



Advances in Sports Therapy for Injury Prevention, Rehabilitation, and Athletic Performance Enhancement Worldwide: A Comprehensive Review

Ahmed Farhan Shallal

Basic Medical Sciences Department, College of Medicine, University of Sulaimani, Sulaymaniyah, Kurdistan Region-Iraq. Email: ahmed.farhan@uor.edu.krd

OPEN ACCESS

Corresponding Author:

Name

Ahmed Farhan Shallal

Basic Medical Sciences Department,
College of Medicine, University of
Sulaimani, Sulaymaniyah, Kurdistan
Region-Iraq. Email:
ahmed.farhan@uor.edu.krd

Received: 21-03-2026

Accepted: 26-04-2026

Published: 18-05-2026

ABSTRACT

Sports therapy is now a multidisciplinary therapy that focuses on injury prevention, rehabilitation, exercise prescription, biomechanics, sports medicine, nutrition, psychology, recovery science and new digital technology, rather than just the treatment of injuries. The modern treatment focuses on injury prevention, timely and precise diagnosis, rehabilitation on a one-to-one basis, gradual return to sport and maximizing physical and psychological function. The utilization of exercise-based prevention programs, neuromuscular training, strength and conditioning, movement-control exercises, load management, sport-specific skill development and proper warm-up are now key priorities in modern sports therapy. There are some indications that the use of tailored preventative programmes based upon previous injury, athlete characteristics, the specific demands of the sport and training exposures is most effective, and that adherence to the programme is high. Rehabilitation has also transitioned to criterion-based progression in addition to the time-based approach. Therapeutic Exercise, manual therapy, neuro-muscular re-education, cardiovascular conditioning, proprioception, plyometrics, aquatic therapy and sport-specific drills are part of a modern therapy. Recovery management, sleep, nutrition, psychological readiness and tracking of training loads are now emerging as important aspects of athlete health and performance. New technologies, such as wearable sensors, GPS workload monitoring, motion analysis, tele-rehabilitation, artificial intelligence, virtual reality and digital health platforms offer new opportunities for personal decision-making. Technology should be used to supplement—not supplant—clinical exam and professional judgment, however. Current international agreement also highlights the need to take athlete-specific factors into account, such as sex, age, para-sport and level of competition, culture, healthcare and access to healthcare. This review focuses on the advances in sports therapy around the world for injury prevention, rehabilitation, recovery, performance enhancement, nutrition, psychological support, technology, and future directions. The most promising approach to minimizing the burden of injuries and enhancing athletic performance is an integrated model centered on the athlete, rooted in evidence-based clinical practice, and that involves multi-disciplinary collaboration that utilizes individual monitoring.

Keywords: Sports therapy, injury prevention, sports medicine, rehabilitation, athletic performance.

Copyright© INTERNATIONAL JOURNAL OF CLINICAL, MEDICAL AND HEALTH SCIENCES

INTRODUCTION

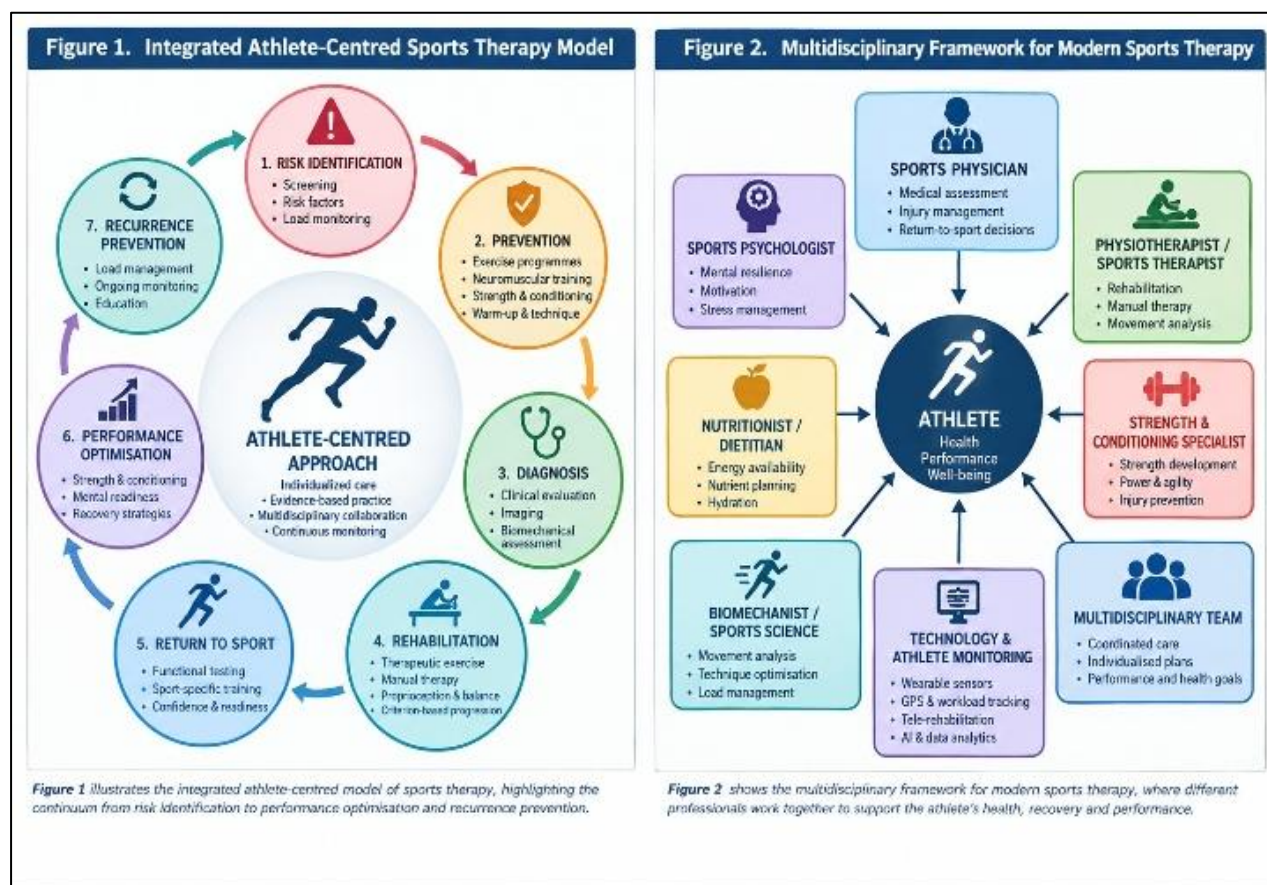
Sport offers great physical, psychological and social advantages and, at the same time, carries the risk of acute sports injuries, overuse injuries, illness, fatigue, and performance problems. Sport's growing professionalism has resulted in a greater need for complex strategies to prevent, rehabilitate, recover and enhance sporting performance. Modern sports therapy is thus not just about the management of an injured athlete but a continuum from reducing risk through to rehabilitation, return to sport and performance optimization [1,7].

Traditionally, sports injury management has been concerned mainly with the treatment of acute injuries and the resolution of symptoms. The modern approach to athlete care has come to understand that a combination of identifying modifiable risk factors, training loads, recovery, progressive rehabilitation, psychological preparation and integration with the sport is needed for success. Exercise-based injury prevention programs are especially critical since these programs allow for the incorporation of strength, balance, agility, neuromuscular control, and sport-specific training movements into regular training [1,2].

In response to the question about previous injuries, sports physical therapists from 32 countries concurred in the international Delphi study that previous injury should be taken into account in injury-prevention programs, with 94% agreement. With regard to previous injury, 94% of international sports physical therapists agreed in the international Delphi study that previous injury is a factor to consider in injury-prevention programs. Importantly, implementing within warm-up sessions can optimize integration into routine training than to be seen as an added burden for prevention.

Modern sports therapy has also embraced recovery science, and it has found its way into the core of the profession. Fatigue, maladaptation, illness, injury and diminished performance may stem from training stress/recovery imbalance. Therefore, it is now becoming recommended that athletes of varying levels of competition be systematically monitored for training and recovery [4].

There has also been recent international consensus-building on the field, creating even wider field. The IOC FAIR consensus was formed based on the current evidence on injury prevention in women and girls' sport and has delivered 56 recommendations on injury prevention strategies, possible modifiable risk factors, implementation and supportive sporting environments for 2025 [6]. This is the evolution of sports medicine which is moving away from a uniform solution and towards individual-specific and context-based solutions.



Literature Search Strategy

A structured literature search was conducted to identify relevant evidence on contemporary sports therapy, with particular emphasis on injury prevention, sports injury diagnosis, rehabilitation, return-to-sport decision-making, recovery, athletic performance enhancement, sports nutrition, psychological support, multidisciplinary care, and emerging technologies. The search focused primarily on peer-reviewed literature and recent international consensus statements relevant to athletes across different sporting disciplines and levels of participation.

The literature search was performed using major biomedical and scientific databases, including PubMed/MEDLINE, Scopus, Web of Science, and Google Scholar. The search strategy combined relevant keywords and Boolean operators, including "sports therapy," "sports injury prevention," "sports rehabilitation," "return to sport," "athletic performance," "neuromuscular training," "strength and conditioning," "training load," "recovery," "sports nutrition," "psychological readiness," "wearable technology," "artificial intelligence," "virtual reality," "tele-rehabilitation," and "sports medicine."

[Ahmed Farhan Shallah](#). Advances in Sports Therapy for Injury Prevention, Rehabilitation, and Athletic Performance Enhancement Worldwide: A Comprehensive Review. *Int. J. of Clin. Med. and Hea. Sci.*, 2 (2): 34-39, 2026

Additional searches were conducted using combinations of these terms with “athletes,” “injury prevention,” “performance,” “female athletes,” “youth athletes,” “para-athletes,” and “multidisciplinary care.”

Priority was given to systematic reviews, meta-analyses, international consensus statements, expert consensus studies, clinical guidelines, and relevant original research. Publications addressing established and emerging approaches to injury prevention, rehabilitation, recovery, workload management, psychological readiness, nutrition, athlete monitoring, and technology-assisted sports therapy were considered particularly relevant. Reference lists of important consensus statements and review articles were also examined to identify additional relevant publications.

Studies and documents were considered eligible when they were directly relevant to sports injury prevention, diagnosis, rehabilitation, recovery, return to sport, athletic performance, or broader athlete health and when they provided information applicable to contemporary sports therapy practice. Literature concerning different age groups, sexes, sporting levels, and athlete populations was considered where relevant to the objectives of the review. Publications that were unrelated to sports therapy or focused exclusively on non-athletic populations without clear relevance to sports practice were not considered.

The evidence was reviewed narratively rather than through quantitative meta-analysis because the purpose of this article was to provide a broad, multidisciplinary overview of advances in sports therapy. The selected literature was organized thematically into injury prevention, diagnosis, rehabilitation and return to sport, recovery and sports nutrition, psychological support, technological developments, multidisciplinary care, global challenges, and future directions. Particular attention was given to evidence supporting individualized, athlete-centred and criterion-based approaches rather than uniform treatment strategies.

The literature search and synthesis were undertaken to provide an updated international perspective on the evolution of sports therapy and to identify important developments, current challenges, and future opportunities in the field.

Evolution of Modern Sports Therapy

There are several significant phases of sports therapy development, from rest, immobilisation, massage and basic rehabilitation, to therapeutic exercise, physiotherapy, strength and conditioning, biomechanical analysis and evidence based rehabilitation. The model in place is multidisciplinary: healthcare for high performance athletes is coordinated by a sports physician, strength and conditioning coaches, nutritionists, sport psychologists, biomechanists, athletic trainers and sport scientists, working together. This integration allows for the evaluation and treatment of the injured tissue and also the underlying risk factors, functional restrictions, psychological factors and sport-specific performance requirements. Therefore modern sports therapy can be seen as consisting of five inter-dependent stages which are: Risk identification, Injury Prevention, Diagnosis and Acute Management, Progressive Rehabilitation and Return to Sport, and Performance Optimisation and Recurrence Prevention. This integrated model is not about the prevention of injury and the enhancement of performance in isolation, but about the use of appropriate strength development, movement control, recovery strategies, and training-load management to reduce risk of injury, restore functional capacity, and improve performance [1,4].

Advances in Sports Injury Prevention

Exercise-Based Prevention

One of the most significant developments in sports therapy is the inclusion of exercise-based prevention, and the frequency of these programs is increasing. Exercise-based prevention typically includes strength training, balance training, neuromuscular training, agility training, dynamic movement preparation, plyometrics, sport-specific drills, core and trunk control exercises, and proprioceptive training. The interventions aim to increase strength, coordination, balance, efficiency of movement, joint stability and the athlete's capacity to withstand the physical demands of the sport. Athlete participation is a key factor in the effectiveness of exercise-based prevention programs, with recent research showing that adherence to these programs is a key factor in decreasing sports injuries [3]. Hence, prevention programs must be practical, efficient, progressive, individualized and properly embedded into the athletes' normal training, in order to encourage the athletes' involvement and maximize the prevention benefits.

Neuromuscular Training

The aim of neuromuscular training is to enhance the interplay between the nervous system and musculoskeletal system. May contain exercises on balance, landing, agility, strength, and movement control.

These interventions are especially useful in contact and sports that include jumping, change of direction, acceleration, deceleration. Modern consensus guidelines endorse the use of neuromuscular warm-up programs as a valuable part of the prevention of injuries [6].

Strength and Conditioning

Muscle weakness and function deficits may lead to movement impairments, decreased physical capacity and decreased load tolerance. Strength and conditioning programs therefore focus on maximizing strength, producing maximal power, providing muscular endurance, enhancing rate of force development, maximizing tendon capacity, increasing joint stability, and increasing overall movement efficiency. Progressive resistance training can improve the neuromuscular function, tolerance of tissues and readiness of athletes to the requirements of their sport. Resistance training programs, however, must differ based on the age, training history, sport, competition level, physical status, injury history and rehabilitation status of the

Ahmed Farhan Shallal. Advances in Sports Therapy for Injury Prevention, Rehabilitation, and Athletic Performance Enhancement Worldwide: A Comprehensive Review. *Int. J. of Clin. Med. and Hea. Sci.*, 2 (2): 34-39, 2026

athlete to maximize performance benefits, minimize risk of injury, and ensure appropriate progression.

Training Load Management

Training load management is a well-recognized part of contemporary sports therapy and an effective method for managing training and/or competition demands and the athletes' ability to adapt and recover. Load can be exercise time, distance covered, repetitions, acceleration, deceleration, external resistance, competition exposure and physiological load. Sudden and/or too high workloads can lead to fatigue, poor performance, and higher injury risk, while too low workloads can lead to detraining, low fitness, and low tissue capacity. As a result, sports therapists are increasingly working alongside coaches and S&C professionals to programme progressive individual workloads, varying from previous injuries, current symptoms, training history, competition programme, sleep quality, nutritional status, psychological stress, recovery status, athlete age and the demands of the sport [4,6]. One of the key principles of today is that it is not possible to make a general statement about the level of workload as there is great variability between athletes in response to the same amount of external load and hence the level of workload needs to be managed continuously based upon the individual athletes condition, recovery capacity and training goals.

Advances in Warm-Up Strategies

Warm-up has developed from being simple stretching and low intensity activity into a structured performance preparation intervention to prepare the athlete physically and psychologically for training and competition. Some modern warm-up techniques include sport-specific preparation, agility, balance, neuromuscular training, dynamic movements, mobility exercises and aerobic activity. The experts from 12 countries were polled in a recent international Delphi consensus and there was general agreement on the definition, goals, structure, exercise selection, injury prevention and effect on performance of warm-up [8]. A correctly formulated warm up can increase muscle temperature, prepare neuromuscular systems to function, and facilitate coordination of movement, prepare the joints and muscles for sport-specific movements, and stimulate psychological preparedness, and include injury prevention exercises in regular training. Therefore, the inclusion of static stretching in the general warm-up has become discredited and current research has focused on the use of dynamic, progressive and sport-specific warm-up exercises that pre-activate the muscles prior to the demands of the following exercise or competition.

Advances in Sports Injury Diagnosis

When a person is injured in a sport, the process of diagnosis is crucial in order to create a successful rehabilitation pathway as clinicians will be able to determine the nature of the injury, how serious it is, and what the functional repercussions are, and then take appropriate action. Modern sports therapy utilizes thorough patient history and physical examination, functional testing, range of motion, muscle strength assessment, neurological examination, and if clinically indicated, imaging (ultrasound, magnetic resonance imaging [MRI], radiography and computed tomography [CT] scan) and biomechanical analysis. These diagnostic techniques complement one another in terms of information about tissue integrity, movement patterns, functional limitations and sport-specific demands. The use of diagnostic technology must, however, be considered selectively and must be well understood in the broader clinical context because the imaging could show structural abnormalities in athletes with few or no symptoms. Appropriate imaging should be used in combination with the athlete's symptoms, clinical examination, functional performance, and history of the injury to inform a diagnosis for the individual, and then help guide the athlete's rehabilitation and safe return to sport.

Modern Rehabilitation Approaches

Rehabilitation, Return-to-Sport, Recovery, and Sports Nutrition

Treatment has changed from a passive to an active, progressive and criterion-based approach with a focus on symptom control, mobility and strength restoration, improving neuromuscular control and cardiovascular fitness, building sport-specific capacity, restoring psychological readiness, and preventing re-injury. While therapeutic exercise is the basic component of most rehabilitation programs, progress will generally be made from low load to resistance, functional exercise, plyometrics, sport specific drills to free run competition and based on objective clinical and functional parameters and not solely on time. The return to sport is now considered to be a continuum, starting with the return to participation, moving to return to training, return to sport and finally return to performance and assessment should include pain, range of motion, muscle strength, power, balance, agility, jumping, sprinting, change of direction, sport specific skills, and psychological readiness. Manual techniques (soft tissues, joint mobilization, clinically appropriate manipulation, massage, myofascial techniques, and scar management) may be used to complement active rehabilitation to manage symptoms and mobility and adjunctive therapy (cryotherapy, thermotherapy, compression, electrical stimulation, therapeutic ultrasound, hydrotherapy, and aquatic exercise) may be selected based on the injury, treatment goals, timing, and available evidence. However, the importance of recovery in maintaining the performance and minimising the effects of excessive training stress is also recognised, and sleep, active recovery, massage, mobility work, swimming, cycling and hydrotherapy are all recognised as being able to aid the process of recovery [4]. Nutrition is also an essential part of sports rehabilitation and performance, as proper energy, carbohydrate, protein, healthy fat, fluid, electrolyte, vitamin, and mineral intake are vital to the repair of tissues and the function of the immune system, as well as training adaptation and athletic performance. Ensuring adequate nutrition is especially critical during rehabilitation, as decreased activity levels can lead to loss of lean tissue and strength, and proper nutrition may help maintain and rebuild lean tissues. On the other hand, a deficiency of energy intake can have an adverse impact on athlete health and on injury risk; nutritional assessment and proper nutritional support should be part of a complete

sports-that-care programme [6].

Psychological, Technological, and Multidisciplinary Advances in Sports Therapy

It is becoming clear in sports rehabilitation that the successful rehabilitation of an injured athlete is reliant on both physical and psychological aspects, and an athlete may be physically able to return to sports, but not psychologically prepared, which can be indicated by fear of reinjury, anxiety, loss of confidence, frustration, depression, social isolation, and reduced motivation after injury; psychological readiness should be considered as part of the return-to-sport decision making process including goal setting, visualization, cognitive-behavioral strategies, relaxation techniques, confidence-building exercises, education, and motivational support [18]. Meanwhile, new technologies are also revolutionizing athlete monitoring and recovery with wearable sensors that measure heart rate, movement, distance, acceleration, deceleration, training volume, sleep patterns, and recovery metrics, and GPS tracking details about running distance, sprinting, high-speed running, and acceleration to help manage workloads on an individual basis. Three dimensional motion analysis and video based assessment can also be used to assess running mechanics, jumping and landing, joint movement, balance, technique and sport specific movements in an effort to determine movement patterns that need to be addressed. AI has also been introduced into the field of sports medicine, where it could be applied to predict injury risk, automatically analyze movements, monitor rehabilitation, prescribe personalized exercises, analyze performance, optimize training load, and support clinical decision making, but there is a need to validate the use of AI across a wide variety of athletes and sports, and also to consider issues of bias, data quality, privacy and transparency. VR and digital rehab systems offer the added benefits of interactive balance training, motor learning, reaction training, cognitive rehab, psychological preparation and sport-specific decision making, and tele-rehabilitation can enhance access to professional guidance for athletes who live far from specialized centers. Modern sports therapy also focuses on individual care for female athletes, youth and para-athletes, with consideration given to the following: age, maturation, sport exposure, energy availability, psychological development, functional ability, assistive equipment, sport classification, skin integrity, shoulder health, thermoregulation and sport-specific requirements [6]. After the healing of injury, sports therapy may progress into maximal strength training and sport specific strength training, explosive strength training, plyometrics, sprint training, acceleration, agility, endurance conditioning, mobility and neuromuscular control, all with the aim of restoring and even enhancing physical capacity and resilience. A multidisciplinary approach, including sports physicians, physiotherapists, sports therapists, strength and conditioning coaches, nutritionists, sports psychologists, biomechanists, sports scientists, coaches, and athletes, in addition to effective communication and shared decision making, is essential to effectively coordinate the diagnosis, rehabilitation, workload management, psychological preparation, nutrition, performance development, and long-term injury prevention of athletes.

Global Sports Injury Prevention, Current Challenges, and Future Directions

The prevention of sport injuries should not be limited to elite sports but also to the recreational sports, school sports, community sports and older people and, for it to be successful, globally, it is necessary to take account of the availability of health care professionals, the economic resources, the quality of coaching, the sports infrastructure, cultural aspects, the availability of sports equipment, the education of the athletes and the existence of trained professionals. The use of costly technology should not be the only tool for effective prevention programs; both practical and low-cost interventions can be integrated into the regular warm up and training sessions and can offer meaningful prevention benefits with proper implementation [2]. Although the field of sports therapy has rapidly evolved, there are still challenges such as individual variability in injury history, physiology, psychology, training status and response to workload, inconsistent use of the research evidence in practical settings, lack of adherence to injury-prevention and rehabilitation program – potentially reducing its efficacy [3] – and the possible over-reliance on wearable technologies and artificial intelligence, which should be used alongside, but not in place of, the professional clinical assessment and judgment. In addition, research investigating sports injuries is still inconsistent between various sports, geographic regions, age groups, female athletes and para-athletes, making for the need of more context-specific and inclusive evidence [6]. Future sports therapy is expected to focus on the use of data-driven decision making, multidisciplinary-based approaches, artificial intelligence, digital rehabilitation, wearable sensors, real-time workload monitoring, personalised rehabilitation programs, personalised return-to-sport programs, precision nutrition, virtual environment, advanced biomechanical assessment and remote healthcare, while also considering the mental health of athletes, injury-risk modelling, and individualised return-to-sport criteria. Future studies should focus on the prospective evaluation of new interventions, implementation in the field, cost-effectiveness, adherence of the athletes, long-term outcomes, and accessibility of sports healthcare, as improvements in sports therapy should be applicable to athletes in various countries, competitive levels, socioeconomic status, age and physical ability.

CONCLUSION

Sports therapy has grown into a holistic, multi-faceted discipline that encompasses injury prevention, clinical evaluation, sports therapy, recovery, nutrition, psychology, technology, and sports science. Exercise-based prevention, neuromuscular training, strength development, or warm-up and individual load management, and criterion-based rehabilitation are modern support for these. Returning the player to sport is dependent on restoration of physical capacity, alongside sport-specific performance and psychological readiness.

The recovery process should be seen as a fundamental part of performance, not just recovery. Comprehensive athlete-care models should include sleep, nutrition, workload management, psychological health and monitoring. New technologies, like wearable sensors, AI, motion analysis, VR, and Tele-rehabilitation, are all great possibilities for the future, but must be used

in an evidence-informed way.

Sports therapy will be more and more based on individual, multi-disciplinary and athlete-centred care. Prevention programmes need to be easily available, feasible and embedded into regular training. There is current international opinion that prevention is a shared responsibility of the athlete, the coach, healthcare practitioners, sports organizations and the broader sport system [6]. In the end, evidence based therapy, proper training, recovery, technology, and individual decision-making is the best platform for sustaining athlete health and performance around the world.

REFERENCES

1. Viiala J, Čech P, Bakalár P, Paravlič A, Ružbarský P, Sučka J, Toivo K, Parkkari J, Leppänen M. Effect of adherence to exercise-based injury prevention programmes on the risk of sports injuries: a systematic review and meta-analysis of randomised controlled trials. *Injury Prevention*. 2026;32(1):31–40. doi:10.1136/ip-2025-045632. ([PubMed](#))
2. De Michelis Mendonça L, et al. Sports injury prevention programmes from the sports physical therapist's perspective: an international expert Delphi approach. *Physical Therapy in Sport*. 2022;55:146–154. doi:10.1016/j.ptsp.2022.04.002. ([PubMed](#))
3. Viiala J, et al. Effect of adherence to exercise-based injury prevention programmes on the risk of sports injuries: a systematic review and meta-analysis of randomised controlled trials. *Injury Prevention*. 2026;32(1):31–40. ([PubMed](#))
4. Kellmann M, Bertollo M, Bosquet L, Brink M, Coutts AJ, Duffield R, Erlacher D, Halson SL, Hecksteden A, Heidari J, Kallus KW, Meeusen R, Mujika I, Robazza C, Skorski S, Venter R, Beckmann J. Recovery and performance in sport: consensus statement. *International Journal of Sports Physiology and Performance*. 2018;13(2):240–245. ([PubMed](#))
5. Bangsbo J, Hostrup M, Hellsten Y, Hansen M, Melin A, Kjær M, Burr JF, Engebretsen L, Egan B, Hackney AC, Chambers TL, Jones AM, Pitsiladis Y, Magnusson P, Petersen J, Deshmukh AS, Calbet JAL, Elliott-Sale K, Joyner M, Andersen JL, Christensen PM, Dünweber MR, Rømer T, Wickham KA, Jessen SK, Kissow J, Jeppesen JS, Moesgaard L. Consensus Statements—Optimizing Performance of the Elite Athlete. *Scandinavian Journal of Medicine & Science in Sports*. 2025;35(8):e70112.
6. De Souza, M.J., Williams, N.I., Misra, M., Nattiv, A., Joy, E., Barrack, M., Ricker, E.A., Gorrell, S., Koltun, K.J., O'Donnell, E. and Mallinson, R.J., 2026. 2025 Update to the Female Athlete Triad Coalition Consensus Statement Part 1: State of the Science and Introduction of a New Adolescent Model: MJ De Souza et al. *Sports Medicine*, 56(2), pp.327-373.
7. Bahr R, Clarsen B, Derman W, Dvorak J, Emery CA, Finch CF, Hägglund M, Junge A, Kemp S, Khan KM, Marshall SW, Meeuwisse W, Mountjoy M, Orchard JW, Pluim B, Quarrie KL, Reider B, Schwellnus M, Soligard T, Stokes KA, Timpka T, Verhagen E, Bindra A, Budgett R, Engebretsen L, Erdener U, Chamari K. International Olympic Committee consensus statement: methods for recording and reporting of epidemiological data on injury and illness in sport 2020 (including STROBE Extension for Sport Injury and Illness Surveillance [STROBE-SIIS]). *British Journal of Sports Medicine*. 2020;54(7):372
8. Bahr R, Clarsen B, Derman W, et al. International Olympic Committee consensus statement: methods for recording and reporting of epidemiological data on injury and illness in sport. *British Journal of Sports Medicine*. 2020.
9. Arden CL, Glasgow P, Schneiders A, et al. 2016 Consensus statement on return to sport from the First World Congress in Sports Physical Therapy, Bern. *British Journal of Sports Medicine*. 2016;50:853–864.
10. van Melick N, Meddeler BM, Hoozeboom TJ, Nijhuis-van der Sanden MWG, van Cingel REH. How to determine leg dominance: the agreement between self-reported and observed performance in healthy adults. *PLoS One*. 2017;12:e0189876.
11. Grindem H, Snyder-Mackler L, Moksnes H, Engebretsen L, Risberg MA. Simple decision rule for determining readiness to return to sports after anterior cruciate ligament reconstruction. *British Journal of Sports Medicine*. 2016;50:804–808.
12. Arden CL, Taylor NF, Feller JA, Webster KE. Fifty-five per cent return to competitive sport following anterior cruciate ligament reconstruction surgery: an updated systematic review and meta-analysis. *British Journal of Sports Medicine*. 2014;48:1543–1552.
13. Gabbett TJ. The training-injury prevention paradox: should athletes be training smarter and harder? *British Journal of Sports Medicine*. 2016;50:273–280.
14. Soligard T, Schwellnus M, Alonso JM, et al. How much is too much? International Olympic Committee consensus statement on load in sport and risk of illness. *British Journal of Sports Medicine*. 2016;50:1030–1041.
15. Drew MK, Finch CF. The relationship between training load and injury, illness and soreness: a systematic and literature review. *Sports Medicine*. 2016;46:861–883.
16. Herring SA, Kibler WB, Putukian M. The team physician and the sports medicine team. *Clinical Sports Medicine*. 2021.
17. Reardon CL, Hainline B, Aron CM, et al. Mental health in elite athletes: International Olympic Committee consensus statement. *British Journal of Sports Medicine*. 2019;53:667–699.
18. Mountjoy M, Sundgot-Borgen J, Burke L, et al. IOC consensus statement on relative energy deficiency in sport (RED-S): 2018 update. *British Journal of Sports Medicine*. 2018;52:687–697.
19. Bahr R, Clarsen B, Ekstrand J. Why we should focus on the burden of injuries and illnesses, not just their incidence. *British Journal of Sports Medicine*. 2018;52:1017–1021.

Ahmed Farhan Shallal. Advances in Sports Therapy for Injury Prevention, Rehabilitation, and Athletic Performance Enhancement Worldwide: A Comprehensive Review. *Int. J. of Clin. Med. and Hea. Sci.*, 2 (2): 34-39, 2026