



**Spor Bilimleri
Fakültesi**



FACULTY OF SPORTS SCIENCES

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Future of Sports, Center of Success Istanbul Gelisim University

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Academic Visit from the Faculty of Sports Sciences to Shymkent University, Kazakhstan

Res.Asst.Fikret KAYHALAK

Within the scope of the academic cooperation protocol signed between Istanbul Gelişim University and Shymkent University in Kazakhstan, our Faculty of Sports Sciences Dean Prof. Dr. Ali KIZILET and our Vice Dean Assoc. Prof. Dr. Mustafa Can KOÇ paid an academic visit to Shymkent University between 13–17 October 2025.

During the visit, a meeting was held with the Rector of Shymkent University, Prof. Dr. Seitkulov Nurlybek Akinovich, and the university administration. The discussions covered topics such as joint curriculum work, student exchange programmes, and joint projects aimed at developing academic cooperation between the two universities. Furthermore, during the visit, our faculty members met with Shymkent University students in theoretical and practical courses, sharing academic experience and knowledge.

The visit is considered a productive step in strengthening international academic cooperation and interaction between the two universities.



Our University Took Its Place Among Partner Universities at the 4th International Youth Research Conference.

Res.Asst.Fikret KAYHALAK

IVth INTERNATIONAL YOUTH RESEARCH CONGRESS 29 October–2 November 2025 at the Orka Sunlife Hotel in Fethiye/Ölüdeniz Mersin University, Istanbul Esenyurt University, Istanbul Topkapı University, Istanbul Gelişim University, Istanbul Galata University, Balıkesir University, Osmaniye Korkut Ata University, Kilis 7 December University, Trabzon Eurasia University, Alanya Alaaddin Keykubat University, Bingöl University, Hakkari University, Ardahan University, Gümüşhane University, Iğdır University, Azerbaijan Tourism and Management University, Samarkand State University, Samarkand Silk Road Tourism and Cultural Heritage University, Bayan -Olgii Mongolian State Education University, Kyrgyzstan Jalal-Abad State University, Kazakhstan International Tourism and Hotel Management University, and Marmaris Youth Association.

Prof. Dr. Yusuf CAN, Member of the Congress Organising Committee and Chairman of the Congress Proceedings Book Preparation Committee, represented our university at the Congress and ensured that our university was included among the partner universities of the Congress. Prof. Dr. Yusuf CAN, Vice Dean of the Faculty of Sports Sciences, also chaired a session and presented an oral paper at the congress.



Presidential Cup Tennis Tournament Held

Res.Asst.Fikret KAYHALAK

The Presidential Cup Tennis Tournament, held for the first time under the auspices of the Presidency of the Republic of Turkey and organised for different age groups, took place in Ankara.



The Presidential Cup Tennis Tournament, held for the first time under the auspices of the Presidency of the Republic of Turkey and organised for different age groups, took place in Ankara. Dr Yunus Şahinler, Assistant Professor at the Faculty of Sports Sciences at Istanbul Gelişim University, served as the National Team Coach at the event. News Text: The Turkish Tennis Federation (TTF) held the Presidential Cup Tennis Tournament, organised for the first time under the auspices of the Presidency of the Republic of Turkey at the Ankara Tennis Training Centre, with age groups participating. The opening ceremony was attended by Deputy President Mr Cevdet Yılmaz, Minister of Youth and Sports Mr Osman Aşkın Bak, and TTF President Mr Şafak Müderrisoğlu. Dr Yunus Şahinler, Assistant Professor at the Faculty of Sports Sciences at Istanbul Gelişim University, represented our university as National Team Coach at this prestigious event. As a university, we congratulate Dr Yunus Şahinler and our athletes and wish them continued success.

The Pulse of the School Beats in Student Clubs

Eylül ZARARSIZ | Third-year Sports Management Student Campus & Wellness Club President



We call the sound of your heart, the rhythm that determines the order of your life and echoes in your veins, your pulse. In this context, the heart of a school is its students, and its pulse is its clubs. Sometimes at meetings, sometimes at events, sometimes at a tournament, and sometimes in the joy of socialising, the rhythm of this heart increases.

Every club activity holds a melody within us. Some find their rhythm in the excitement of a sports tournament, others hide all their voices behind the theatre curtain. These melodies are not just extra activities for students; they also instil self-confidence, discipline, a sense of responsibility and a feeling of belonging. The rhythms created by different clubs form the heart's polyphonic orchestra. Consider this: the pulse of the Fit Campus & Wellness Club beats when sport becomes a way of life for everyone. On the other hand, the pulse of the Film Design Club increases as it supports cinematic development. Or the Cancer and Social Awareness Club... Their every note is the deepest and most compassionate. This represents the rhythm of social sensitivity and the call to awareness of our power of empathy. When we look at our school, our heart as a whole, the coming together of these different notes creates a dynamic and healthy rhythm of life.

Of course, we cannot always expect a regular rhythm, a pleasant and high-pitched melody. Irregularities in school clubs are also a sign of problems. A slowing pulse (bradycardia) indicates periods when student participation has declined, interest in clubs has waned, and activities have slowed down (perhaps even been cancelled). The quietening of club meetings, students choosing indifference over excitement; this indicates that the pulse is falling rapidly and dangerously. An irregular pulse (arrhythmia), on the other hand, means that existing activities progress in an unplanned and unsystematic manner, student support fluctuates, or only a few popular clubs stand out while others are forgotten. We must not forget that a weak and irregular pulse brings with it reluctance, a lack of belonging, and the social inefficiency of school life. This is a signal we cannot ignore, whispering to us that we need to question things.

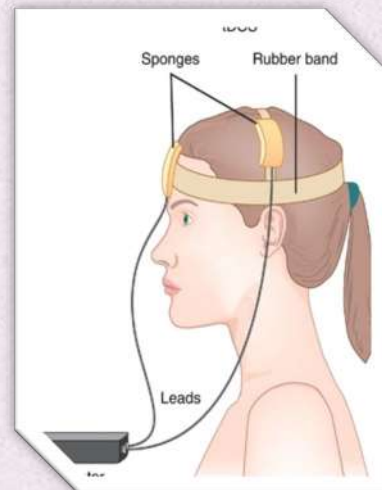
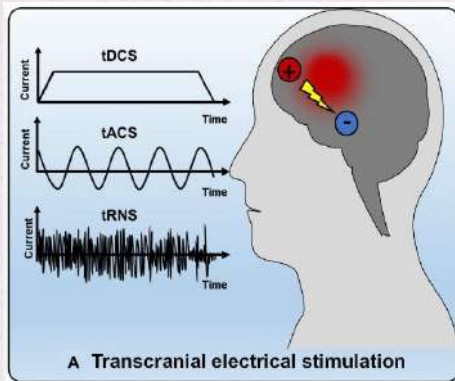
Sometimes, we need to stop and listen to the rhythm of the heart. When that rhythm weakens, we actually lose our own melody. Clubs are not just activities; they are the identity, spirit, excitement, and memory of the school. Therefore, it is our responsibility to feel the pulse and protect it.

The pulse of the school beats in the clubs, and the sound of that pulse echoes when we are together.

New Sports Technology That Increases Reaction Time Through Brain Stimulation

Res.Asst.Ayşe Demet Karadağ

Transcranial direct current stimulation (tDCS), used to improve reaction times in athletes, has become a noteworthy neurotechnological method in performance science in recent years. This method, which increases neural excitability by applying low-intensity electrical current to the motor cortex, stands out particularly for its potential to support speed, agility and decision-making skills.



A new meta-analysis has demonstrated that tDCS application can provide short-term performance improvements, particularly in disciplines requiring hand-eye coordination and reaction time (Coffman et al., 2023). Another study reported that brain stimulation raised the cognitive fatigue threshold and extended the athlete's attention span (Lattari et al., 2022).

Although experts emphasise that the method still needs to be carefully evaluated in terms of ethics and long-term safety, it is noted that tDCS has ushered in a new era in neuromodulation research for sports performance.

Coffman, B. A., et al. (2023). *Neurostimulation and cognitive-motor performance in athletes: A systematic review*. *Neuroscience & Biobehavioral Reviews*, 151, 105275.

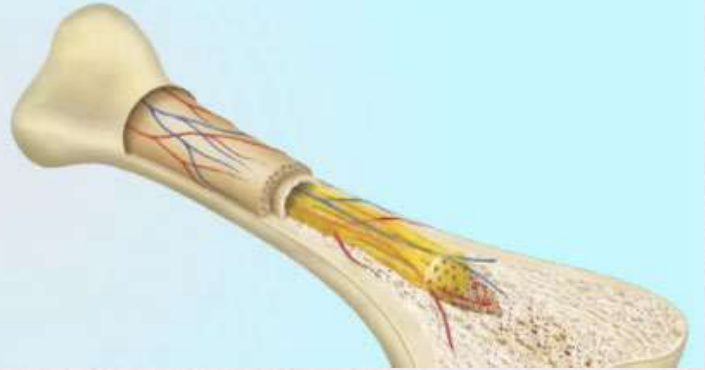
Lattari, E., et al. (2022). *Transcranial direct current stimulation on cognitive performance: A randomized controlled trial*. *Frontiers in Human Neuroscience*, 16, 854763.

Stem Cell-Based Treatments Offer New Hope in Muscle Repair

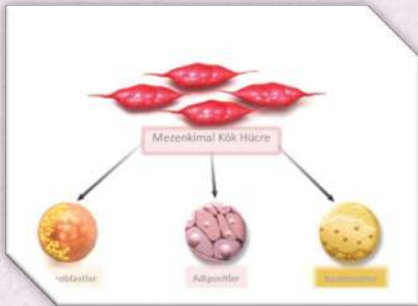
Res.Asst.Ayşe Demet Karadağ

Stem cell-based biotechnological approaches are emerging as a powerful alternative to traditional rehabilitation protocols in the treatment of muscle tears and traumatic muscle injuries. Findings suggesting that mesenchymal stem cells (MSCs) can accelerate regeneration in muscle tissue and reduce inflammation are generating excitement in the treatment of sports injuries.

Mesenchymal Stem Cells



A recent systematic review has demonstrated that MSC injections yield meaningful results in muscle repair and functional recovery (Pereira et al., 2024). Furthermore, experiments conducted on animal models have revealed that stem cells support remodelling in muscle fibres and reduce fibrosis (Li et al., 2023).



However, experts emphasise that more human-based research and long-term safety data are needed before these treatments can be implemented in clinical practice.

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Personalised Strength Training Through Muscle Architecture Analysis

Res.Asst.Ayşe Demet Karadağ

Muscle architecture analysis, which has rapidly developed in sports science in recent years, is emerging as an important tool that enables individualisation in training planning. The examination of morphological characteristics such as muscle fascicle length, pennation angle and muscle thickness provides valuable information about the athlete's strength production capacity and movement efficiency.

Thanks to modern ultrasound technologies, these structural parameters can be measured non-invasively. This allows coaches to design 'muscle-type-compatible strength training' by determining the type of load, tempo, and number of repetitions appropriate for each athlete's muscle structure. This approach accelerates performance gains while significantly reducing the risk of injury.

A study published in the *European Journal of Sport Science* in 2024 revealed that an increase in the pennation angle of the vastus lateralis muscle is directly related to maximal strength gains (Kellis et al., 2024). The same study reported that regular resistance training alters the arrangement angle of muscle fibres, enabling greater force production.

Similarly, another study published in the *Journal of Applied Physiology* indicated that muscle fascicle length in sprint athletes showed a high correlation with sprint speed, and athletes with shorter fascicles exhibited lower speed performance (Blazeovich et al., 2023).

According to experts, muscle architecture analysis is important not only for performance enhancement but also in rehabilitation processes. Monitoring changes in fascicle length after muscle injuries provides an opportunity to objectively assess the athlete's functional recovery. Consequently, muscle architecture measurements are now being used as a complement to strength tests and biomechanical analyses in many elite performance laboratories.

This development in sports science is shaping the future of science-based training approaches that focus on individual differences. Universities and performance centres continue to make significant contributions in both academic and practical fields through such innovative analyses.

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Our student Eyüp Çetin came third in the Balkan Wrestling Championship!

Res.Asst.Bilgehan PEPE

Eyüp Çetin, a second-year student in the Coaching Education Department of the Faculty of Sports Sciences at Istanbul Gelişim University, achieved an outstanding performance at the Balkan Wrestling Championship held in Cluj-Napoca, Romania, between 7 and 12 October 2025, securing third place in the Balkan Championships.

Representing our country in the national team uniform, our student brought great pride to both Turkish wrestling and Istanbul Gelişim University with this achievement.

We congratulate our student on this significant accomplishment and wish him many more successes in his career.



Artificial Intelligence-Supported Motion Analysis: A Revolutionary Model in Sports Performance from Japan

Res.Asst.Bilgehan PEPE

A new study conducted in Japan has developed an artificial intelligence-based model for personalised movement training and performance enhancement processes for athletes. This system, called the 'Personalised Motion Guidance Framework (PMGF)', analyses athletes' movement patterns and provides personalised performance improvement recommendations.

The model uses AI-powered deep learning algorithms to track athletes' movements in three dimensions and generate a unique 'motion profile' for each individual. Thanks to this profile, the system:

- .Reduces movement differences between athletes and experts,
- .Optimises performance through muscle activation and biomechanical data,
- .Provides personalised guidance during rehabilitation and training processes.

The study was conducted by Japanese universities on baseball players, and the results demonstrated that the system achieved high success in terms of both technical accuracy and athlete feedback.

This innovation is considered a significant milestone in sports science in the fields of coaching, rehabilitation, performance analysis, and sports technology.

FIFA Funds Research Investigating the Link Between ACL Injuries and Menstrual Cycles

Res.Asst.Muhammed Ali GÖKÇE

A FIFA-supported study aims to investigate whether the increasing incidence of anterior cruciate ligament (ACL) injuries among female footballers is related to hormonal fluctuations during the menstrual cycle. The study will be conducted at Kingston University (near London, England). Target group: elite and amateur female footballers. Researchers will monitor hormone levels, such as oestrogen and progesterone, during different stages of the menstrual cycle. Objective: To determine which hormone levels during which stage of the menstrual cycle may be associated with an increased risk of injury and to develop injury prevention strategies by personalising training/loading plans.

Why is it important?

- ACL injuries are more common among female athletes than males. This research questions whether biological (hormonal) factors contribute to this higher risk.
- From a sports science perspective, the missing data in the 'load – hormone – injury' triad in female athletes can be completed.
- In practice: This could enable the creation of personalised loading plans for coaches, physiotherapists, and sports scientists.
- In terms of academic publications, it could contribute to an increase in physiological research focused on female athletes.

https://www.espn.com/soccer/story/_/id/44917657/fifa-funds-study-link-acl-tears-menstrual-cycle

Imaginary Athletes: Enhancing Sports Performance with Imagination

Res.Asst.Mustafa DEMİR

Children creating imaginary teammates, opponents or coaches while playing is often seen as a simple figment of the imagination. However, research shows that these imaginary sports figures play an important role in children's mental, social and emotional development. According to experts, imaginary athletes are not just a fun game; they are a powerful mental strategy that increases children's motivation, strengthens their self-confidence and improves their performance. The creation of imaginary characters in a sporting environment is a very natural process. Children sometimes create 'ghost teammates' to make up for the lack of players, and sometimes design imaginary opponents that are slightly above their skill level in order to improve themselves. Researchers categorise these characters into three main groups: Placeholders, Athletic Opponents, and Social Support Figures. Placeholders fill in for missing players, making the game sustainable. Athletic Opponents trigger the child's desire to improve themselves; they become a motivating factor for increasing speed, strength or endurance. Imaginary coaches or teammates that provide social support enrich the sporting experience by giving children confidence, a sense of belonging and courage. Research shows that approximately 41% of children aged 6–12 have created at least one imaginary sports character. The rate is higher among boys, who have been found to perform better in imagination tests. Children with strong imaginations are said to develop better social communication skills, increased empathy, and more creative problem-solving abilities. Imagination is a skill that broadens individuals' social world at every stage of life. In childhood, imaginary friends contribute to the learning of social skills; in adolescence, young people develop parasocial relationships with media figures, supporting identity formation. In adulthood, imagination is an important tool for coping with difficult times, demonstrating emotional resilience, and generating alternative solutions. Sport is not merely a physical activity; it is also an area of mental and social development. Imaginary sports figures help children gain self-confidence while also supporting behaviours such as competing, developing team spirit and setting goals. A child's words sum up this situation: 'I drew strength from my imaginary athletes. When I imagined I could beat them, I truly believed I could achieve anything.' Source: The Conversation

Toprak Razgatlıoğlu Wins the 2025 World Superbike Championship!

Res.Asst.Onur TOPUZ

Turkish motorcycle racer Toprak Razgatlıoğlu, who finished third in the final race of the season at the Jerez Circuit in Spain, secured his third world championship title by topping the 2025 World Superbike Championship standings with 616 points.

Nicolo Bulega from Aruba Ducati finished first in the race, while his teammate Alvaro Bautista came in second. Toprak's victory was celebrated enthusiastically by fans waving Turkish flags in the stands.

After the championship, Toprak, who shared his immense joy with Kenan Sofuoğlu, performed a tyre burnout show before taking the victory lap in his gold-coloured leathers.

National athlete Bahattin Sofuoğlu finished the season in 21st place with 26 points and came 15th in the final race.



SITTING (INACTIVITY) LIKE SMOKING

Res.Asst.Onur TOPUZ

An alien arriving on our planet would struggle to understand humanity's contradictory relationship with physical activity. Humans, who lived an active life as hunter-gatherers for millions of years, now sit for hours in front of screens in warm rooms; they prefer lifts to stairs and vehicles to shortcuts. Yet, these same people go running in their free time or pay to lift weights in places called 'gyms'.



Scientists explain this dilemma with the 'obesity epidemic' that is having a global impact. Research shows that physical inactivity accounts for approximately 9% of premature deaths worldwide. Although experts recommend that adults engage in at least 150 minutes of moderate-intensity exercise per week for a healthy life, it is known that these periods do not fully offset the harmful effects of prolonged sitting habits throughout the day.

According to experts, future generations will look back on today's sedentary office life with the same astonishment we now view smoke-filled enclosed spaces. As physical inactivity, stress, and burnout become increasingly serious issues, particularly among healthcare professionals, there is a growing emphasis on prioritising routines that support health rather than undermine it in the workplace.

Indeed, group morning exercises in workplaces have long been a tradition in Japan, both for health and productivity reasons. Increasingly, employers in Western countries are also recognising that providing exercise opportunities at work not only improves physical well-being but also reduces stress, absenteeism and increases productivity.

THE VITAL IMPORTANCE OF SPORT AND EXERCISE FOR PEOPLE WITH DISABILITIES: SOCIAL PARTICIPATION AND TRANSFORMATION IN HEALTH

Res.Asst.Selim AKMAN

The participation of individuals with disabilities in sports and exercise activities is considered a critical factor not only for improving physical health but also for enhancing social integration, psychological well-being, and quality of life. According to World Health Organisation (WHO) data, regular exercise increases cardiorespiratory capacity in individuals with disabilities, supports musculoskeletal system functions, and significantly reduces the risk of chronic diseases. Adaptive sports programmes, in particular, enable individuals to develop their physical independence and take on an active role in society.

Research shows that wheelchair basketball, para swimming, and structured physical activity programmes for individuals with autism increase self-esteem by up to 30%. In addition to the competitive aspect of sport, recreational activities are emerging as an important protective factor in preventing social isolation among individuals with disabilities. Furthermore, the participation of children with disabilities in exercise contributes to reducing stress levels and the burden of care for families. Many countries are placing sports policies for people with disabilities at the centre of their national health strategies and increasing investment in this area.

In Turkey, the strengthening of the Paralympic movement has gained momentum with local governments prioritising persons with disabilities in their sports projects. Sports scientists emphasise that access to physical activity for persons with disabilities should be considered a rights-based approach. In this context, access to appropriate facilities, support from specialist coaches and science-based programmes are of vital importance. Consequently, sport for persons with disabilities has gone beyond being a rehabilitation tool to become a key to social justice, social equality, and inclusive development.

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Orientation Programme Held for Our First Year Students for the 2025-2026 Academic Year

Res.Asst.Selim AKMAN

The Department of Exercise and Sports Sciences for People with Disabilities at the Faculty of Sports Sciences, Istanbul Gelişim University, organised an orientation programme for our first-year students joining us in the 2025-2026 academic year.

During the programme, our students were provided with detailed information about the academic structure of our department, course content, internship and practical training opportunities, academic advisory processes, and social event opportunities. In addition, our faculty facilities, student clubs, and international exchange programmes were introduced to help our students adapt to university life quickly and smoothly.

During the orientation process, our students were introduced to the department's academics, and there were also discussions about professional goals and career planning. The event concluded with a friendly chat where our students were able to ask questions.

As the Department of Exercise and Sports Sciences for People with Disabilities, we wish all our students a successful, productive and healthy academic life in the new academic year.



Returning from a Long-Term Injury: A Guide to Comeback for Athletes

Res.Asst.Ünal CAN GÖKMEN

1. **Rebuilding with Patience and Scientific Planning** The primary goal of recovery is to safely restore the structural integrity of muscle, ligament, tendon, and joint tissues. An individualised, phased, and measurable rehabilitation plan prepared under expert supervision is the most critical step.
2. **2. Movement Quality, Not Volume, is Paramount** For athletes, the priority upon return is not to push to high intensity, but to relearn correct movement patterns. Performance improvement must be built on a solid technical foundation. Regaining quality reduces the risk of recurrence of injury.
3. **3. Nutrition: The Fuel for Recovery** Proper nutrition is an integral part of the process for tissue repair, immunity and energy management. Protein, omega-3, antioxidants and mineral balance directly affect the speed of recovery.
3. **4. Regaining Mental Strength** For athletes, the real comeback begins mentally, not physically. Motivation, self-confidence, and psychological support during the process of reconnecting with sport strengthen the sustainability of performance.
4. **5. Utilise Technology** Biomechanical analyses, strength measurements, load tracking, and performance data make the recovery process safe and measurable. A data-driven approach shows the athlete when to progress and when to rest.
6. **6. Recovery as a Team** Communication between the physiotherapist, coach, nutritionist, sports psychologist and doctor is the most important factor in accelerating the process. Recovery is a team effort.
5. **7. Gradual Return to Sport Model** The return process should be gradual, with each stage supported by physical, technical, and psychological criteria. Advancement to the next level should be based on acquired competencies, not performance.
6. **8. Increase Resilience with Prehab** Strengthening, mobility, and balance exercises before injury significantly reduce the likelihood of re-injury. The most effective method is to prevent injury before it occurs.
7. **Conclusion** A long-term injury is not a setback for an athlete; it is an opportunity for rebuilding and strengthening. With proper planning, a scientific approach, and mental resilience, this process can be a new turning point in an athletic career. 'Your injury may have happened not to stop you, but to rebuild you.'

From Our School

Academic Developments

Res.Asst.Yalçın MARAŞLI

The book chapter titled 'The Effect of Exercise and Nutrition on Cardiometabolic Health' by Research Assistant Ünal Can Gökmen from the Department of Coaching Education, Faculty of Sports Sciences, Istanbul Gelişim University, has been published. The chapter is included in the scientific book titled 'Exercise, Nutrition and Health: Individual and Societal Perspectives' and serves as an important resource contributing to the field. This academic work examines the role of exercise and nutrition in combating cardiometabolic diseases commonly seen today, such as obesity, type 2 diabetes, hypertension, and dyslipidaemia, in light of scientific data. The effects of aerobic exercise, resistance training, and high-intensity interval training (HIIT) on cardiometabolic risk factors are examined in detail, while evidence-based nutrition strategies such as the Mediterranean diet, DASH diet, omega-3 fatty acids, and fibre consumption are evaluated in terms of their health outcomes. The chapter emphasises that exercise and nutrition-based lifestyle changes not only improve cardiometabolic indicators but also support psychosocial well-being, enhance quality of life, and have a cost-saving effect on healthcare expenditures in society.

Publication Details

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Book Title: Exercise, Nutrition and Health: Individual and Societal Perspectives

Editors: Assoc. Prof. Dr. Akan Bayrakdar, Dr. Ali Ağılönü

Author: Research Assistant Ünal Can Gökmen

Publisher: Özgür Yayınları

DOI: 10.58830/ozgur.pub905.c3763

Wearable Technology Changing the Future of Sport

Res.Asst.Yalçın MARAŞLI

The data revolution has begun in the world of sport. Wearable technologies are fundamentally changing the approach to coaching, ushering in an era of performance management based on scientific data rather than intuition. The sports industry has undergone a significant transformation in recent years. Traditional coaching no longer relies solely on observation and experience. With smart watches, sensor-equipped clothing, GPS tracking devices and advanced data analysis systems, every detail of an athlete's performance can be measured. This technology allows coaches to plan their programmes in a more personalised, scientific and effective way. Wearable devices allow for the instant collection of numerous data points from athletes, such as heart rate, running distance, speed changes, contact intensity, and number of direction changes. This data facilitates the early detection of performance declines, injury risks, and tactical errors. Thus, coaches have the opportunity to support decisions made on the field with 'data' rather than 'eyewitness accounts'. Real-time data tracking also adds a new dimension to training management. By monitoring the player's fatigue level, heart rate zones, recovery status, and on-field load intensity during training, the technical team can immediately adjust the training as needed. This both increases efficiency and reduces the risk of injury for athletes. Wearable technologies are changing not only performance but also the way we communicate. Athletes can instantly view their own performance data via wristbands, vests or sensor-equipped equipment. While players can identify and quickly correct their mistakes, coaches can also provide more accurate feedback by analysing athletes' physical responses. The data tracked varies for each sport and position. Parameters such as running pace and number of collisions in football; jump height and landing mechanics in basketball; heart rate response and pace distribution in athletics; and shoulder load in tennis are evaluated to reduce injury risks and enhance performance. One of the most significant contributions of wearable technologies is in the field of injury prevention. Most injuries are not caused by sudden contact but by repetitive strain and accumulated fatigue. Regular data tracking reduces the stress on the musculoskeletal system by controlling the load balance. This extends athletes' careers and enables teams to achieve more sustainable performance. The future points to an even more advanced stage. With the introduction of artificial intelligence-supported analysis systems, data will be automatically evaluated, and coaches will receive real-time strategy recommendations. This new era, where biomechanical, physiological, and tactical data converge on a single platform, will serve as a 'digital assistant' for coaches. Ultimately, wearable technology does not eliminate coaching; rather, it strengthens it with scientific foundations. Success in the future of sport will depend not only on talent and experience but also on the ability to interpret and manage data accurately.



İGÜ

KARYON

Kariyer Yönlendirme
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İGÜ

MMK

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Değerli İGÜ mezunları ve öğrencileri,
iş arayanların nitelikleri ile işverenlerin
aradığı özellikleri eşleştiren yeni

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