



**SOCIAL MEDIA**  
FOR HIGHER EDUCATION FORUM

21-23 May, 2019  
Pullman Hyde Park Sydney

[Find out more](#)



# CAMPUS REVIEW

[NEWS](#) ▾

[POLICY](#) ▾

[RESEARCH](#) ▾

[VET+TAFE](#)

[ON CAMPUS](#) ▾

[OPINION](#) ▾

[RADIO+TV](#) ▾

[SUBSCRIBE](#) ▾

[ADVERTISE](#)

[JOBS](#)

[Home](#) | [News](#) | Which Olympic sports pose the greatest skin cancer risk?

## LOGIN

Welcome **Richard Garfield!**

[Change Password](#)

[Logout](#)





## Which Olympic sports pose the greatest skin cancer risk?

By: Nicole Madigan in News, Top Stories March 25, 2019 0

In an effort to encourage greater sun protection by elite athletes participating in the Tokyo Olympic Games, University of Southern Queensland researcher Nathan Downs has embarked on a world first study to determine which outdoor sporting disciplines pose the highest risk of skin cancer.

Dr Downs says while increased temperatures caused by global warming resulted in heightened risks for professional athletes, the skin cancer message was not getting through.

"I worry that skin cancer prevention messages are not being presented frequently enough to make an impact on what is a significant problem," says Downs.

"Raising awareness with regards to the Olympics can make a difference to the athletes who compete, but importantly can also make a difference to those members of the public who take an active interest in sport.

The study, published in the Taylor & Francis journal *Temperature*, found that the winner of the women's singles tennis tournament will receive the highest levels of UV rays, followed by the gold medallist for men's golf, and the winner of the men's cycling road race.

Tennis, golf and cycling requires athletes to be outside and exposed to sun for long periods of time during the hottest parts of the day, putting them at severe risk of sunburn, which is known to increase the risk of

**UniBank**  
Know more

Banking\* for staff, students and graduates of Australian Universities and their families.

[Know more](#)

\*Conditions apply.  
Membership eligibility criteria apply to join UniBank.

**Green Car Loan**

**5.29% p.a.**  
Promotional Variable Rate

**5.50% p.a.**  
Comparison Rate<sup>1</sup>

[Find out more](#)

1. Click for T&Cs and Comparison Rate Warning.

**bankfirst**



skin cancer.

Downs says athletes with fair skin who don't wear sunscreen can expect considerable sunburn when competing in singles tennis, golf, the cycling road race, beach volleyball, hockey, rugby, the decathlon, the triathlon, football, softball and the 10km marathon swim.

"The winner of the women's singles tennis will have to compete in six rounds, many of which will be at peak midday," says Downs, also a senior lecturer in mathematics at USQ.

"Golfers must also compete in four daytime rounds, and the winner of the men's cycling road race can also expect to be exposed to sunlight for at least 6 hours, with other competitors being outside for even longer."

To calculate the total sun exposure that each gold medal winner of the 144 outdoor events will receive over the duration of the 2020 games, Downs used satellite data on cloud cover, ozone and aerosol concentrations to create a model of the ambient UV environment that athletes will be exposed to in Tokyo.

He then looked at what time of day the events are usually held, and how long they tend to last.

Footage of Rio 2016 was viewed to determine what type of clothing is usually worn by competitors, and whether they compete on grass, concrete, water or sand, with each surface reflecting the sun's rays to differing extents.

He also modelled the athlete's body posture, as this can affect what parts of the body are exposed to sunlight.

The results showed that the duration of events, along with the time of day, are the most important factors influencing UV exposure, which is why tennis, golf and cycling stars are the most at risk.

However, clothing also plays a significant role.

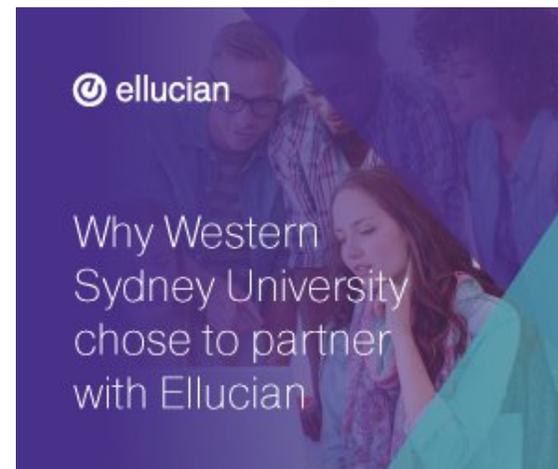
Downs says female tennis players only topped the league tables because male tennis stars tend to wear protective caps.

Beach volleyball players' lack of clothing, coupled with the fact their matches take place on highly reflective sand, also put them at considerable risk.

"I was a little surprised that beach volleyball did not rank higher than 4th in the sun exposure list for Tokyo 2020.

"It is certainly a good thing that many beach volleyball events will be scheduled at night. This, and the fact that beach volleyballer's exposure time will likely be about half the time a tennis player spends outdoors certainly reduced our total exposure estimate."

Conversely, the fact that golfers tend to wear long trousers and a cap stopped their sun exposure from being even higher.



## FEATURED STORIES



Scientists to tackle Everest in pollution study

🕒 March 28, 2019



Research benchmarking results released amid calls for a review of the system

🕒 March 27, 2019



Ditch NAPLAN for sample testing: Gonski Institute

🕒 March 25, 2019



Which Olympic sports pose the greatest skin cancer risk?

🕒 March 25, 2019



'Receive the changing voices': the place of poetry in our digital age

🕒 March 22, 2019

## CAMPUS REVIEW JOBS



Downs says he was surprised to also find that women overall exposed a greater skin surface area to the sun (averaged across all 144 outdoor Olympic events) compared to men, resulting in higher sunburn exposure.

According to Downs, making sure long events were scheduled when the sun is lower in the sky or at night was an important factor in limiting sun exposure.

“Events like the marathon are purposefully scheduled to run early in the morning in order to keep the total sun exposure down, so this is something that could be considered for other events too.

“Other things that can be done include route alterations that make greater use of shade, or careful use of sunscreens to prevent unnecessary sunburn.”

The study also recommends that the Olympic Committee adopt specific sun protection regulations and guidelines.

“Sporting communities and the athletes who represent them can make a positive contribution to reducing this very significant global disease burden.

“I would very much like to see more athletes at Tokyo 2020 wear a hat, particularly in events like the 50km walk, rowing and marathon events...”

“I hope the world’s best athletes will take a leading role in demonstrating best practice.”

Downs says he will monitor the Tokyo 2020 games and hopefully report improved exposure estimates based on changes that may be implemented between now and July next year.

### Do you have an idea for a story?

Email [dallas.bastian@apned.com.au](mailto:dallas.bastian@apned.com.au)



## Get the news delivered straight to your inbox

Receive the top stories in our weekly newsletter [SIGN UP NOW](#)

👁 Post Views: 367

Share this:



---

Ref. 19032113 | Professor in Applied Language Sciences / Bilingualism and Communication  
Kowloon, Hong Kong › [The Hong Kong Polytechnic University](#) › [Full Time](#)

---

Ref. 19032114 | Assistant Professor in Applied Language Sciences / Bilingualism and Communication / Chinese Linguistics / Translation and Interpreting  
Kowloon, Hong Kong › [The Hong Kong Polytechnic University](#) › [Full Time](#)

---

Ref: VRAA/03/2019 | Vice Rector (Vice President) for Academic Affairs  
Macao › [University of Macau](#) › [Full Time](#)

### CONNECT WITH US



### SUBSCRIBER EXCLUSIVE



Edit

Tagged with:

SKIN CANCER

TOKYO OLYMPIC GAMES

USQ

## LEAVE A COMMENT

---

Logged in as Richard Garfield. [Log out?](#)

---

Post Comment



[eMag archive](#)

## ABOUT US

---

[Contact Us](#)

---

[Advertise with us](#)

---

[Subscribe](#)

---

## SUBSCRIBE TO OUR NEWSLETTERS

---

Email Address\*

First Name\*



---

[Editorial guidelines](#)

---

[Privacy Policy](#)

---

[Terms of use](#)

---

Last Name\*

Company Name

Please select which forms of communication you would like to receive from us

E-newsletters  Partner messages

Submit

---

© Copyright 2019 APN Educational Media All Rights Reserved. Registration on or use of this site constitutes acceptance of our [Terms and Conditions](#) and [Privacy Policy](#).

