FAST BREAK

Publication for team medical personnel

Therapeutic Use Exemptions (TUEs)

June 2026

ISSUE 23

WELCOME to FAST BREAK!

Welcome to Fast Break, the official quarterly news bulletin of the FIBA Medical Commission. Our goal is to introduce our FIBA sports medicine and sports science community to newsworthy research topics and develop a community of practice among physicians and clinicians involved with basketball at every level of play across the globe.

We hope this publication will foster friendly communication and discussions within the world of basketball. We welcome and encourage your questions, comments, suggestions, and contributions to this publication.

MESSAGE FROM THE EDITOR

In the last edition of the Fast Break, we featured discussion pertinent to the challenges and ethics for the team physician and outlined an approach for the team physician's preparedness for team travel. We highlighted the list of medications that I travelled with and included in that list was Tramadol. Dr. Kolli Eswar Teja reached out to the FIBA and correctly pointed out that Tramadol is a medication that is prohibited in competition. His notation of this is important as it is vital that the team physician is aware of the impact that medications and supplements can have on doping in sport.

It behooves the team physician to include in the medical bag medications that will enable the provision of care for the needs of the entire team, including athletes subjected to doping in sport rules, as well as the non-athlete team staff. In the event of a significant and painful injury to any member of the team, stronger analgesia may be required. If a physician chooses to include medications in the travel medical bag that are banned for use in competition, it is important to have a manner of identifying banned medications in the medical bag to avoid inadvertent administration of a banned substance to an athlete. A prudent addition to the medical bag may consider blank copies of the FIBA Therapeutic Use Exemption (TUE) forms.

Each January, the WADA publishes the International Standard of banned substances and methods for sport. While that document is an exhaustive listing of banned medications and methods, it is important that the team physician understands the categories of banned substances in- and out-of-competition:

1) Non-approved substances (experimental drugs not approved for human use)
2) Anabolic agents
3) Peptide hormones, growth factors related substances and mimetics
4) Beta-2 agonists
5) Hormone and metabolic modulators
6) Diuretics and masking agents.

There are also further medications that are banned only in-competition:

7) Stimulants
8) Narcotics
9) Cannabinoids
10) Glucocorticoids

There are three categories of prohibited methods. These are prohibited at all times:

1. Manipulation of blood and blood components
2. Chemical and physical manipulation
3. Gene and Cell Doping

After years of consultation and review, in 2027 the WADA Code will be revised. A summary of those pending changes and important information for the team physician pertinent to doping in sport, including guidance on the Therapeutic Use Exemption (TUE) process is presented in this thematic edition of the Fast Break.

Marni Wesner, MD, MA, CCFP(SEM), FCFP, Dip Sport Med
Editor, Fast Break
Email: medical@FIBA.basketball

IN THIS ISSUE

GUEST EDITORIAL

TEAM PHYSICIAN ROLE AND FIBA EVENTS

Prof Dradan Radovanovic, FIBA Medical Commission
Serbia

OVERVIEW

The basketball team physician plays a central role in the organisation, management and provision of health care for athletes and team officials. The responsibilities of the team physician extend beyond injury management and includes preventive care, emergency management, rehabilitation supervision, return-to-play decisions, and ethical oversight. In contemporary high performance and elite sport, the team physician works within a multidisciplinary environment involving coaches, physiotherapists, strength and conditioning trainers, nutritionists, and sports psychologists. The increasing physical and psychological demands of competitive sports have significantly expanded the role of sports medicine professionals.

FIBA emphasizes that athlete welfare must remain the team physician's primary responsibility. The relationship between the team physician and athletes must be based on trust, confidentiality, professional integrity and athlete-centred care. The team physician must be a fully qualified medical practitioner and registered with the appropriate licensing body. An expanded skill-set and sport-specific experience is essential to provide for athlete health, safety, and optimal performance. Modern sports medicine requires the team physcian to practice evidence-based medicine with sound general/internal medicine skills, as well as expertise in orthopedics, musculoskeletal injuries, emergency medicine, concussion and spinal injury management, exercise physiology, rehabilitation, nutrition, anti-doping and environmental medicine. The team physician must also be versed in emergency planning and preparedness, injury and illness prevention, management of infectious disease, travel medicine as well as the unique needs of special populations (i.e. female athletes, pediatrics, athletes with a disability). Because sport medicine evolves rapidly with advances in injury prevention, rehabilitation, and sports science continuing medical education is essential for the team physician

Successful athlete management in modern sport medicine depends on effective relationships and communication within the entire sports organization. The team physician operates in a complex environment involving athletes, coaches, physiotherapists, strength and conditioning specialists, team managers, administrators, and ownership structures. Effective collaboration and communication between the physician, physiotherapist and all members of the sport science and coaching/management team is one of the fundamental principles of modern sport medicine. Athlete care requires mutual respect and trust, a multidisciplinary approach, close communication, inter-disciplinary teamwork with shared decision-making for athlete-centered care.

The team physician and coach relationship is one of the most sensitive relationships in sport medicine. Coaches are primarily focused on team performance and competitive success; physicians prioritize athlete health and safety. Effective communication between the physician and coach is essential. The physician must maintain professional integrity and avoid situations that could compromise medical judgment. More information regarding ethical issues for the team physician can be found in the March 2026 edition of the Fast Break.

AT FIBA EVENTS

In modern professional sport, athletes are frequently supervised by both club team physician(s) and national team physician(s). Although both groups share a common objective of safeguarding athlete health and optimizing performance, their responsibilities, priorities, schedule and environments may differ significantly. The increasing physical demands of elite sport, congested competition calendars, and frequent international travel have made coordination between club and national team doctors more important than ever.

The club team physician is usually responsible for the athlete's daily medical supervision throughout the competitive season. Club team physicians typically have continuous access to the athlete, long-term medical records, regular communication with coaching staff and detailed understanding of the athlete's physical condition and injury history. The national team physician is responsible for athlete health during training camps, international competitions, and national team activities. National team physicians often must evaluate athletes within a limited timeframe, rapidly assess medical fitness, injury risk, recovery and readiness for return to competition. National team physicians also work in challenging conditions involving frequent travel, compressed schedules, limited preparation time and coordination between athletes from different clubs.

Conflicts occasionally arise between club and national team medical staff due to differences in competitive priorities. Medical decisions should always remain evidence-based, athlete-centered and ethically independent. Effective communication and collaboration between club and national team physician is essential to ensure continuity of care, safe return-to-play decisions, and long-term athlete welfare.

RETURN TO PLAY DECISION MAKING

FIBA consistently emphasizes that athlete welfare must remain the physician's primary responsibility. Return-to-play (RTP) decisions are among the most important responsibilities of the team physician. Premature return to sport may increase the risk of reinjury or long-term disability. RTP decisions involving elite basketball players should consider collaboration between club team physicians, national team physicians, physiotherapists, performance specialists and associated medical consultants. RTP decisions are a multi-step process that considers tissue healing, functional performance, reinjury risk, psychological readiness, competition demands, and cumulative workload. Modern sport medicine increasingly supports shared multidisciplinary decision-making while maintaining clear medical leadership and accountability. Medical judgment must prioritize athlete safety over competitive demands.

AN EXCELLENT RESOURCE

Dr. Stanley Herring and colleagues published an excellent summative resource for the Team Physician in May 2025 in Medicine and Science in Sports and Exercise: Team Physician Consensus Statement 2024 Update (Med Sci Sports Exerc, 1;57(5):1067-1075)

SELECTED PUBLICATIONS OF INTEREST

Annual Banned-Substance Review 18th Edition-Analytical Approaches in Human Sports Drug Testing 2024/2025. [Review]

Thevis M, Kuuranne T, Geyer H. Drug Testing & Analysis. 18(4):458-482, 2026 Apr.

Alongside the considerable advances and accomplishments in drug research and development, the breadth of anti-doping research topics has also continued to grow. This is particularly relevant not only to provide comprehensive information on new drug entities, drug metabolism and elimination, and/or the impact of administration and exposure routes on analytical test results but also to ensure the timely implementation of analytical methods that ensure the availability of relevant anti-doping testing procedures and corresponding analytical data for routine doping control applications. The 18th edition of the annual banned-substance review on analytical approaches in human sports drug testing is dedicated to literature published between October 2024 and September 2025, and information published within these 12 months on established doping agents as well as new (potentially and evidently) relevant substances is reviewed and discussed, especially in the context of the World Anti-Doping Agency's 2025 Prohibited List. Topics of particular interest have been investigations into the metabolic fate and detection of anabolic agents, both anabolic-androgenic steroids and other anabolic substances such as selective androgen receptor modulators and protein-based therapeutics negatively regulating the activin receptor signaling pathway, and detection strategies for numerous new drug candidates have been discussed and presented. Further, the trend toward expanding testing options with regard to gene doping practices including oligonucleotide-based compounds (e.g., small interfering RNA, antisense oligonucleotides, etc.), transgenes, and gene editing practices continued also in 2024/2025, underlining the relevance for current and future sports drug testing programs.

Analysis of doping control test results in individual and team sports from 2003 to 2015.

Aguilar-Navarro M; Munoz-Guerra J; Del Mar Plara M; Del Coso J, J. Sport Health Sci.. 9(2):160-169, 2020 03.

Background: Determining the prevalence of doping in sport might be useful for anti-doping authorities to gauge the effectiveness of anti-doping policies implemented to prevent positive attitudes toward doping. Using questionnaires and personal interviews, previous investigations have found that the prevalence of doping might be different among different sports disciplines; however, there is no sport-specific information about the proportion of adverse and atypical findings (AAF) in samples used for doping control. The aim of the present investigation was to assess the differences in the frequency of adverse analytical and atypical findings among sports using the data made available by the World Anti-Doping Agency. **Methods**: The data included in this investigation were gathered from the Testing Figures Reports made available annually from 2003 to 2015 by the World Anti-Doping Agency. These Testing Figures Reports include information about the number of samples analyzed, the number of AAFs reported, and the most commonly found drugs in the urine and blood samples analyzed. A total of 1,347,213 samples were analyzed from the individual sports selected for this investigation, and 698,371 samples were analyzed for disciplines catalogued as team sports. **Results**: In individual sports, the highest proportions of AAF were 3.3% +/- 1.0% in cycling, 3.0% +/- 0.6% in weightlifting, and 2.9% +/- 0.6% in boxing. **In team sports, the highest proportions of AAF were 2.2% +/- 0.5% in ice hockey, 2.0% +/- 0.5% in rugby, and 2.0% +/- 0.5% in basketball.** Gymnastics and skating had the lowest proportions at (<=1.0%) for individual sports, and field hockey, volleyball and football had the lowest proportions for team sports (<=1.4%). **Conclusion**: As suggested by the analysis, the incidence of AAF was not uniform across all sports disciplines, with the different proportions pointing to an uneven use of banned substances depending on the sport.

This information might be useful for increasing the strength and efficacy of anti-doping policies in those sports with the highest prevalence in the use of banned substances.

Anti-doping awareness among community pharmacists in Norway: a study using a simulated patient.

Christensen S, Bjornsdottir I, Lauritzen F, Gjelstad A. International Journal of Pharmacy Practice. 34(2):140-146, 2026 Apr 03.

OBJECTIVES: The study investigated the knowledge and awareness of anti-doping regulations among community pharmacists in Norway. **METHODS**: The research employed a simulated patient methodology, involving 296 pharmacists, to assess their ability to identify prohibited substances and provide appropriate anti-doping advice. **KEY FINDINGS**: The findings reveal that 46.6% of pharmacists could identify salbutamol as a prohibited substance, with only 23.3% providing comprehensive anti-doping guidance. The study highlights a significant knowledge gap, emphasizing the need for enhanced educational programs to equip pharmacists with the necessary skills to offer effective anti-doping advice. **CONCLUSIONS**: The results underscore the critical role of community pharmacists in promoting a vigilant healthcare environment against doping in sports.

Electroceuticals for Paralympic Athletes: A Fair Play and Classification Concern?

Hodgkiss DD, Balthazaar SJT, Gee CM, Boardley ID, Janssen TWJ, Krassioukov AV, Nightingale TE. Sports Medicine. 56(2):315-325, 2026 02.

Electroceuticals such as brain computer interfaces and spinal cord stimulation (SCS) represent transformative strategies for neuromodulation. Research has demonstrated that SCS can ameliorate motor and autonomic cardiovascular dysfunctions, particularly in individuals with spinal cord injury (SCI). Notably, SCS has been shown to augment aerobic exercise performance. Owing to the nature of their injury, athletes with SCI are often predisposed to low resting blood pressure and impaired physiological responses to exercise. Therefore, some athletes intentionally induce autonomic dysreflexia ("boosting") to gain a competitive advantage - an act banned by the International Paralympic Committee (IPC). However, the emergence of electroceuticals facilitates an alternative performance enhancement strategy that could be considered unfair without equal access opportunities for all athletes. Currently, the World Anti-Doping Agency and the IPC have not acknowledged the potential impact of electroceuticals in parasport. Herein, we present an argument that the use of SCS meets the criteria for it to be placed on the World Anti-Doping Code Prohibited List (or at the very least be monitored) because collectively: SCS can enhance sport performance, represents a potential health risk to the athlete if misused, and may violate the spirit of sport. Acute and chronic use of SCS may also lead to classification changes, and increased opportunities for athletes to intentionally misrepresent, thereby raising concerns for the IPC. The growing access to electroceuticals (e.g. via clinical trial participation or private healthcare implantation) more than ever increases the likelihood of an athlete using SCS to gain an unfair advantage in parasport.

Pharmacological Interventions in the Management of Sports Injuries: A Review of Clinical Use, Dosage Forms, and Anti-Doping Considerations. [Review]

Alorfi NM. Drug design, development & therapy. 20:587793, 2026.

Background: Sports injuries are common among active adults and frequently require pharmacological interventions to control pain, reduce inflammation, and support functional recovery. Clear understanding of drug use patterns in clinical trials and their alignment with anti-doping regulations is essential for safe and ethical sports medicine practice. **Objective**: To

identify and characterize pharmacological interventions investigated in clinical trials for sports injuries in adults, focusing on drug class, dosage form, route of administration, and World Anti-Doping Agency classification. **Methods**: A retrospective registry-based analysis was conducted using ClinicalTrials.gov on 13 March 2025. Trials registered under the condition Sport Injury and involving adults aged 18 to 64 years were included, obtaining 426 studies. Pharmacological agents explicitly listed in the Interventions field were extracted and classified by therapeutic category, dosage form, route of administration, and World Anti-Doping Agency status according to the 2024 Prohibited List. **Results**: Twenty pharmacological agents were identified across multiple therapeutic classes, including non-steroidal anti-inflammatory drugs, corticosteroids, local anesthetics, biological therapies, and nutritional supplements. Oral, injectable, and topical formulations were most commonly reported. Non-steroidal anti-inflammatory drugs and local anesthetics represented the predominant drug classes. Most identified agents were permitted under World Anti-Doping Agency regulations when used via appropriate routes, whereas systemic corticosteroids were restricted during competition. **Conclusion**: Clinical trials evaluating pharmacological management of sports injuries predominantly focus on non-steroidal anti-inflammatory drugs and local anesthetics, reflecting current clinical practice. The findings highlight the importance of route-specific prescribing and regulatory awareness to ensure anti-doping-compliant pharmacotherapy in athletic populations.

Clostebol and sport: about controversies involving contamination vs. doping offence.

Kintz P, Gheddar L, Pichini S, Plebani M, Salomone A. Clinical Chemistry & Laboratory Medicine. 63(2):258-261, 2025 01 29.

Clostebol, the 4-chloro derivative of testosterone, available as Over The Counter product in pharmacies and drugstores in several countries, is mostly commercialized as a cream or spray in the form of acetate ester. As other anabolic steroids, clostebol is listed as a prohibited substance by the World Anti-Doping Agency (WADA). Controlled transdermal application of clostebol acetate has been reported to produce detectable amounts of its metabolites in urine, even after a single exposure. Indeed, a low urine concentration can be interpreted as the tail of a drug voluntarily used to enhance performance or a direct consequence of a contamination. The increased number of adverse analytical findings (AAFs) involving clostebol reported in the last years should lead to highlight the need for athletes to be warned against personal and /or accidental use/exposure of dermal preparation containing this doping agent. Further discussion on possible threshold limits and laboratory testing on different matrices (e.g. hair) to better clarify the origin of minimal amounts of clostebol in urines is advisable.

Determination of diuretics in the whey protein supplements: uncovering hidden contaminants in the sports nutrition market.

Ab Rahman SK, Rahmat N, Md Razali MR, Yeo WK. Acta Chimica Slovenica. 73(1):197-206, 2026 Jan 07.

The widespread use of whey protein supplements raises concerns about contamination with banned diuretics, posing health risks and the potential for inadvertent doping. In this study, a liquid-liquid extraction (LLE) procedure coupled with liquid chromatography-tandem mass spectrometry (LC-MS/MS) was developed and validated for the simultaneous detection of 23 diuretics in whey protein supplements. The method was assessed for selectivity, linearity, matrix effect, recovery, precision, and sensitivity. Statistical evaluation using the Shapiro-Wilk and Levene's tests confirmed that most calibration residuals exhibited a normal distribution and homogeneity of variance, ensuring the reliability of the regression model. The method demonstrated excellent linearity (R2 = 0.980-0.999) and low method detection limits (MDLs, 0.39-2.73 ng/g). A total of 58 commercially available whey protein supplements were analysed, and

bendroflumethiazide (D4) was detected in 12 samples, with concentrations ranging from 1.4 to 40.4 ng/g. These findings highlight the applicability of the validated method for routine monitoring and underscore the urgent need for stringent quality control and regulatory oversight in the sports supplement industry to protect consumer health and maintain fair competition.

When enhanced games outpace public health and ethics. Commentary.

Palmi I, Pichini S, Solimini R. Annali Dell'Istituto Superiore di Sanita. 62(1):1-5, 2026 Jan-Mar.

The enhanced games, a new sports event scheduled to take place in the United States in the spring of 2026, propose a competition model in which the use of performance-enhancing drugs (PEDs) is openly permitted and encouraged. This initiative represents a radical departure from long-established sporting norms and is strongly criticized by major international institutions, due to its potential public health consequences and ethical implications. PEDs use poses significant risks, ranging from severe physical damage to long-term mental health effects. The enhanced games risk normalising these substances, particularly among vulnerable populations such as youth, who are highly influenced by elite athletes and media narratives. This commentary examines the conceptual frameworks underpinning sport, performance enhancement, and doping as well as the main issues that may arise in relation to these games. Particular emphasis is placed on the possible implications for public health, from both an ethical and a health perspective.

Detection of sample swapping in anti-doping investigations using machine learning.

Rahman MR, Piper T, Thevis M, Maass W. Scientific Reports. 16(1), 2026 Mar 17.

The substitution of a urine sample that may result in an adverse analytical finding with a previously collected, clean sample is strictly prohibited under the World Anti-Doping Agency (WADA) regulations and is referred to as sample swapping. When an athlete reuses their own clean sample, detection becomes particularly difficult through conventional analytical methods. In this paper, we propose a similarity detection framework that explicitly accounts for pattern complexity in the analysis of urinary steroid profiles. The framework is based on a convolutional network to capture more complex and subtle variations in profile pairs. Using a dataset of 67,651 steroid profiles collected between 2021 and 2023, the framework was evaluated on both synthetic and laboratory-confirmed similar samples, reflecting realistic variability in doping control processes. The results show that the proposed framework outperforms several baseline models, achieving higher accuracy compared to different baselines. These findings demonstrate the potential of machine learning to improve anti-doping workflows by enabling the automated detection of reused or identical urine samples within large-scale sample collection managed by the Athlete Biological Passport.

Forensic Perspective of Unintentional Doping, Cardiovascular Health, and the Role of Nutrition in Competitive Sports. [Review]

Sosa I. *Nutrients. 18(5), 2026 Feb 25.*

Unintentional doping, often caused by contaminated supplements or misinterpreted therapeutic prescriptions, poses significant health, ethical, and regulatory challenges in competitive sports. Understanding the cardiovascular risks associated with performance-enhancing substances (PESs) and the preventive role of nutrition requires integrated analysis. A systematic review was conducted in accordance with PRISMA guidelines. Searches of comprehensive bibliographic databases yielded studies published between 2015 and November 2025. Inclusion criteria

encompassed peer-reviewed research on doping prevalence, cardiovascular outcomes, nutritional strategies, and supplement regulation. Data extraction focused on prevalence estimates, odds ratios (ORs), hazard ratios (HRs), and effect sizes for nutritional interventions. Quality assessment employed GRADE and risk-of-bias tools. From 1320 records screened, 60 studies were included in the qualitative synthesis and 31 in the meta-analysis. Surveys using indirect questioning estimated that 30-45% of elite athletes may engage in doping, while official anti-doping reports indicated that approximately 20-25% of confirmed rule violations are classified as unintentional. Supplement contamination accounted for 10-15% of unintentional cases. PES use significantly increased cardiovascular risk (HR for arrhythmias and myocardial infarction up to 3.5). Nutritional strategies-such as carbohydrate loading, optimized protein intake, omega-3 supplementation, and hydration-improved endurance by 8-12%, reduced resting heart rate by ~3 bpm, and lowered LDL cholesterol. Unintentional doping remains a major contributor to ADRVs, primarily driven by supplement contamination. Evidence-based nutrition offers safe alternatives to PESs (evidence-based nutritional strategies and structured hydration protocols), enhancing performance and cardiovascular health. Forensic toxicology and pharmacogenomic screening are essential for accurate detection and interpretation. Regulatory reforms, mandatory third-party supplement certification, and athlete education are critical to mitigate unintentional doping and ensure fair competition.

Promoting anti-doping behaviors through group norms: understanding the role of team identity among adolescent athletes.

Du J, Wang X, Luo S, Xia X, Dong C. Frontiers in Public Health. 14:1788343, 2026.

Background: While anti-doping education programs have expanded globally, their effectiveness in collectivist cultural contexts remains poorly understood. Existing research has largely focused on individual-level psychological factors, overlooking how group-level social dynamics interact to shape health behaviors in intensive team-based training environments where both normative pressures and identity processes operate simultaneously. **Objective**: To examine whether and how group norms influence anti-doping behaviors among Chinese adolescent amateur athletes, and to test team identity as a potential mediating mechanism in this relationship. **Methods**: Cross-sectional survey of 1,718 adolescent athletes (mean age 18years) from sports schools across 15 Chinese cities. Structural equation modeling tested direct effects of group norms on anti-doping behaviors and indirect effects through team identity as a mediator. **Results**: Group norms were strongly associated with anti-doping behaviors (*beta*=0.54, $p<0.001$). However, team identity exhibited a negative mediating pattern in this association (indirect effect=-0.194, accounting for 35.8% of total effect), revealing a paradox: while anti-doping norms show a positive association with healthy behaviors, the concurrent strengthening of team identity is statistically associated with an attenuation of this relationship. This negative mediation suggests that team-level interest coalitions can create conflicting pressures that complicate health promotion efforts in sports settings. **Conclusion**: This study identifies a dual-pathway social mechanism through which group norms and team identity jointly shape adolescent athletes' anti-doping behaviors in collectivist sports settings. From a practical perspective, the findings suggest that anti-doping education programs should move beyond individual-focused knowledge delivery and explicitly incorporate team-level strategies, such as shaping shared norms, engaging peer leaders, and aligning team identity with health and ethical values. Interventions that strengthen team cohesion without addressing underlying performance-driven identity pressures may be insufficient or counterproductive. These findings provide actionable guidance for designing culturally adapted anti-doping education programs that leverage group norms while managing the potential risks associated with strong team identification.

Navigating the Risks Beyond the Label: Unpacking Global Nutritional Supplement Safety. [Review]

Wardenaar FC, Burns SF, Campos M, Chan Y, Claassen-Smithers A, Dunshea-Mooij C, Haddou SE, Hoogervorst D, Jagim A, Garcia PR, Garthe I, Nugent AP, Aly MO, Saunders B, Schott KD, Sekiguchi Y, Slater G, Speers N, Stratton MT, Aussieker T. International Journal of Sport Nutrition & Exercise Metabolism. 36(2):134-166, 2026 Mar 01.

Nutritional supplement use is common among athletes aiming to enhance performance, recovery, and health. However, variable regulatory frameworks and limited safety oversight create risks for inadvertent doping violations. This article provides a global overview of supplement use, relevant authorities, legislation, and safety measures, with a focus on third-party testing (TPT) as a risk-mitigation strategy. Data from six global regions-Africa, Asia, Australia/New Zealand, Europe, Latin America, and North America-were synthesized from peer-reviewed studies, governmental sources, and regional expert contributions. Reported supplement use ranged from 7% to 100% among athletes (variability within regions), with protein powders, vitamins/minerals, creatine, caffeine, and sports drinks being most prevalent. High-risk products (potential anti-doping rule violations), including certain herbal blends, preworkouts, and weight-management supplements, were reported across all regions. While some countries have robust regulatory systems, most lack harmonized or enforceable safety frameworks. TPT programs, which independently verify products for prohibited substances, remain concentrated in the global northwest (Europe, North America, and Australia/New Zealand); awareness and use of TPT certification vary widely, and even in regions with established systems, athlete adherence is inconsistent. Barriers to low-risk supplement use are limited TPT availability, cost, differences in labeling (including language), and cultural factors. Firsthand experiences and perceptions highlight widespread misconceptions about supplement safety and certification. The authors recommend expanded athlete and team-around-the-athlete education, improved global access to TPT low-risk supplements, and policy initiatives to harmonize safety standards. This work emphasizes the need for coordinated international efforts to protect athlete health and integrity while allowing access to evidence-based supplementation.

FROM THE HISTORY BOOK

(image credit Brittanica online)

"The earliest records of doping in sport come from the Ancient Olympic games when athletes are reported to have taken figs to improve their performance. … Growth hormone was first isolated from the human pituitary gland in the 1950s. Its anabolic effects were soon recognised, and athletes had begun to abuse it by the early 1980s, at least a decade before it was used therapeutically by adult endocrinologists.[1.]

In the 1960's an increase in deaths among athletes, including cyclist Knud Enemark Jensen's death at the 1960 Olympic Summer games in Rome raised attention and concern for the hazards to health and safety from doping in sport. The International Olympic Committee convened a medical committee in 1961 and instituted the first drug testing in 1968 at the Winter Olympics in Grenoble.

The World Anti-Doping Agency (WADA) "was established on the 10 November 1999 to protect athletes, promote the values of clean sport, and preserve the spirit of sport internationally."[2] The World Anti-Doping Code harmonizes global antidoping policies to ensure fair competition. The rules, testing procedures and banned substances are governed by the WADA code which has been adopted by more than 700 sport organizations.

(image online: Frontiers)

The 2027 World Anti-Doping Code and International Standards will come into effect 1 January 2027.

1. Holt RG, Erotokritou-Mulligan I, Sonksen PH. The history of doping and growth hormone abuse in sport. Growth Horm IGF Res, 2009 Aug;19(4):320-6.
2. https://www.wada-ama.org/en/who-weare#:~:text=WADA%20was%20formed%20in%201999,in%20the%20fight%20against%20doping.

EDIFICATION FROM THE MEDICAL COMMISSION

In this segment of the Fast Break we feature an editorial from a member of the FIBA Medical Commission on topics relevant to basketball.

In this edition, Dr. Andrew Pipe, FIBA Therapeutic Use Exemption Committee Chair discusses doping in basketball and Therapeutic Use Exemptions (TUE)

Therapeutic Use Exemptions (TUEs) Made Easy!
Andrew Pipe, CM, MD. Chair, FIBA TUEC

Fundamental responsibilities of every team physician include being familiar with anti-doping policies and procedures, ensuring awareness of all medications and supplements that players may be using, and when an otherwise prohibited medication is needed to treat injury or illness promptly forwarding an application for a Therapeutic Use Exemption (TUE) to the appropriate sport organization.

Failure to submit a TUE application can have significant consequences for the player – and potentially for those who failed to appropriately ensure submission. Here are steps to ensure that these responsibilities can be addressed easily and effectively.

1. Conduct a 'medication review' with all the members of your team – this is particularly important when new players join a team (many – particularly those coming from U.S. colleges (the NCAA) – are often unfamiliar with the international approaches to anti-doping and the requirements for a TUE).
2. Ensure that all players are aware of their responsibilities regarding medication use and the problems that can arise with the use of certain supplements. Advise players to notify you of any medication or supplement use at any time.
3. Be familiar with the WADA Prohibited List. Use Global Dro to identify the status of any medication. It will provide clear guidance regarding the status of that medication (e.g. Prohibited, Not Prohibited etc). Download the *GlobalDro* App to your phone or laptop.

4. If a medication being prescribed to or used by a player is prohibited, promptly submit a TUE application. An appropriate form can be obtained from your National Anti-Doping Organization (NADO), or Regional Anti-doping Organization (RADO).
5. If the players under your care are competing internationally it is essential to submit a TUE application to FIBA. If you are uncertain about a player's competitive status or there is the possibility of international competition, submit to both the NADO and FIBA.
6. Be aware of the WADA TUE Physician Guidelines which provide a clear indication of the criteria used to validate the diagnosis of an array of conditions common in sport. These guidelines can be of great help in indicating the nature of the documentation that should accompany a TUE application.

Submitting a TUE Application:
The WADA International Standard for Therapeutic Use Exemptions provides clear guidance regarding the TUE process.

Submitting a TUE application is straightforward but requires a degree of care and consideration on the part of the physician.

1. Complete the form legibly. Ensure that biographical details are accurate.
2. Ensure the name, dosage and duration of the medication are clearly identified and accurate.
3. Ensure the provision of a succinct clinical summary of the condition or injury for which the medication is being prescribed.

   Example: "The player was diagnosed with cystic acne by dermatologist Dr. James Naismith on February 27th. A copy of his letter is attached. The use of spironolactone was recommended - and commenced on March 14th. There has been good response to treatment, and the player is followed by Dr. Naismith on a regular basis."

4. Provide, if appropriate, copies of consultation letters, laboratory or imaging results and testing scales. This is particularly important when applying for permission to administer a stimulant for the treatment of ADD/ADHD.
5. Ensure that the application is signed and dated by both physician and player.
6. Forward to the appropriate organization promptly.

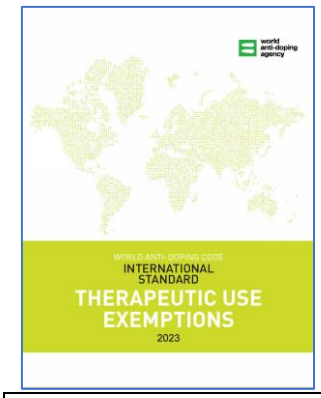
Problems with TUE applications usually reflect inadequate provision of basic data: failure to provide a succinct clinical summary of the condition or injury; confusing or conflicting information regarding the medication, its route of administration and dosage; or a failure to appropriately sign the form.

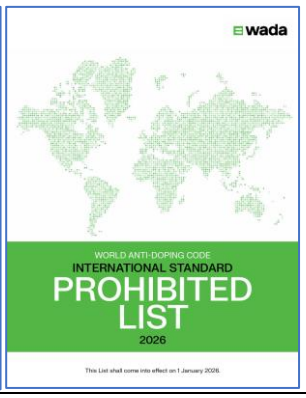
All applications received by FIBA are reviewed promptly by an international panel of physicians with distinct and considerable experience in the care of basketball players and familiarity with the roles and responsibilities of team physicians.

Retroactive TUEs:
It is important to recognize that the provision of necessary treatment or care should never be interrupted or delayed because of the need to apply for a TUE. The International Standard allows the submission of a Retroactive TUE to address such situations. Careful reading of the International Standard reveals the circumstances which permit such an application. When completing a TUE form note the section which deals with 'Retroactive Applications' and complete it appropriately. The application will be reviewed carefully and with an appreciation of the

legitimate clinical or other circumstances that make a retroactive application necessary. It is important to note, however, that **a retroactive application will not be approved if it does not meet the retroactive criteria (e.g. emergent or urgent need and insufficient time to apply in advance).**

Some final thoughts:
The FIBA Staff are always available to assist by responding to your questions or concerns; the FIBA TUE Committee (TUEC) appreciates the circumstances of busy team physicians and the need for thoughtful, well-documented clinical care when injury or illness occur. All are committed to doping-free sport and to assisting colleagues from around the world as they provide a high standard of care to the basketball's most important assets – our players!
I hope these suggestions have been helpful…a copy of the WADA Prohibited list, WADA TUE Physician Guidelines, WADA International Standard for TUEs, and the GlobalDro application are always present on my laptop and save time and effort in assessing the need for a TUE and completing any application. They can all be downloaded in 5 minutes!





PHYSICAL – NOT CHEMICAL – PROWESS: DOPING IN SPORT
This new recurring segment of the Fast Break will feature important information about anti-doping in basketball.

We would like to thank Dr. Alan Vernec, the former Medical Director of WADA for his contribution to this inaugural discussion on anti-doping.

World Anti-Doping Code 2027

First published in 2003, the World Anti-Doping Code (Code) now has over 700 signatories, including almost all sport federations and most professional sports. "The World Anti-Doping Code is the core document that harmonizes anti-doping policies, rules and regulations within sport organizations and among public authorities around the world."[3] The Code is supported by a series of International Standards (IS) that help to harmonize the technical and operational domains of anti-doping programs. For 2027 the International Standards will be:

1. Testing,
2. Intelligence and Investigations
3. Data Protection,
4. Code Compliance by Signatories,
5. Prohibited List,
6. Therapeutic Use Exemptions,
7. Laboratories,
8. Education, and
9. Results Management.

The 2027 version of the Code is the fourth revision and will come into effect this coming January. The IS have also been updated for 2027. You may be aware that the List of Prohibited Substances and Methods also is an IS but it is reviewed annually and a new version published in January of each year.

The goal of the 2027 update is to improve flexibility and fairness. It addresses areas such as proportionality in sanctions, procedural fairness, protection of athletes' rights, data privacy, and athlete support responsibility. It also addresses and makes changes in specific areas such as Substances of Abuse and Retroactive TUEs. While a discussion of all the changes to the Code is beyond the scope of this synopsis, a few Code articles are highlighted below.

For a full summary review of the upcoming changes, please read the summary documents on the WADA site (https://www.wada-ama.org/sites/default/files/2026-02/2026-02-13_summary_of_major_changes_code_final_13022026.pdf)

Articles 2.1.1 and 2.2.2 address the Presence and Use. New comments to this article clarify two points: an athlete cannot be charged with use of a prohibited substance before they became subject to anti-doping rule violations. However, once an athlete becomes subject to anti-doping rules, the presence of a prohibited substance in their sample is an anti-doping rule violation notwithstanding the fact that the adverse analytical finding (AAF) came from a substance having been used before the athlete became subject to the rules.

Article 4.3 Criteria for Including Substances and Methods on the Prohibited List
The wording on the long-standing criteria for inclusion to the List were modified. It also clarifies that WADA, in its sole discretion, determines if a substance or method meets the inclusion criteria. A substance or method shall be considered for inclusion to the List if it meets two of the following three criteria to be put on the prohibited list:

1. potential to enhance or enhances sport performance;
2. actual or potential health risk to the athlete, and
3. violation of the spirit of sport as described in the introduction to the Code.

Article 4.4 Therapeutic Use Exemptions (TUE)
Much of this article has been moved the International Standard TUE document. It was streamlined and improved for clarity with a number of minor modifications.

Article 10.2.4.1 TUE Criteria.
One significant change regarding TUEs in the Code considers the situation where an athlete was supposed to have applied for a TUE in advance but failed to do so and also does not fulfill any retroactive TUE criterion. The new rule will limit the sanction to 2 months if they fulfill the key TUE criteria (i.e. it is clearly a legitimate medical issue). Notwithstanding any other provision in Article 10.2, where the Athlete can establish that the presence, Use or Attempted Use or Possession met each of the criteria in Article 4.2 of the International Standard for Therapeutic Use Exemptions (except for the need to show there was no reasonable permitted Therapeutic alternative) at the time the presence Use or Attempted Use or Possession occurred, then the period of Ineligibility shall be two (2) months.

Article 10.6.1.2. Contaminated Source.
This addresses a potential reduction in the period of ineligibility for anti-doping rule violations involving contaminated products/sources and expands the definition of contamination to explicitly include food or drink, environmental contamination, or exposure through contact with a third person or object touched by a third person. There must have been no basis for the athlete to suspect that the third person who contaminated them have used or possessed or been exposed to the Prohibited Substance. This change in the Code increases flexibility to sanctions but

highlights that athletes still take nutritional supplements at their own risk, and assignment of No Fault to the athlete in these situations is rare.

Article 10.2.1.3 Sanctions.
This article provides a decrease in sanctions where the Athlete cannot establish how the Prohibited Substance entered their system, but in exceptional cases can establish to the comfortable satisfaction of the decision-making body that, based on scientific evidence, the anti-doping rule violation was not compatible with intentional use of a Prohibited Substance, then the period of Ineligibility may be reduced to two years. Note that evidence could be the metabolic profile indicates recent administration or the existence of prior or subsequent samples that confirm that the substance was not the tail end excretion of a therapeutic dose.

Article 10.4.2 Substances of Abuse.
Substances of Abuse (SoA) were first defined in the 2021 Code with specific sanctioning regimes. These substances, which were already on the List are cocaine, heroin, MDMA (ecstasy) and THC (cannabis) and are prohibited in-competition only. Changes were made in the 2027 Code so that for a first-time offense with a SoA there will be a fixed sanction term of 2 months with no requirement for attendance in a rehabilitation program. A second violation with SofA confers a 4-month sanction that can be reduced to 2-months with attendance in a rehabilitation program.

Sources:

3. WADA online: https://www.wada-ama.org/en/resources/world-anti-doping-code-and-international-standards/world-anti-doping-code

All the necessary information can be found on the dedicated TUE section of FIBA website, including the FIBA Application TUE form.

SHARE YOUR PHOTOS

Please send us your funny, interesting, or remarkable basketball pictures that we can share with the medical and sport science basketball community. Email: medical@FIBA.basketball

The 2026 Basketball Champions League Final Four finished on Saturday, 9 May with Rytas Vilnius edging out AEK BC 92-86 in overtime in the Final in front of 10,372 fans at the Palau Municipal d'Esports in Badalona.

THE STUDENT'S CORNER

This space is intended for sport science and medical students, residents, and fellows to contribute to our knowledge and conversation.

Please encourage your students to contribute to the Fast Break on a topic of their choosing related to basketball injury, rehabilitation or sport science. The work published here is reviewed and approved for submission by the student's preceptor.

Unfortunately, there were no student submissions to this edition of the Fast Break.

NEWS AND NOTABLE FROM THE FIBA MEDICAL COMMISSION

In 2026 the FIBA Medical Commission's educational programming will focus on core concepts for the team physician's preparedness at FIBA events. The date will be confirmed and shared soon. The recordings of previous webinar sessions can be found here: **https://about.fiba.basketball/en/services/medical/webinars**

Resources from the FIBA Medical Commission can be found here:
https://about.fiba.basketball/en/services/medical/information-for-medical-staff

BASKETBALL CME OPPORTUNITIES

A listing of varied sport medicine and basketball meetings and conferences you may be interested in attending:

Sports Medicine Australia conference events can be found here: **https://sma.org.au/about-sma/honour-board/sma-national-conferences/**

Sports Medicine New Zealand conference events can be found here: **https://sportsmedicine.co.nz/**

The Australasian College of Sport and Exercise Physicians events can be found here: **https://www.acsep.org.au/page/events**

The Asian Federation of Sport Medicine conference events can be found here: **https://afsm2024.com/index.php**

The South African Sports Medicine Association hosts several events throughout the year:

https://www.sasma.org.za/events/

The South African Sports Medicine Association hosts several events throughout the year:

https://www.sasma.org.za/events/

The British Association of Sport and Exercise Medicine conference events can be found here: **https://basem.co.uk/learning/**

The FIMS (International Sport Medicine Federation) list of events can be found here: **https://www.fims.org/news-events/events/**

The National Basketball Strength and Conditioning Association hosts a performance conference. Check here for the latest updates regarding the date of their next conference: **https://thenbsca.com.**

The Euroleague Strength and Conditioning Coaches Association list of upcoming events can be found here: **https://escca.net/events/.**

The High-Performance Basketball Symposium dates are coming soon: **https://www.highperformancebasketball.com/index.cfm.**

A listing of all the American Medical Society for Sports Medicine conferences can be found here:

https://www.amssm.org/Conferences.php

The Society for Sport Exercise and Performance Psychology website lists a number of mental performance educational opportunities:

https://www.apadivisions.org/division-47/about/resources/conferences

Conference Locate.com allows you to search globally for conferences on an extensive array of medical topics:

https://www.clocate.com

A listing of exercise physiology conferences across the world can be found here: **https://conferenceindex.org/conferences/exercise-physiology**

And for something a little different:

https://unconventional.com.au/conferences/south-america/medical-conferences/2024/

If you prefer self-study to earn CME credits while you are on vacation, have a look at these options.

Date	Location	Event website
Sept 9-11, 2026	Singapore (Singapore)	Medical Fair Asia + Medicine and Sports Conference
Jun 1-4, 2027	Indianapolis (USA)	American College of Sport Medicine Annual symposium