



**Spor Bilimleri
Fakültesi**



FACULTY OF SPORTS SCIENCES

E - BULLETIN

Future of Sports, Center of Success Istanbul Gelisim University

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SPORBİLİMLERİ.GELİSİM.EDU.TR

WE ARE VERY SORRY

We extend our deepest condolences for the citizens who lost their lives in the fire at Bolu Kartalkaya Ski Resort. May they rest in peace, and we wish a speedy recovery to those who were injured.



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Historic Achievement by a Turkish Athlete: Ali Rıza Bilal at the South Pole!

Res. Asst. Fikret KAYHALAK

Ali Rıza Bilal has etched his name in Turkish sports history in golden letters by becoming the first Turkish athlete to set foot on the South Pole today. This extraordinary achievement is not only a milestone for Turkey but also a significant moment in global sports history. Throughout this challenging journey, filled with harsh natural conditions and nearly insurmountable obstacles, Bilal demonstrated remarkable determination and discipline. By reaching the South Pole and proudly waving the Turkish flag, he has become a source of national pride. This historic moment has resonated widely both in Turkey and on international platforms.



Every step of the way, from preparation to reaching his goal, Optimum Nutrition stood by Ali Rıza Bilal, helping him push his limits and unleash his true potential in this challenging journey. With the brand's support, Bilal maximized his physical endurance and demonstrated exceptional performance in the harsh and freezing climate, ultimately achieving his goal.

Speaking about his success, Ali Rıza Bilal stated: "Reaching the South Pole and waving the Turkish flag here is an indescribable joy and honor. I would like to extend my deepest gratitude to everyone who believed in me and supported me throughout this journey."

This outstanding success, which sets an example for Turkish sports, will continue to inspire young athletes. With his courage, determination, and discipline, Ali Rıza Bilal has achieved a remarkable milestone both individually and on a national level. Through this historic triumph, Turkey's prestige in the field of sports has been further elevated.

Congratulations, Ali Rıza Bilal, for making us proud!

U18 Women's Ice Hockey National Team Wins Gold Medal!

Res. Asst. Dr. Ali KAYA

The Turkey U18 Women's Ice Hockey National Team achieved a historic victory by winning the gold medal at the IIHF U18 Women's Ice Hockey World Championship Division II Group B, held in Istanbul.

In the final match of the tournament at Zeytinburnu Ice Rink, Turkey secured the championship by defeating Iceland 2-0. The winning goals were scored by Sidre Haciosmanoğlu and Azra Şenyuva. With this victory, Turkey remained unbeaten throughout the championship, finishing at the top of Group B.

This triumph not only earned the team a gold medal but also secured their promotion to Division II Group A, marking a significant milestone in Turkish women's ice hockey history.

The Turkey U18 Women's Ice Hockey National Team has made the entire nation proud with their outstanding performance and remarkable achievement. This success once again highlights the rapid rise of Turkish sports on the international stage.

Congratulations to the U18 Women's Ice Hockey National Team! We eagerly look forward to even greater achievements!



Turkey Honors Its Martyrs with the "Your Footsteps Are in This Land" in a Memorial March in Sarıkamış

Res. Asst. Dr. Ali KAYA

The Ministry of Youth and Sports organized the "Sarıkamış Martyrs' Memorial March" under the theme "Your Footsteps Are in This Land" to mark the 110th anniversary of the Sarıkamış Operation. The significant event took place in Sarıkamış, Kars, with the participation of a large number of citizens. Among those attending the march were Minister of Youth and Sports Dr. Osman Aşkın Bak, Minister of National Defense Yaşar Güler, and Minister of Family and Social Services Mahinur Özdemir Göktaş.

During the opening ceremony of the newly unveiled memorial statues, Minister Osman Aşkın Bak emphasized the importance of remembering the heroic legacy of Sarıkamış, stating:

"We are here together in Sarıkamış to commemorate the 110th anniversary of this heroic operation. This land holds a legendary tale of bravery, and we must never forget it. These events should be remembered and deeply felt. May God grant strength to our security forces protecting our homeland and borders. May they remain safe from harm. We are well aware that our geography presents great challenges, and maintaining strength in this region comes at a cost. We will never forget those who paid that price with their lives. That is why we are gathered here once again, urging our nation to keep this heroic epic alive in their hearts. Tonight, we will hold a torchlit procession, followed by another march tomorrow morning with our soldiers, young people, and all participants. May the souls of our martyrs rest in peace."

The commemoration will continue with various ceremonies, reinforcing the eternal memory of the Sarıkamış martyrs and their sacrifices for the homeland.



Blood Flow Restriction Method: A New Era in Strength Training

Res. Asst. Ayşe Demet KARADAĞ

The Blood Flow Restriction (BFR) method, recognized as an innovative approach in sports science and physiotherapy, is gaining attention for its potential in enhancing muscle strength and supporting rehabilitation processes. Originally developed in Japan to improve the quality of life for elderly individuals (Sato, 2005), this method has since been widely adopted for improving sports performance and accelerating recovery after injuries.

Principles of the BFR Method

BFR training involves the use of an elastic tourniquet to restrict venous return (the flow of blood back to the heart) while exercising with light loads, thereby increasing ischemia (a reduction in blood and oxygen supply) in the muscles during contraction. Simply put, an elastic tourniquet is applied to the proximal (upper) part of the limbs, restricting blood flow while performing specific exercise sets.

Scientific literature indicates that BFR training stimulates anabolic signaling and muscle protein synthesis, producing hypertrophic responses similar to traditional resistance training, even when using submaximal loads. This controlled pressure does not restrict arterial blood flow but limits venous return, creating a metabolic stress environment similar to that of high-intensity exercises (Patterson et al., 2019). As a result, high-intensity adaptations can be achieved with low-intensity exercises.

Applications in Rehabilitation and Sports Performance

In rehabilitation, BFR has been particularly beneficial for individuals unable to tolerate high-intensity exercise, as it helps prevent muscle atrophy and enhance muscle strength (Hughes et al., 2019). For athletes, BFR training provides advantages such as performance enhancement, recovery of lost strength, and diversification of training programs (Wortman et al., 2021).

BFR Method in Scientific Literature

Research on BFR training supports its safety and effectiveness. Studies emphasize that the use of auto-regulated and pneumatic cuffs helps maintain optimal pressure levels, thereby minimizing cardiovascular stress and muscle damage risks (Jacobs et al., 2023). BFR training has been successfully integrated with both resistance and aerobic exercises, yielding positive outcomes in both applications (Patterson et al., 2019; Manago et al., 2022).

Additionally, passive applications of BFR have proven effective in rehabilitation. For example, post-anterior cruciate ligament (ACL) surgery, BFR has demonstrated successful recovery outcomes (Hughes et al., 2019). In such passive implementations, full occlusion pressure (100% LOP) is applied, supported by 5-minute perfusion-reperfusion cycles, ensuring a controlled and effective rehabilitation process.

The BFR method continues to revolutionize the fields of strength training and rehabilitation, offering a promising alternative for athletes, patients, and fitness enthusiasts looking to maximize gains while minimizing injury risks.

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The Importance of Nutrition and Exercise in Polycystic Ovary Syndrome

Res. Asst. Ayşe Demet KARADAĞ

Polycystic Ovary Syndrome (PCOS) is a common hormonal disorder affecting women of reproductive age, resulting from the interaction of genetic and environmental factors. PCOS, which affects 6-15% of women worldwide, is associated with serious health risks such as menstrual irregularities, hirsutism, infertility, type II diabetes, cardiovascular diseases, and endometrial cancer (Amsterdam ESHRE/ASRM-Sponsored 3rd PCOS Consensus Workshop Group, 2012). Recent scientific research has demonstrated the positive effects of a balanced diet and regular exercise on PCOS management (Hutchison et al., 2011).

Nutritional Approaches in PCOS

The primary goal of dietary therapy in PCOS is to reduce symptoms and prevent long-term metabolic disorders. Studies have shown that low-calorie diets can improve insulin resistance, abdominal fat accumulation, hyperandrogenism symptoms, and menstrual cycle irregularities (Moran et al., 2011). Additionally, consuming low glycemic index (GI) carbohydrates has been found to regulate insulin secretion and maintain hormonal balance (Marsh et al., 2010).

A recommended PCOS-friendly diet includes high-fiber foods, healthy fats, and the avoidance of trans fats. Research suggests that obtaining more than 20% of total daily energy intake from proteins can positively impact reproductive functions (Sorensen et al., 2012).

Effects of Exercise on PCOS

Exercise plays a crucial role in the management of PCOS. Regular physical activity has been found to increase insulin sensitivity, reduce hyperandrogenism, and help control body weight (Costa et al., 2018). Aerobic and resistance exercises support both metabolic and cardiovascular health, offering a therapeutic approach to PCOS symptom management (Tiwari et al., 2019).

Studies suggest that engaging in at least 150 minutes of moderate-intensity aerobic exercise per week can help regulate hormone levels and improve the overall quality of life for individuals with PCOS (Ramos et al., 2016).

The Role of Healthcare Professionals

A multidisciplinary approach is essential in the treatment and management of PCOS. Nurses and dietitians play a key role in educating patients about proper diet and exercise plans, encouraging lifestyle modifications, and enhancing treatment adherence. Additionally, regular medical check-ups and psychological support are critical in ensuring long-term success in PCOS management (Garad et al., 2011).

Conclusion

Polycystic Ovary Syndrome is a manageable condition when proper interventions are applied. Incorporating nutrition and exercise into treatment strategies significantly improves the quality of life for women with PCOS while reducing long-term health risks. The support and guidance of healthcare professionals are crucial in raising awareness and promoting effective PCOS management strategies.

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Buse Tosun avuřođlu Named Women's Wrestler of the Year Worldwide

Res. Asst. Bilal GÖK

Turkish national wrestler Buse Tosun avuřođlu has been honored with the title of Women's Wrestler of the Year by the United World Wrestling (UWW). Achieving a historic milestone in Turkish wrestling, Buse has once again made her country proud with this prestigious recognition.

The United World Wrestling announced the best wrestlers of the year across women's, men's freestyle, and Greco-Roman categories. Competing in the 68 kg women's category, Buse Tosun avuřođlu earned this distinguished title as the reigning world champion and a bronze medalist at the Paris 2024 Olympic Games.

A Year of Historic Achievements

The year 2024 has been a remarkable one for Buse, filled with extraordinary achievements. In addition to her world championship, she also won the first European championship of her career, marking a significant milestone in Turkish wrestling history. Her international success further highlights the rise of Turkish sports on the global stage.

In the men's categories, Georgian wrestler Geno Petriashvili was named Freestyle Wrestler of the Year, while Japanese athlete Nao Kusaka earned the Greco-Roman **Wrestler of the Year title**.

Buse Tosun avuřođlu's historic achievement will continue to inspire Turkish women's wrestling for generations to come. We congratulate her on this outstanding success and wish her continued victories in future competitions.

Congratulations, Buse Tosun avuřođlu!



World Health Organization: 500 Million People Will Face Health Issues Due to Physical Inactivity by 2030

Res. Asst. Bilal GÖK

WHO Report: 500 Million People at Risk of Health Issues Due to Physical Inactivity by 2030
A report by the World Health Organization (WHO), compiled using data from 194 countries, reveals that many nations are failing to effectively encourage physical activity among their populations.

Key Findings of the WHO Report

Less than half of countries have a national physical activity policy in place. Among those that do, fewer than 40% have successfully implemented these policies. Only 30% of countries have physical activity guidelines covering all age groups. Infrastructure that promotes active lifestyles, such as bike lanes and safe sidewalks, is available in only 40% of countries.

WHO's Call for Action

WHO Director-General Dr. Tedros Adhanom Ghebreyesus emphasized the need for urgent action, stating:

"More countries need to encourage people to walk, cycle, play sports, and engage in other physical activities."

The report also highlights that mass events aimed at promoting physical activity have declined in the last two years due to the COVID-19 pandemic.

Challenges in Data Collection and Policy Implementation

Dr. Fiona Bull, Head of the WHO Physical Activity Unit, pointed out a significant data gap in many countries regarding bike lanes, access to parks, and pedestrian-friendly infrastructure. She warned:

"This lack of data creates a vicious cycle. Without data, there is no tracking or accountability, which leads to a lack of policy development and investment."

As physical inactivity continues to pose a growing public health challenge, WHO urges governments worldwide to take stronger policy measures and infrastructure investments to promote active lifestyles and prevent health complications.



How Should Athletes Differentiate Between Good and Bad Fats?

Res. Asst. Mustafa DEMİR

Sports science highlights the importance of nutrition in improving athletes' performance and overall health. In particular, fat consumption is a crucial aspect that must be carefully managed. Balancing good and bad fats can enhance endurance while reducing the risk of injuries.

Good Fats: A Vital Energy Source for Athletes

Good fats provide an essential energy source for athletes and support numerous critical functions in the body. Some of the best sources of healthy fats include avocados, nuts, seeds, and fatty fish. These fats promote heart health while improving insulin sensitivity, helping to maintain stable energy levels. Additionally, they enhance the absorption of fat-soluble vitamins (A, D, E, and K), which play a crucial role in muscle repair and recovery.

Bad Fats: A Threat to Athletic Health

On the other hand, bad fats can negatively impact an athlete's health. Trans fats and saturated fats are commonly found in processed foods, fried products, and fatty meats. These types of fats can cause inflammation, weight gain, and cardiovascular diseases. One of their most significant disadvantages for athletes is that they contribute to fatigue and slow down muscle recovery.

The Scientific Perspective on Fat Consumption

Sports science suggests that fat quality is more important than quantity. Research conducted in India has shown that proper fat intake can enhance athletic performance, improve body composition, and reduce injury rates.

Conclusion: Smart Fat Selection for Optimal Performance

For athletes, prioritizing good fats while minimizing bad fats allows them to perform better during training and competition. This conscious nutritional approach plays a crucial role in long-term health and endurance. (The Sportz Planet)



Why is Water Intake Essential for a Marathon Runner?

Res. Asst. Mustafa DEMİR

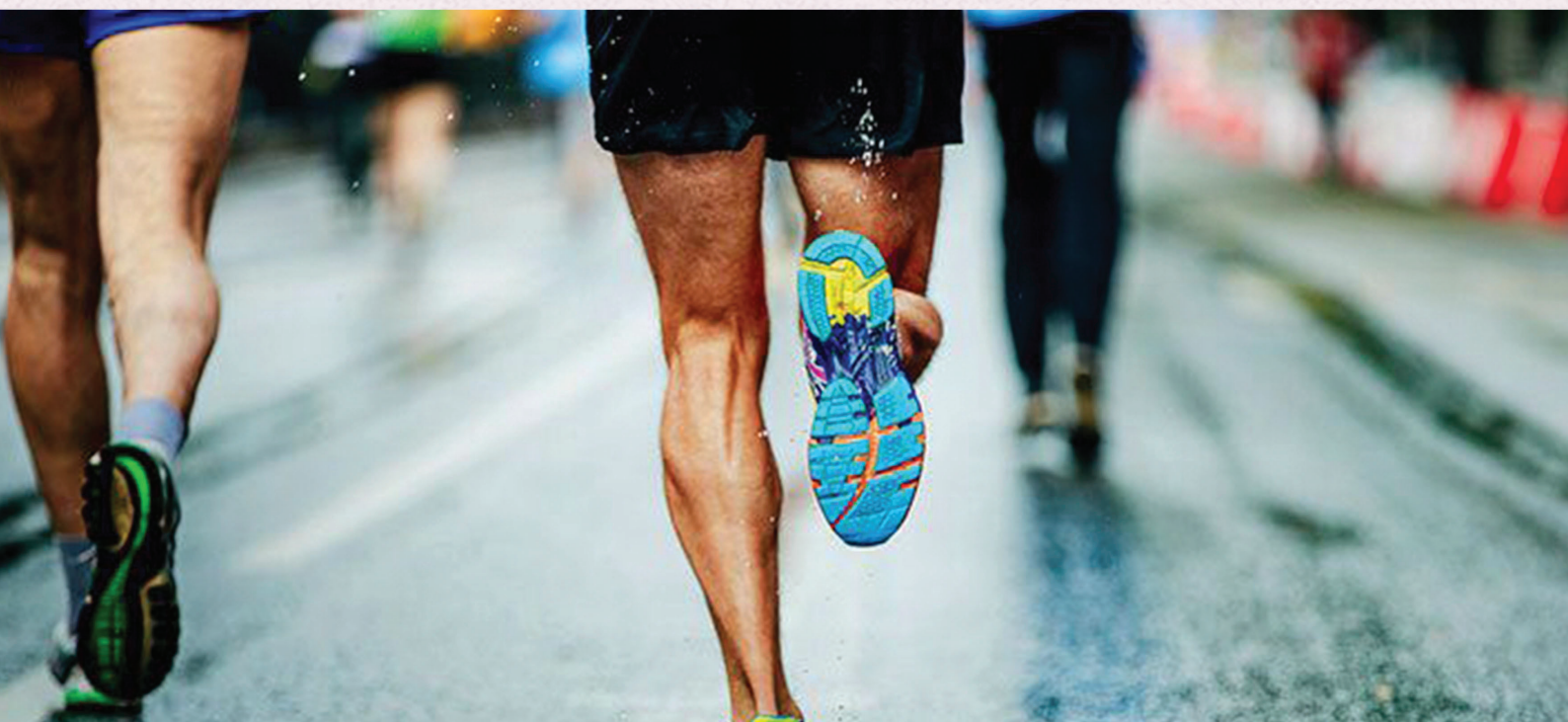
Proper hydration and adequate water consumption are crucial for all athletes, but for marathon runners, they play a critical role in performance and recovery. Since the body is composed largely of water, maintaining fluid balance during long-distance runs is essential for supporting muscle function and regulating body temperature.

During a marathon, the body sweats to prevent overheating. However, if the lost fluids are not replenished, dehydration occurs. Dehydration reduces the body's ability to regulate temperature, leading to fatigue, dizziness, and muscle cramps. In prolonged physical activities such as marathons, the loss of electrolytes like sodium, potassium, and magnesium can negatively impact muscle performance.

Research has shown that a 2% decrease in body weight due to fluid loss significantly reduces performance. Dehydration leads to early fatigue and insufficient nutrient supply to muscles, slowing down the recovery process. Therefore, adequate water intake should be ensured before, during, and after the race.

Hydration should not be limited to race day but should be maintained consistently in marathon training. During a marathon, water intake should follow a planned strategy, with fluids consumed every 15-20 minutes. A general recommendation is to drink 400-800 ml of water per hour, although this amount may vary depending on the runner's sweat rate, weather conditions, and race intensity. Hydration needs continue even after the marathon ends. Post-run water intake helps flush out toxins, reduce muscle soreness, and accelerate recovery. Restoring electrolyte balance is necessary to support muscle repair and maintain energy levels.

In conclusion, proper hydration is not an option but a necessity for marathon runners. Ensuring optimal water intake before, during, and after the race is one of the most effective ways to enhance performance and prevent injuries. The most important point to remember is that hydration is a critical factor that enables a runner to reach the finish line. (The Sportz Planet)



Another Innovation in the Sports Information System via E-DEVLET

Res. Asst. Onur TOPUZ

The General Directorate of Sports Services has introduced a new digital application that enables all transactions related to sports clubs, sports joint-stock companies, and sports governing bodies to be conducted through e-Government (e-Devlet).

In recent years, the growing demand for sports schools has led to a noticeable increase in the number of individuals looking to establish sports clubs. The primary reason for this trend is that athletes trained in sports schools cannot participate in official (licensed) competitions. As a result, many sports school owners have taken official steps to establish their own sports clubs.

Given these developments, sports federations bear a significant responsibility in processing sports club establishment requests. In response, the Department of Sports Clubs, under the coordination of the General Directorate of Sports Services, has launched a new system that aligns with Law No. 7405 on Sports Clubs and Sports Federations, which came into effect on April 26, 2022.

As of January 17, 2025, legal entities and individuals who wish to establish a sports club will be able to submit their sports club registration applications through the Sports Information System (Spor Bilgi Sistemi) on the e-Government portal (e-Devlet Kapısı).

This new system represents a significant step in digital transformation, making the sports club establishment process faster, more transparent, and more accessible.



T.C. GENÇLİK VE SPOR BAKANLIĞI
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erişim sağlanarak yapılacaktır.



Retired Gymnastics Coach Fatih Güller Rescues 11 People by Tying Sheets Together During the Fire in Bolu

Res. Asst. Onur TOPUZ

While on vacation in Bolu, a fire broke out in an apartment building, but thanks to the heroic efforts of retired gymnastics coach Fatih Güller (67), the disaster was prevented from turning into a tragedy. Having served at Ankara University for 42 years, Güller, who had chosen Bolu as his vacation destination after retirement, displayed remarkable self-sacrifice by ensuring the safe rescue of 11 people during the fire.

Güller, who was inside the building when the fire started, explained that they were able to reach the 8th floor but had to take shelter in a room with an open door due to thick smoke. Using sheets and mattresses, he devised a rescue plan and recounted the experience:

"God gave me strength in that moment. I told everyone, 'If we stay calm, we will all survive; if we panic, we will all remain here.' I clearly remember rescuing 11 people. Later, some of them reached out to thank me."

Emphasizing the importance of remaining calm in a crisis, Güller developed an action plan, prioritizing children and women first, followed by men. By tying sheets together, he helped them reach the fire escape, ultimately facilitating the safe evacuation of 11 people.

While Güller, his family, and other vacationers narrowly escaped a major disaster, his bravery and composure played a crucial role in saving many lives.



Europe's Football Stadiums Under Threat from Climate Change!

Res. Asst. Selim AKMAN

The effects of climate change are posing a serious threat to football stadiums across Europe. Research indicates that iconic venues, such as Principality Stadium in Wales and Estadio Benito Villamarín in Spain, are significantly impacted by rising temperatures, flooding, and extreme weather conditions.

Stadiums located in coastal areas face high risks due to rising sea levels, while inland venues are vulnerable to heatwaves and droughts. This situation not only endangers stadium infrastructure but also disrupts match schedules and compromises spectator safety. Additionally, damage to natural grass pitches could directly affect player performance and overall game quality.

Experts emphasize the urgent need for sustainable solutions, such as renewable energy integration, efficient water management, and the use of durable construction materials, to mitigate these risks. The sports industry must take immediate action to enhance its resilience against the effects of climate change. As Europe's football stadiums adapt to these challenges, they are becoming a crucial part of the broader environmental fight alongside their role in the world of sports.



Nike Shapes the Environmental Future: "Move to Zero"

Aims for Zero Waste and Carbon Emissions

Res. Asst. Selim AKMAN

Nike is taking its environmental commitment one step further with the "Move to Zero" initiative. The company aims to eliminate waste and reduce carbon emissions by focusing on recycled materials, energy efficiency, and water conservation. By 2025, Nike plans to manufacture a significant portion of its products using eco-friendly materials while adopting green energy in its production and logistics processes to achieve a zero-carbon footprint.

Beyond production, Nike is also strengthening sustainability efforts within its supply chain. This initiative will help the brand minimize its environmental impact while promoting sustainability in the sports industry and global market. By offering eco-conscious products, Nike aims to raise consumer awareness and contribute to a greener future.



The Future of Digitalization and Recreation: The Intersection of Sports and Technology

Res. Asst. Sinan DEMİRCİ

By 2025, digitalization has evolved beyond being a mere innovation in sports and recreation, becoming a fundamental element of transformation. Technologies such as Augmented Reality (AR), Virtual Reality (VR), and Artificial Intelligence (AI) are integrating into people's daily lives, making physical activities more accessible and enjoyable.

Digital Recreation and Participation

Technology not only increases participation in physical activity but also enhances the entertainment aspect. AR and VR applications allow individuals to exercise on interactive courses or participate in virtual sports events. Those with physical disabilities can engage in activities such as virtual yoga or running at home, ensuring a more inclusive recreational environment for everyone.

Personalized Sports Experience with Artificial Intelligence

Artificial intelligence (AI) optimizes physical activity by offering personalized training programs. Wearable smart devices analyze data such as heart rate, calorie consumption, and sleep patterns, helping users enhance their workouts. AI-powered training systems provide real-time movement assessments, reducing the risk of injuries and improving athletic performance.

Strengthening Social Bonds Through Digitalization

Online recreation platforms enable individuals to connect with people from different geographical locations. Activities such as virtual running events and online yoga classes promote social engagement while increasing participation in physical activities. Digital communities allow individuals to share their goals, boost motivation, and collaborate, bringing a social dimension to the sports experience.

Education and Digital Recreation

The integration of digital technologies into sports science and recreation education makes learning more effective. VR simulations and AI-supported analytical tools enable students to gain practical experience in sports management. Online educational platforms provide globally accessible courses, offering sports science students opportunities to acquire international-level knowledge.

A Sustainable and Technological Future

Digitalization contributes to the sustainable management of recreation. Virtual events reduce carbon footprints, while eco-friendly applications help maintain environmental balance. By 2025, digital recreation will continue to shape the future of sports and physical activity, fostering a more inclusive, sustainable, and innovative environment.

How Much Does Two Hours of Exercise Per Week Reduce the Risk of Heart Disease?

Res. Asst. Ünal Can GÖKMEN

Regular exercise is one of the most effective ways to maintain heart health. However, many people struggle to find the time and motivation to exercise amidst their busy daily routines. Research suggests that engaging in just two hours of exercise per week can reduce the risk of death from heart disease by up to 20%.

Effects of Exercise on Heart Health

Exercise significantly lowers the risk of heart disease by reducing blood pressure, lowering bad cholesterol (LDL), and improving vascular health. According to the American Heart Association, at least 150 minutes of moderate-intensity exercise per week provides major benefits for heart health. Even transitioning from a completely sedentary lifestyle to a few hours of brisk walking or cycling per week can result in significant health improvements.

Exercise Duration and Its Impact on Health

The more exercise a person does, the greater the benefits, but these effects plateau beyond a certain point. There is no conclusive evidence that engaging in more than five hours of intense exercise per week offers additional cardiovascular advantages. However, for individuals with a sedentary lifestyle, incorporating even two hours of physical activity per week can make a substantial difference.

Best Exercises for Heart Health

Aerobic exercises (walking, running, cycling, swimming) strengthen the cardiovascular system.

Resistance training enhances muscle strength and improves circulation.

Flexibility exercises (yoga, Pilates) help reduce stress and contribute to overall well-being.

Conclusion

Engaging in just two hours of regular exercise per week is sufficient to lower the risk of heart disease. Even small lifestyle changes can lead to significant health benefits. The key to long-term success is making exercise a sustainable habit.



Preventive Exercise Programs for Injured Athletes

Res. Asst. Yalçın MARAŞLI

At The Sportz Planet SportSci Summit Season 2, sports physiotherapist and founder of The Hands On Clinic, Shravan Kumbagowdana, discussed the importance of Preventive Exercise Programs (PEP) for injured athletes. According to Kumbagowdana, these programs help reduce the frequency and severity of injuries, facilitating faster recovery and return to sports.

Key Components of Preventive Exercise Programs

Preventive Exercise Programs aim to minimize both intrinsic and extrinsic injury risk factors. These programs include:

Strength training to enhance muscle endurance

Agility exercises to improve movement efficiency

Proprioception training to increase balance and coordination

These components help improve physical resilience and reduce injury risk for athletes.

The Role of Injury Assessments

Kumbagowdana emphasized the importance of injury assessments in identifying weak points and preventing future injuries. Such assessments play a critical role in shaping exercise plans and providing targeted interventions to lower injury risks.

Neuromuscular Training and External Factors

Neuromuscular training enhances muscle and joint coordination, creating a foundation for injury-free performance.

External factors, such as changes in sports regulations and protective equipment usage, also play a vital role in injury prevention.

Conclusion

Preventive exercise programs help athletes stay healthy and perform at a high level over the long term. By integrating rule modifications, equipment recommendations, and structured training strategies, a safer sports environment can be established for all athletes.



Scientific Studies Conducted by Our Department

Faculty Members

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