard to develop a program that will be educational and entertaining. After reviewing our member's comments we have decided to take a break from the full day team dentist course and instead offer two great hands on opportunities. Doug Lambert will be presenting a splinting workshop and Dan Brett will be presenting "The Greatest Mouthguard Workshop Ever." Both workshops will be offered in the morning and afternoon on Thursday to provide spots for more attendees to get this great hands on experience, but even so there will be limited seating so please register early. Walter's committee also heard

**PAGE 3**

# **Commitment to Excellence**

your requests for providing more options for exploring what Nashville has to offer. As such, the meeting schedule and President's Reception will end earlier than in previous years to allow time for exploring "Music City USA". The rest of the speaker line up is shaping up to make the symposium a great meeting overall.

A few odds and ends:

- Don't forget that if you bring a non-member\* colleague to the Annual Symposium you receive 10% of your registration fees. There is no limit to this discount so if you bring 10 colleagues you can attend for free. *\*Non-member must be a first-time attendee.*

- Please consider doing a poster presentation for the meeting.

- Tom Coreno has agreed to coordinate the development of an ASD standardized athlete form so that over time a database could be formed and lead to data available for research. If you have a form you wish to share, or wish to volunteer to help Tom develop this form, please contact Sandi or myself and we will put you in touch with Tom.

- Lastly, in order for our organization to continue to grow, the development of a Strategic Plan is needed. This is a Call to Action to our members to volunteer to work on developing this plan. These volunteers will work with the Past Presidents/Strategic Planning Committee to make sure the ASD has a roadmap to making sure it is the leader in sports dentistry.

I look forward to seeing you all in Nashville.

Respectfully,  
Jeff



## *Editor's* **REPORT**

Steve Mills, DDS

# We need to know **EVERYTHING!**

This newsletter is highlighting the global development of sports dentistry. The Academy for Sports Dentistry is recognized as a legitimate and venerable dental organization. We feel that we understand the field as well as any other organization in the world. But the world is a big place and the possibility that we are not keeping up in one or more areas of this niche of dentistry is a very real concern. It is imperative that all sports dentists worldwide continue to reach out to one another to collaborate and learn from one another.

In the past year two collaborative efforts have been held which will go a long way in improving the knowledge about sports dentistry as an area of study. The first was the Second International Workshop in Sports Dentistry which was held in Osaka, Japan on September 16-17, 2019. This workshop was a follow-up to the first such event held in Hawaii, in 2016. Results of this first workshop were published in *Dental Traumatology*, December 2017. This most recent meeting boasted an international group of attendees including our own David Kumamoto who has written a summary of it for this newsletter.

The second event was the first official symposium of the European Academy for Sports Dentistry (EA4SD) which took place on November 29 and 30, 2019 at the National Institute of Sport, Expertise, and Performance (INSEP) in Paris, France. While this meeting is geared to its European members, attendees included several of us from the ASD and several from Japan, in addition to 9 European countries

Both were important events as they, along with the Academy for Sports Dentistry Annual Symposium, bring together leaders in the field of sports dentistry to exchange ideas and to learn. With such a small area of dentistry one might well ask how much more is there to learn? How much can our little corner of the dental world expand, and do we really need to work hard to keep up with our international colleagues?

The simple answer is a resounding yes. While we in North America are very comfortable creating excellent protective mouthguards and in treating trauma from the field to a final result, the rest of the world has made great strides in developing more sophisticated ways to evaluate and to help position intraoral appliances which seem to impact performance. In addition, a considerable amount of work has been done to evaluate the impact of dental health on the overall health and well-being of an athlete. Occlusion, periodontal concerns, caries, and even dentoalveolar abscesses which go unnoticed do have an impact on overall health.

At the INSEP meeting there were at least 5 presentations from four different countries which educated us in the use of electromyography to create appliances with the most stable occlusion. That seems to have an important impact on athletic performance. We in North America have been down this road on a much more simplistic level which has led many of us to be skeptical, to say the least, about the claims made which promise increased performance. The results shown at the EA4SD conference were without product funding and represented legitimate research. The results were not outlandish and made this line of endeavor seem extremely reasonable. We owe it to our athletes to be able to bring this knowledge to them to maximize their abilities.

We will try to build on this in Nashville in June. I was tremendously energized and excited to see how sports dentistry is being embraced worldwide. For all of you, especially team dentists at the elite level, who think that you have nothing more to learn about "doing sports dentistry", think again. There is a very dynamic world of new knowledge out there.



# The Second International Workshop on Sports Dentistry

By David P. Kumamoto, DDS, MS

The Second International Workshop on Sports Dentistry was held in Osaka, Japan, September 27th to the 29th. Members from the Japanese Academy of Sports Dentistry, the Korean Academy of Sports Dentistry, the Academy for Sports Dentistry (United States), and dentists from Taiwan, France, Germany, Canada, United Kingdom, and Egypt also participated in this Conference. Many of the participants had performed research related to sports dentistry while others work with their countries' National Olympic athletes. The purpose of this meeting was to add to the evidence and scientific data gathered at The First International Workshop on Sports Dentistry held in 2016 at Honolulu, Hawaii, to expand the field of sports dentistry in areas such as dental trauma treatment and nutrition, and to provide evidence-based support for the 2020 Tokyo Olympic and Paralympic Games.

The 27 attendees were separated into 5 groups. The topics for discussion included the effect of mouthguards on preventing and reducing traumatic dentofacial injuries, the effect of mouthguards in preventing and reducing concussions or minor brain injuries, materials and methods for improving the efficacy of mouthguards, the relationship between occlusion and performance, oral health among athletes and its effect on performance relating to treatment options for injured athletes.

Some of the conclusions reached at this meeting are listed below:

1. Mouthguards contribute to a low prevalence of dental trauma among athletes in contact sports.

2. 40% of emergency room visits from sports activity involve dental trauma. Retrospective studies show 10-61% of athletes in a variety of sports have experienced orofacial trauma.
3. The prevention of dental trauma through the use of mouthguards should be promoted by educating the sports groups involved.
4. 95% of cases of dental trauma where mouthguards were not worn was due to lack of awareness about mouthguards.
5. Dentists must strive to remove the barriers to mouthguard compliance.
6. Sports dentistry training should be included within the undergraduate dental curriculum in dental schools with hands on training in mouthguard fabrication as an essential part of the educational process.
7. The dental community strongly supports continued scientific research on the developing connection between mouthguards and concussion.
8. Ethylene vinyl acetate and polyolefin plastics are the recommended materials for fabricating custom mouthguards.
9. Multilayer mouthguards are recommended in order to control the thickness of the final Appliance.
10. Occlusion of the mouthguard should be bilateral and balanced along with anterior occlusal contact.
11. The correlation between occlusion and posture needs to be studied further.

continued on page 6

## The Second International Workshop on Sports Dentistry

continued from page 5

12. There is a tendency for a change in postural balance when the mandibular system is modified (when wearing an oral appliance).
13. Team dentists should be familiar with the emergency protocol guidelines for the athletes under their care.
14. Oral health of athletes appears to be poor across a wide range of sports. Poor oral health may affect athletic performance.
15. Exercise is a significant factor in reducing the buffering capacity and the flow rate of saliva.
16. Oral health education of athletes, coaches,

athletic trainers, and parents needs to be stressed at all levels of competition.

A complete description of the conclusions reached at this conference will be published in the future. A summary of this workshop was presented to over 100 dentists who belonged to the Japanese Academy of Sports Dentistry, the Osaka Dental Association, and the Japanese Dental Association at the Osaka University Nakanoshima Center. Each discussion group presented a summary of their work. The Third International Workshop on Sports Dentistry is being planned for 2022 in either Taipai, Seoul, or Chicago.

# Mouthguard use in youth ice hockey and the risk of concussion: nested case-control study of 315 cases

Br J Sports Med. 2020 Jan 14. pii: bjsports-2019-101011. doi: 10.1136/bjsports-2019-101011. [Epub ahead of print]

Chisholm DA, Black AM, Palacios-Derflinger L, Eliason PH, Schneider KJ, Emery CA, Hagel BE

## ABSTRACT

**Background:** Concussion is the most common injury in youth ice hockey. Whether mouthguard use lowers the odds of concussion remains an unanswered question.

**Objective:** To determine the association between concussion and mouthguard use in youth ice hockey.

**Methods:** Nested case-control design. Cases and controls were identified from two prospective cohort studies using valid injury surveillance methods. Cases were players concussed during a game or practice; controls were players who sustained a non-concussion injury during a game or practice. The primary exposure was mouthguard use at time of injury; mouthguard type (dental custom fit or off the shelf) was a secondary exposure. Physician-diagnosed or therapist-suspected concussion was the primary outcome. Dental injury was a secondary outcome. Multilevel logistic regression with random effect at a team level was used to obtain ORs for the mouthguard effect, adjusted for level of play, age group, position, concussion history, mechanism of injury, cohort, session type and body checking policy.

**Results:** Among cases, 236/315 (75%) were wearing a mouthguard at time of injury, while 224/270 (83%) controls were wearing a mouthguard at time of injury. Any mouthguard use was associated with an adjusted OR for concussion of 0.36 (95% CI 0.17 to 0.73). Off-the-shelf mouthguards were associated with a 69%

lower odds of concussion (adjusted OR: 0.31; 95% CI 0.14 to 0.65). Dental custom-fit mouthguards were associated with a non-significant 49% lower odds of concussion (adjusted OR: 0.51; 95% CI 0.22 to 1.10). No dental injuries were identified in either cohort.

**Conclusion:** Mouthguard use was associated with lower odds of concussion. Players should be required to wear mouthguards in youth ice hockey.

**Practical implications:** This is a well-constructed, if not totally perfect, use of existing data to study this connection. Sports Dentists should feel confident to believe that there continues to be a "potential" connection between mouthguards and concussions.

Additional material is published online only. To view please visit the journal online (<http://dx.doi.org/10.1136/bjsports-2019-101011>).

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# The European Academy for Sports Dentistry (EA4SD) in Paris

By Steve Mills, DDS



*Steve Mills, Saul Konsiver, Thanos Stamos,  
Jeff Hoy and Rick Knowlton*



*Elif Gündüz*



*A Worldwide Gathering of Sports Dentists*

The European Academy for Sports Dentistry (EA4SD) held its first International Symposium on November 29 and 30, 2020 at the National Institute of Sport, Expertise and Performance (INSEP), in Paris, France. The meeting was held in conjunction with the European College of Sports and Exercise Physicians (ECOSEP) and was a resounding success. There were three distinct half day sessions and a mouthguard workshop. Twenty different international speakers from nine different countries presented twenty-minute sessions on a wide array of different topics connecting sports and dentistry. Three members of the Academy for Sports Dentistry; Rick Knowlton, Jeffrey Hoy, and Steve Mills, were among the speakers. In addition to many members of the EA4SD, Tomo Takeda and Yoshinubo Maeda from Japan also presented different topics.

The topics varied and the meeting was an excellent chance to see just how diverse the field of sports dentistry has become worldwide. There were talks on aspects of overall oral health on athletic readiness and performance, orofacial trauma, dental erosion and athletes, dental education and sports dentistry, as well as the design and performance of athletic mouthguards.

The program was unique in the number of excellent scientific discussions on the use of fairly sophisticated methods to produce intraoral appliances which could have a positive impact on athletic performance. Lectures from Japan, Italy, Greece, Germany, and Ireland discussed creating an ideal jaw position from which to build a useful mouthguard or splint. There was refreshingly little continued on page 8

## The European Academy for Sports Dentistry (EA4SD) in Paris

continued from page 7

if any commercial influence of on these discussions, and the focus was on progressing with legitimate scientific protocols.

Especially relevant to this was the routine use of electromyography in the development of the correct occlusal position for optimal performance across the continent. The level of sophistication and the use of hi-tech advances to enhance athletic performance was a large segment of the ECOSEP medical conference as a whole. It was only realistic that sports dentists try to attain that same level of excellence. If we hope that our elite athletes, and in fact all of our athletes, in our own particular country continue to be on par with athletes from

the rest of the world, it would behoove us to keep up with these advances. In fact, several of these ideas will be discussed at the Annual Symposium of the Academy for Sports Dentistry in Nashville in June of 2020.

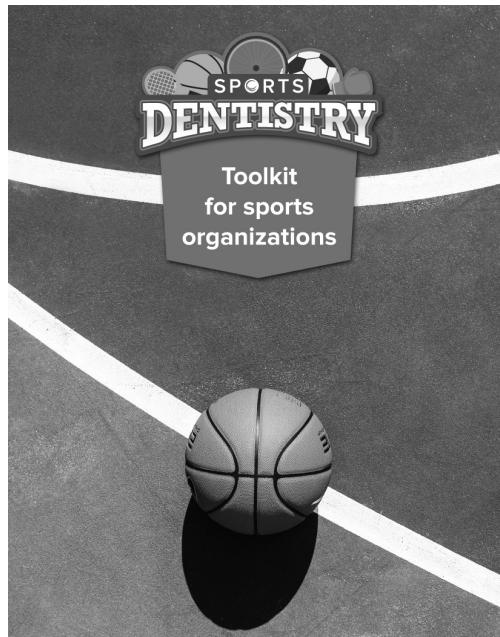
Thanos Stamos and Sophie Cantamessa and our friend and liaison Elif Gunduz of the EA4SD, among many others, were excellent hosts and all had a great time enjoying Paris as well as the INSEP facility which is a truly awe-inspiring modern training center. In the heartwarming spirit of cooperation and shared goals that were so powerful, it would have been encouraged to look forward to future meetings of the EA4SD.

## Exciting New Resources Available

The FDI World Dental Federation have recently released four “toolkits” dealing with sport dentistry. These toolkits are targeted at four different constituencies who have a particular interest in sports, athletes, and athlete health and safety. These publications were developed by the FDI Sports Dentistry Task Force.

The first toolkit is aimed at sports organizations and gives a great overview to different clubs, schools, teams and larger organizations on what how important oral health concerns are in sports. This is the largest of the four toolkits and is really a small booklet. It deals with everything from overall oral health, to mouthguards, to proper nutrition, and much more.

The other three are designated as “brochures” on the FDI World Dental Federation website and apply to amateur athletes, elite athletes and finally for dentists and sports medicine physicians and other medical personnel. These are clear and concise with great



photos and graphics, and they give the reader important and understandable information for them to use.

The toolkits can be accessed in several ways. The first would be to go to European Academy 4 Sports Dentistry website at [ea4sd.com](http://ea4sd.com), and click on “FDI Guidelines and Toolkits” on the top bar. In addition to the toolkits, you can see what is going on in the world of sports dentistry. You may visit the ASD website at <https://www.academyforsportsdentistry.org/>. The toolkits are available under the ASD in the News section of the homepage.

You may also go to the FDI World Dental Federation website at <https://www.fdiworlddental.org>. The toolkits are one of the four they are highlighting at the top of the home page. Click the New Sports Dentistry guidelines available for oral health. Sports organizations is listed as a “toolkit” and the other three are listed as “brochures”.