



INSTITUTE OF NATIONAL  
ANTI-DOPING ORGANISATIONS

## iNADO Community

### Upcoming Webinar

iNADO is looking forward to our next webinar "The Services of the Anti-Doping Division of CAS for NADOs and RADOs" with Brent Nowicki from the Court of Arbitration for Sport (CAS). As Managing Counsel of the Anti-Doping Division (ADD) Nowicki will present some of the most important aspects and benefits of the CAS ADD.

Given the changes that the Code 2021 will bring with regard to the independence of hearing panels, this webinar will be of interest to iNADO Members in the process of reviewing the structure of their hearing panels.

We will learn in this presentation how the ADD can provide a cost-effective and quick resolution to anti-doping disputes on

**Aug 31, 2020, 2:00 p.m. CEST.**

Invitations have already been sent to iNADO Members. If you haven't received one and would like to participate please send us an email to [info@inado.org](mailto:info@inado.org) Registrations are open until Aug 31, 2020. 1:00 p.m. CEST.

### iNADO Live Chat - New Episodes available

Our podcast iNADO Live Chat is gaining momentum with two more episodes. We had David Sharpe (Sport Integrity Australia) and Nikki Hamblin (former Olympic Athlete) this month. Both guests gave us the opportunity to talk about central and very important aspects of the sports world and especially the anti-doping community.

*Episode 03 with Nikki Hamblin:*

**"Anti-doping is something we do for the athletes not to the athletes"**

In this episode, we chatted with Nikki Hamblin, former Olympic middle-distance runner and Educator at DFSNZ, about the Athletes' Anti-Doping Rights Act, and the pivotal role of Athletes in the fight against doping. [Listen](#)

*Episode 04 with David Sharpe:*

**"Our priority focus is to protect sport not to police sport"**

In this episode, we chatted with David Sharpe, CEO of Sport Integrity Australia, about the recent past, the present, and the future of anti-doping in Australia and the new role that Sport Integrity Australia, the new agency coordinating the national strategy for all integrity issues in sport will play in today's complex but very vulnerable sporting landscape. [Listen](#)

## From our Members

### Leaving on a high Note

It is sad when valued members of our community leave. This time Jesper Frigast Larsen, legal manager Anti-Doping Denmark, will retire at the end of August after decades in anti-doping. He witnessed live the birth of the World Anti-Doping Code during the first World Conference on Doping in Sports in Copenhagen in 2003 and knows first-hand the positive impact that the Code brought to harmonise the international approach to doping.

He developed an unique understanding of the challenges and achievements of anti-doping efforts, nationally and internationally and was always keen to share this experience with his colleagues and iNADO, for instance in Legal Basecamp group.

*"[...] I would like to take this opportunity to thank you all for your support and cooperation over the years in the fight for clean sport. It has been a pleasure working with you all. [...] i really believe that the development in anti-doping has been incredible through the years and that we certainly have moved forward together. [...]"*

iNADO would like to thank Jesper for all the input he has delivered over the years and wishes him all the best and a satisfying retirement.

## Research

### Chronic Low Dose Carbon Monoxide Exposure might increase Endurance Performance

In February of this year, a research group from the University of Bayreuth (Germany) led by Walter F. J. Schmidt published an intervention study entitled "Chronic Exposure to Low Dose Carbon Monoxide Age Haemoglobin Mass and VO<sub>2</sub>max". According to the study, correct treatment with carbon monoxide (CO) can lead to similar adjustments in aerobic performance as an altitude training camp.

The results of the study show that regular inhalation of CO leads to an increase in erythropoiesis and, as a result, an increase in haemoglobin (Hb) mass and a proportional improvement in maximum oxygen uptake (VO<sub>2</sub>max).

The authors suspect that the performance-enhancing method has been used for a long time in professional sports and thus, it is suggested to classify this method accordingly by the World Anti-Doping Agency (WADA).

Most recent studies have shown CO to be harmful. The gas is toxic in high concentrations and can lead to fainting and death. Even in small amounts, acute CO absorption affects the performance of the human body. In an exercise context, absorption can lead to symptoms like reduced VO<sub>2</sub>max and accelerated lactate production of the muscles, which subsided after approx. 12 hours. The negative consequences of CO absorption in the body, usually through inhalation, can be explained by the high binding affinity of the gas with Hb.

Regularly, Hb is responsible for the binding of oxygen (O<sub>2</sub>) to the erythrocytes. CO blocks these binding sites when binding with Hb in a complex called COHb. An increased concentration of COHb leads to a reduced oxygen saturation in the blood that is supplied to the organs. Nevertheless, studies with smokers who have an increased COHb concentration show that the chronically reduced oxygen saturation of the blood by a small margin leads to an increased hematocrit and Hb mass to compensate reduced O<sub>2</sub> transport capacities. These two adjustments are generally seen as performance enhancing and are deliberately initiated through endurance training, hypoxia and EPO injections.

#### Main Findings

- Chronic CO intake leads to increased endurance performance
- The increase is comparable to the effects of altitude training
- High probability of CO usage in elite sports

- Evaluation of WADA needed

The study examined the effect of a chronic COHb concentration on parameters of endurance performance in a sports context. For this purpose, the COHb concentration of 11 male volunteers was maintained at 5% by five inhalations daily for three weeks. In comparison to a control group (n = 11) who only received a placebo treatment, an increase in the Hb mass and a proportional improvement in the VO2max could be found in the intervention group. The Hb mass increased by 4.8% in three weeks. This increase is similar to the increase that can be observed after a stay at an altitude of 2500 m over a similar period of time. In addition, the subjects showed typical courses of the ferritin, EPO and reticulocyte concentration over the course of the intervention, which can also be observed when adapting to hypoxia.

According to the authors, their results clearly indicate that chronic CO intake leads to an increase in human endurance performance, which is comparable to that after an altitude training camp. Furthermore, the authors suspect that this method has been and will be used in elite sports. The authors suggest WADA should decide whether this method should be deemed legal or a prohibited method of blood doping. Regarding the assessment of health damage caused by CO, it seems difficult to set an upper limit for COHb. As a reference, the authors cite regulations from Employment Law according to which it is permitted to work under a CO influence which, like the intervention described, causes a COHb increase of 5%.

Click [here](#) to read the full study.

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## Registration for UNESCO Master Programme in Doping Studies reopens

As of September 2020, the UNESCO Chair "Doping Studies and Analysis of Anti-Doping Policies" will offer a master programme specifically tailored to develop the knowledge and -skills of students in anti-doping policy. States parties, institutions and other organizations and personnel related to the fight against doping can apply to Paris Nanterre University to be trained in social sciences research.

The pedagogical content of the master programme includes sport economics, public actions and policies of sport, perspectives in history and sociology of sporting activities, sport and international relations, research methodology and tools, data analysis, sport and globalization, etc. The courses of the two-year programme will be taught in French and English and will take place in Paris (4 months in the first year and 4 months in the second year); the rest of the programme will be dedicated to carrying out tutored research on the student's national territory with remote methodological support.

The registration of the master programme will **reopen from 24 to 31 August 2020**. Besides above-named target groups, applications from individuals wishing to become anti-doping professionals are also very welcome. For further information have a look at the programmes flyer in [english](#) or [french](#). Please note that the flyer does not mention the reopening date.

At the end of the master programme students will be asked to complete an internship at a NADO. We think this programme can contribute positively to the anti-doping community by educating future staff members of iNADO member organisations on a wide range of relevant topics.

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## NCSC Manual on Cyber Threats to Sport Organisations and how to avoid them

Since 2016 the National Cyber Security Centre (NCSC) provides advice and support on avoiding computer security threats for the public and private on behalf of the UK government. In July 2020, the agency published a report called "The cyber threat to sports organisations", focusing particularly on cyber-attacks which are relevant for the sports sector and suggesting how to stop or slow down their impact on organisations.

70% of UK sports organisations experience at least one cyber-attack per year which is significantly more than the average in other types of business. It is suspected that primarily financial interests lead criminals to attack the sports sector frequently.

The present guide, provided by NCSC, aims to educate its readers about cyber-crime by describing the most common attack trends and highlighting cyber security issues within sports organisations. Furthermore, it gives suggestions for measures which can prevent the vast majority of these attacks mainly focussing on email security, staff empowerment and methods of cyber risk management.

Read the full report [here](#).

This guideline might be informative for any sport organisation working with sensitive data especially when cyber security has not been the primary focus in the past.

## Testing

### What Dietary Supplement Certification means to Athletes and Health Practitioners

By John Travis, Senior Research Scientist, NSF International

NSF's Certified for Sport® program currently tests for 280 athletic banned substances from the World Anti-Doping Agency (WADA), NSF Annex B, NFL and MLB prohibited substance lists. [NSF's Certified for Sport®](#) certification provides significant product safety assurance to athletes by specifically testing for doping substances sometimes found in ingested dietary supplements, functional foods and beverages. [Learn more](#)

## Vacancies

Once again we came across a few interesting job offers in the anti-doping community.

- AFLD is looking for an [apprentice](#) in the testing department
- USADA is hiring a [coordinator](#) for DCO operations and engagements



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**New at the Anti-Doping Knowledge Center**

Since January 2020 the ADKC has collected several different files of decisions about ADRVs and additional research papers.

- [CAS awards](#)
- [Decisions International Federations](#)
- [National Decisions](#)
- [Scientific Literature](#)

**iNADO is the Institute of National Anti-Doping Organisations. It promotes best practices by NADOs and is their collective voice.**

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