



Vaccination and medical education of athletes

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Abstract

It is important to mention that athletes represent a specific group of the population with definite health demands due to intensive physical activity, regular travel, and close contact in training and competitive environments. These factors increase their sensibility to infectious diseases, which can negatively impact both individual performance and team outcomes. It is widely known that the vaccination is a critical preventive strategy in safeguarding athletes' health; however, vaccination coverage in this group is often incomplete due to limited awareness and insufficient medical guidance.

This paper shows the role of vaccination in athlete health management and strengthens the importance of targeted medical education regarding health issues, prevention and rehabilitation. The proposed research includes current recommendations for immunization in athletes, including routine vaccines and those indicated for travel or sport-specific risks. Additionally, the study examines barriers to vaccine uptake, such as lack of knowledge, fear of side effects, and misinformation and misinterpretation.

The importance of medical education is highlighted as a key intervention to improve vaccination rates among young athletes. The educational programs for athletes, their coaches, and sports health professionals can improve the understanding of vaccine safety, efficacy, and timing. The integration of the Integrating preventive medicine into sports training systems may reduce the incidence of infectious diseases, sport traumas and in the future can support the optimal athletic performance.

We have concluded that the encouraging vaccination strategies together with inclusive medical education is vital for helping improve athlete health, minimizing disease-related troubles, and ensuring continuous performance at any level, both amateur and professional.

Keywords: athletes, vaccination, immunization, medical education, sports medicine.



Introduction

Athletes globally, due to the specific demands of their profession, face health challenges frequently. Intensive physical activity, regular travel, and close contact during training and competition substantially increases their exposure to infectious diseases, especially it was viable during Covid-19 period. The above-mentioned adversely affects both individual performance and the overall success of sports teams. Vaccination remains as one of the most effective prevention strategies to defend athlete health, but the vaccination rates among athletes remain still incompatible. It is important to mention that the various factors contribute to this, including inadequate awareness, misunderstandings about vaccine safety, and insufficient medical guidance at all. This paper covers the critical role of vaccination in athlete health management and the importance of medical education in overcoming barriers to vaccine acceptance, especially in sport field.

Sport influences people's health, the formation of value systems and human behavior, and the functioning of the financial and economic system. Sport has both educational and health-improving, as well as an economic function [3].

According to Article 17 of the Law of Georgia "On Sports", which concerns the participation of health care organizations and institutions in the development of sports, health care organizations and institutions, functions, duties and competencies are defined, among which it should be noted: b) Sub-clause: "They provide medical control to

members of the sports section, provide medical services to the Georgian national and other teams on the basis of a contract." e) Sub-clause: "Sports training and competitions can be held in an ecologically and hygienically clean environment." [1].

As for preventive vaccinations, they are regulated by Article 78 of the Law of Georgia "On Health" and approved by the Ministry. The Ministry develops and approves the national calendar of preventive vaccinations and the state medical program necessary for its implementation [2].

According to Article 15 of Chapter III of the same law: Management, Organization and Financing of the Health Care System, the implementation of state policy in the field of health care is ensured by the Ministry of Internally Displaced Persons from the Occupied Territories, Health, Labour and Social Affairs of Georgia (hereinafter referred to as the Ministry), which develops and issues relevant legal acts on issues within its competence, unless otherwise established by the legislation of Georgia [2].

Vaccination as an Important Preventive Measure

Routine vaccinations are highly recommended for athletes. These vaccines help protect against common infections. Additionally, athletes who travel frequently for competitions or training may require sport-specific vaccinations or those recommended for travel-related risks. These include vaccines for meningitis, yellow fever, and typhoid, which are particularly important for athletes participating in events



in regions with higher risks of these diseases [4].

The COVID-19 pandemic highlighted the importance of vaccination in ensuring that athletes can continue to compete safely. Since then, vaccinations have become a routine part of health protocols for athletes, not only for disease prevention but also to ensure that teams and competitions remain safe from outbreaks [5].

Barriers to Vaccination in Athletes

Despite the evident health benefits, vaccination coverage among athletes remains incompatible due to low understanding of the importance to be vaccinated. One of the primary barriers to vaccine uptake is a lack of awareness about the importance and safety. Many athletes, coaches, and even medical staff may not fully understand which vaccines are necessary for their specific sports or the regions in which they compete [5].

This lack of awareness is often compounded by misinformation or misconceptions about vaccines. Some athletes are afraid of potential side effects, believing that vaccines might negatively impact their performance or health in the long term. Others may avoid vaccination due to the belief that it could interfere with their training or competition cycles, fearing that side effects such as fever or fatigue could hinder their performance [6].

Another important barrier is the insufficient assistance from healthcare professionals. In many cases, athletes and coaches receive limited counseling on the importance of immunization or the risks associated with neglecting vaccination. Furthermore, athletes may not be aware of the importance

of getting vaccinated in relation to their specific training and competition schedules, leading to confusion about when and how to receive vaccinations without compromising performance [6].

The Role of Medical Education in Improving Vaccine Coverage

Medical education plays a substantial role in addressing barriers. One of the most effective ways to improve vaccine uptake is through targeted education programs designed for athletes, coaches, and sports healthcare professionals. By enhancing their understanding of vaccine safety, efficacy, and the optimal timing for vaccination relative to training and competition cycles, athletes are more likely to make informed decisions regarding vaccination [7].

It is essential for athletes to understand that vaccines are thoroughly tested for safety and that the benefits far outweigh the risks. Additionally, these programs can provide athletes with guidance on how to incorporate vaccination into their schedules without negatively affecting their performance.

Health professionals in sport and coaches play an important role in this educational process. By becoming advocates for vaccination and working closely with athletes, these individuals can help improve vaccine awareness and ensure that athletes are protected from preventable diseases. Sports medicine professionals, such as team physicians, play a particularly critical role in providing personalized vaccine recommendations and addressing athletes' concerns about potential side effects.

Integrating preventive medicine, including



vaccination, into the broader structure of sports training programs is another effective strategy. By doing so, athletes are more likely to view vaccination as a regular part of their health regimen, akin to proper nutrition, exercise, and recovery protocols. This integration can reduce the incidence of infectious diseases and ultimately support an athlete's optimal performance [4].

Conclusion

The importance of vaccination in athlete health cannot be exaggerated. It is widely known that vaccines are essential in protecting athletes from infectious diseases. Once again, to improve vaccination coverage, it is necessary to address the barriers of misinformation, lack of awareness, and limited medical guidance. Medical education is a crucial intervention in this regard. By providing athletes, coaches, and sports

healthcare professionals with precise, it is possible to improve vaccine uptake and ensure that athletes remain healthy and perform at their best at all levels, such as individual and as a team.

To accomplish above-mentioned, comprehensive educational programs, directed medical counseling, and the integration of preventive medicine into sports training systems are more essential. Improving vaccination coverage strategies, alongside with continued medical education, will eventually promote athlete health, decrease disease-related disorders, and ensure improved performance at both amateur and professional levels. These recommendations are for the athletes, their coaches and medical personnel in sport industry. Of course, furthermore investigations must be done in this regard as soon as possible

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აბსტრაქტი

მნიშვნელოვანია აღინიშნოს, რომ სპორტსმენები წარმოადგენენ მოსახლეობის სპეციფიკურ ჯგუფს, რომელსაც აქვს ჯანმრთელობის გარკვეული მოთხოვნები ინტენსიური ფიზიკური აქტივობის, რეგულარული მოგზაურობის და ვარჯიშსა და შეჯიბრებებში მჭიდრო კონტაქტის გამო. ეს ფაქტორები ზრდის მათ მგრძობელობას



ინფექციური დაავადებების მიმართ, რამაც შეიძლება უარყოფითად იმოქმედოს როგორც ინდივიდუალურ შესრულებაზე, ასევე გუნდის შედეგებზე. ფართოდ არის ცნობილი, რომ ვაქცინაცია სპორტსმენების ჯანმრთელობის დაცვის კრიტიკული პრევენციული სტრატეგიაა; თუმცა, ამ ჯგუფში ვაქცინაციის დაფარვა ხშირად არასრულია შეზღუდული ცოდნა და არასაკმარისი სამედიცინო განათლების გამო.

ეს ნაშრომი აჩვენებს ვაქცინაციის როლს სპორტსმენების ჯანმრთელობის მართვაში და ამლიერებს მიზნობრივი სამედიცინო განათლების მნიშვნელობას ჯანმრთელობის საკითხებთან, პრევენციასა და რეაბილიტაციასთან დაკავშირებით. ჩატარებული კვლევა მოიცავს სპორტსმენებში იმუნიზაციის მიმდინარე რეკომენდაციებს, მათ შორის რუტინულ ვაქცინებს და იმ ვაქცინებს, რომლებიც აუცილებელია მოგზაურობის ან სპორტთან დაკავშირებული რისკებისთვის. გარდა ამისა, კვლევა მოიცავს ვაქცინის მიღების ბარიერებს, როგორცაა ცოდნის ნაკლებობა, გვერდითი მოვლენების შიში, დეზინფორმაცია და არასწორი ინტერპრეტაცია.

სამედიცინო განათლების მნიშვნელობა ხაზგასმულია, როგორც მთავარი ინტერვენცია ახალგაზრდა სპორტსმენებში ვაქცინაციის მაჩვენებლების გასაუმჯობესებლად. სპორტსმენების, მათი მწვრთნელებისა და ჯანდაცვის სპეციალისტებისთვის საგანმანათლებლო პროგრამებს შეუძლიათ გააუმჯობესონ ვაქცინის უსაფრთხოების, ეფექტურობისა და დროის აღქმა. სპორტული აქტივობების სისტემებში პრევენციული მედიცინის ინტეგრირებამ შესაძლოა შეამციროს ინფექციური დაავადებების, სპორტული ტრავმების შემთხვევები და მომავალში ხელი შეუწყოს ოპტიმალურ სპორტულ შედეგებს.

ჩვენ შეგვიძლია დავასკვნათ, რომ ვაქცინაციის სტრატეგიების წახალისება ინკლუზიურ სამედიცინო განათლებასთან ერთად სასიცოცხლოდ მნიშვნელოვანია სპორტსმენების ჯანმრთელობის გაუმჯობესების, დაავადებასთან დაკავშირებული პრობლემების მინიმიზაციისა და უწყვეტი შესრულების უზრუნველყოფისთვის ნებისმიერ, როგორც სამოყვარულო, ასევე პროფესიონალურ დონეზე.

საკვანძო სიტყვები: სპორტსმენები, ვაქცინაცია, იმუნიზაცია, სამედიცინო განათლება, სპორტული მედიცინა.

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