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Carta del Presidente

Estimados compañeros y compañeras,

Es un placer presentaros el nuevo número de la revista 24" for Health.

Como siempre, intentamos recoger información de artículos relacionados con la salud y vinculados a nuestro deporte. En esta ocasión hay varios trabajos que hacen referencia a los aspectos psicológicos en la práctica deportiva, un tema que se trató en una de las mesas de nuestras últimas Jornadas, además de otros que espero que sean de vuestro interés.

Aprovecho la ocasión para desearos unas felices vacaciones

Un saludo afectuoso

Juan José Pérez Toledano
Presidente de la AEMB.

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Índice de artículos

Mental health in elite athletes: International Olympic Committee consensus statement (2019)

01

Br J Sports Med 2019;53:667–699

Reardon CL, Hainline B, Aron CM, et al.

Abstract:

Mental health symptoms and disorders are common among elite athletes, may have sport related manifestations within this population and impair performance. Mental health cannot be separated from physical health, as evidenced by mental health symptoms and disorders increasing the risk of physical injury and delaying subsequent recovery. There are no evidence or consensus based guidelines for diagnosis and management of mental health symptoms and disorders in elite athletes. Diagnosis must differentiate character traits particular to elite athletes from psychosocial maladaptations. Management strategies should address all contributors to mental health symptoms and consider biopsychosocial factors relevant to athletes to maximise benefit and minimise harm. Management must involve both treatment of affected individual athletes and optimising environments in which all elite athletes train and compete. To advance a more standardised, evidence based approach to mental health symptoms and disorders in elite athletes, an International Olympic Committee Consensus Work Group critically evaluated the current state of science and provided recommendations. FAI syndrome.

Association of Efficacy of Resistance Exercise Training With Depressive Symptoms Meta-analysis and Meta-regression Analysis of Randomized Clinical Trials

02

JAMA Psychiatry Published online May 9, 2018

BrettR.Gordon,MSc;CillianP.McDowell,BSc;MatsHallgren,PhD;JacobD.Meyer,PhD;MarkLyons,PhD;MatthewP.Herring,PhD

Importance:

The physical benefits of resistance exercise training (RET) are well documented, but less is known regarding the association of RET with mental health outcomes. To date, no quantitative synthesis of the antidepressant effects of RET has been conducted.

Objectives:

To estimate the association of efficacy of RET with depressive symptoms and determine the extent to which logical, theoretical, and/or prior empirical variables are associated with depressive symptoms and whether the association of efficacy of RET with depressive symptoms accounts for variability in the overall effect size.

Data sources:

Articles published before August 2017, located using Google Scholar, MEDLINE, PsycINFO, PubMed, and Web of Science.

Study selection:

Randomized clinical trials included randomization to RET (n=947) ora non active control condition (n=930).

Data extraction and synthesis:

Hedges deffect sizes were computed and random-effects models were used for all analyses.
Meta-regression was conducted to quantify the potential moderating influence of participant and trial characteristics.

Main outcomes and measures:

Randomized clinical trials used validated measures of depressive symptoms assessed at baseline and mid intervention and/or post intervention. Four primary moderators were selected a priori to provide focused research hypotheses about variation in effect size: total volume of prescribed RET, whether participants were healthy or physically or mentally ill, whether or not allocation and/or assessment were blinded, and whether or not the RET intervention resulted inasignificant improvement in strength.

Results:

Fifty-four effects were derived from 33 randomized clinical trials involving 1877 participants. Resistance exercise training was associated with a significant reduction in depressive symptoms with a moderate-sized mean effect Δ of 0.66 (95%CI,0.48-0.83; z=7.35;P<.001). Significant heterogeneity was indicated (totalQ=216.92,df=53; P<.001;I2 =76.0%[95%CI,72.7%-79.0%]), and sampling error accounted for 32.9% of observed variance. The number needed to treat was 4. Total volume of prescribed RET, participant health status,and strength improvements were not significantly associated with the antidepressant effect of RET. However, smaller reductions in depressive symptoms were derived from randomized clinical trials with blinded allocationand/or assessment.

Conclusions and relevance:

Resistance exercise training significantly reduced depressive symptoms among adults regardless of health status, total prescribed volume of RET,or significant improvements in strength. Better-quality randomized clinical trials blinding both allocation and assessment and comparing RET with otherempirically supported treatments for depressive symptoms are needed.

JAMAPsychiatry.doi:10.1001/jamapsychiatry.2018.0572 PublishedonlineMay9,2018.

Comparing performance during morning vs. afternoon training sessions in intercollegiate basketball players

03

Strength Cond Res 31(6): 1557–1562, 2017—

Heishman, AD, Curtis, MA, Saliba, EN, Hornett, RJ, Malin, SK, and Weltman, AL. J

Time of day is a key factor that influences the optimization of athletic performance. Intercollegiate coaches oftentimes hold early morning strength training sessions for a variety of factors including convenience. However, few studies have specifically investigated the effect of early morning vs. late afternoon strength training on performance indices of fatigue. This is athletically important because circadian and/or ultradian rhythms and alterations in sleep patterns can affect training ability. Therefore, the purpose of the present study was to examine the effects of morning vs. afternoon strength training on an acute performance index of fatigue (countermovement jump height, CMJ), player readiness (Omegawave), and self-reported sleep quantity. We hypothesized that afternoon training sessions would be associated with increased levels of performance, readiness, and self-reported sleep. A retrospective analysis was performed on data collected over the course of the preseason on 10 elite National Collegiate Athletic Association Division 1 male basketball players. All basketball-related activities were performed in the afternoon with strength and conditioning activities performed either in the morning or in the afternoon. The average values for CMJ, power output (Power), self-reported sleep quantity (sleep), and player readiness were examined. When player load and duration were matched, CMJ (58.8 6 1.3 vs. 61.9 6 1.6 cm, p = 0.009), Power
(6,378.0 6 131.2 vs. 6,622.1 6 172.0 W, p = 0.009), and selfreportedsleep duration (6.6 6 0.4 vs. 7.4 6 0.25 p = 0.016) were significantly higher with afternoon strength and conditioning training, with no differences observed in player readiness values. We conclude that performance is suppressed with morning training andisassociatedwithadecreaseinself-reportedquantityofsleep.

Supplements with purported effects on muscle mass and strength

04

European Journal of Nutrition

Pedro L. Valenzuela1, Javier S. Morales • Enzo Emanuele • Helios Pareja-Galeano, • Alejandro Lucia.

Purpose Several supplements are purported to promote muscle hypertrophy and strength gains in healthy subjects, or to prevent muscle wasting in atrophying situations (e.g., ageing or disuse periods). However, their effectiveness remains unclear. Methods This review summarizes the available evidence on the beneficial impacts of several popular supplements on muscle mass or strength. Results Among the supplements tested, nitrate and caffeine returned sufficient evidence supporting their acute beneficial effects on muscle strength, whereas the long-term consumption of creatine, protein and polyunsaturated fatty acids seems to consistently increase or preserve muscle mass and strength (evidence level A). On the other hand, mixed or unclear evidence was found for several popular supplements including branched-chain amino acids, adenosine triphosphate, citrulline, β-Hydroxy-β-methylbutyrate, minerals, most vitamins, phosphatidic acid or arginine (evidence level B), weak or scarce evidence was found for conjugated linoleic acid, glutamine, resveratrol, tribulus terrestris or ursolic acid (evidence level C), and no evidence was found for other supplements such as ornithine or α-ketoglutarate (evidence D). Of note, although most supplements appear to be safe when consumed at typical doses, some adverse events have been reported for some of them (e.g., caffeine, vitamins, α-ketoglutarate, tribulus terrestris, arginine) after large intakes, and there is insufficient evidence to determine the safety of many frequently used supplements (e.g., ornithine, conjugated linoleic acid, ursolic acid). Conclusion In summary, despite their popularity, there is little evidence supporting the use of most supplements, and some of them have been even proven ineffective or potentially associated with adverse effects.

Keywords Hypertrophy • Ergogenic aid • Skeletal muscle • Protein supplementation • Prevention of atrophy • Sarcopenia

https://doi.org/10.1007/s00394-018-1882-z

The Efficacy of Platelet-Rich Plasma and Platelet-Rich Fibrin in Arthroscopic Rotator Cuff Repair

A Meta-analysis of Randomized Controlled Trials

05

The American Journal of Sports Medicine 1–8 DOI: 10.1177/0363546517751397

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Background:

Basic science studies suggest that platelet-rich therapies have a positive effect on tendon repair. However, the clinical evidence is conflicted on whether this translates to increased tendon healing and improved functional outcomes.

Purpose:

To perform a systematic review of randomized controlled trials (RCTs) in the literature to ascertain whether platelet-rich plasma (PRP) or platelet-rich fibrin (PRF) improved patient outcomes in arthroscopic rotator cuff repair.

Study Design:

Meta-analysis.

Methods:

Two independent reviewers performed the literature search based on the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines, with a third author resolving any discrepancies. RCTs comparing PRP or PRF to a control in rotator cuff repair were included. Quality of evidence was assessed using the Jadad score. Clinical outcomes were compared using the risk ratio for dichotomous variables and the mean difference for continuous variables. A P value \.05 was deemed statistically significant.

Results:

Eighteen RCTs with 1147 patients were included in this review. PRP resulted in significantly decreased rates of incomplete tendon healing for all tears combined (17.2% vs 30.5%, respectively; P\.05), incomplete tendon healing in small-medium tears (22.4% vs 38.3%, respectively; P\.05), and incomplete tendon healing in medium-large tears (12.3% vs 30.5%, respectively; P\.05) compared to the control. There was a significant result in favor of PRP for the Constant score (85.6 vs 83.1, respectively; P\.05) and the visual analog scale score for pain at 30 days postoperatively (2.9 vs 4.3, respectively; P\.05) and at final follow-up (1.2 vs 1.4, respectively; P\.05) compared to the control. PRF did not result in a significantly decreased rate of incomplete tendon healing for all tears combined (23.0% vs 24.6%, respectively; P = .74) or an improved Constant score (80.8 vs 79.8, respectively; P = .27) compared to the control. PRF resulted in a significantly longer operation time (99.1 vs 83.3 minutes, respectively; P \ .05) compared to the control. Conclusion: The current evidence indicates that

the use of PRP in rotator cuff repair results in improved healing rates, pain levels, and functional outcomes. In contrast, PRF has been shown to have no benefit in improving tendon healing rates or functional outcomes.

Keywords:

biologic; platelet-rich plasma; rotator cuff; meta-analysis; systematic review

A Delphi developed syllabus for the medical specialty of sport and exercise medicine

06

Br J Sports Med 2018;52:490–492.

David Humphries,1 Rod Jaques,2,3 Hendrik Paulus Dijkstra,4 on behalf of the International Syllabus in Sport and Exercise Medicine Group (ISSEMG) Consensus statement

Training in the medical specialty of sport and exercise medicine is now available in many, but not all countries. Lack of resources may be a barrier to the development of this important specialty field and the International Syllabus in Sport and Exercise Medicine Group was convened to reduce one potential barrier, the need to develop a syllabus. The group is composed of 17 sport and exercise medicine specialists residing in 12 countries (Australia, Canada, India, Ireland, Malaysia, the Netherlands, Qatar, South Africa, Sweden, Switzerland, the UK and USA). This paper presents the first phase of this project covering the domains and general learning areas of a specialist training syllabus in sport and exercise medicine.

Prevention of Lower Extremity Injuries in Basketball: A Systematic Review and Meta-Analysis

07

Sports Health. 2015 Sep-Oct;7(5):392-8. doi: 10.1177/1941738115593441. Epub 2015 Jun 26.

Taylor JB1, Ford KR2, Nguyen AD3, Terry LN4, Hegedus EJ2.

Lower extremity injuries are common in basketball, yet it is unclear how prophylactic interventions affect lower extremity injuryincidence rates.

Objective:

To analyze the effectiveness of current lower extremity injury prevention programs in basketball athletes, focusing on injuryrates of (1) general lower extremity injuries, (2) ankle sprains, and (3) anterior cruciate ligament (ACL) tears.

Data sources:

PubMed, MEDLINE, CINAHL, SPORTDiscus, and the Cochrane Register of Controlled Trials were searched in January 2015.

Study selection:

Studies were included if they were randomized controlled or prospective cohort trials, contained a population of competitive basketball athletes, and reported lower extremity injury incidence rates specific to basketball players. In total, 426 individual studies were identified. Of these, 9 met the inclusion criteria. One other study was found during a hand search of the literature, resulting in 10 total studies included in this meta-analysis.

Study design:

Systematic review and meta-analysis.

Level of evidence:

Level 2.

Data extraction:

Details of the intervention (eg, neuromuscular vs external support), size of control and intervention groups, and number of injuries in each group were extracted from each study. Injury data were classified into 3 groups based on the anatomic diagnosis reported (general lower extremity injury, ankle sprain, ACL rupture).

Results:

Meta-analyses were performed independently for each injury classification. Results indicate that prophylactic programs significantly reduced the incidence of general lower extremity injuries (odds ratio [OR], 0.69; 95% CI, 0.57-0.85; P < 0.001) and ankle sprains (OR, 0.45; 95% CI, 0.29-0.69; P < 0.001), yet not ACL ruptures (OR, 1.09; 95% CI, 0.36-3.29; P = 0.87) in basketball athletes.

Conclusion:

In basketball players, prophylactic programs may be effective in reducing the risk of general lower extremity injuries and ankle sprains, yet not ACL injuries.

Keywords:

ankle sprain; anterior cruciate ligament; basketball; injury prevention; lower extremity

Injuries in Japanese Mini-Basketball Players During Practices and Games

08

J Athl Train. 2016 Dec;51(12):1022-1027. doi: 10.4085/1062-6050-51.12.22. Epub 2016 Dec 6.

Kuzuhara K1,2, Shibata M3, Uchida R2.

Mini-basketball is one of the most popular junior sports in Japan. Mini-basketball-related injuries may increase because of early specialization. However, no reports have been published to date concerning basketball injuries in children younger than 12 years of age.

Objective:

To prospectively study the incidence, sites, types, and mechanisms of injuries in mini-basketball teams.

Design:

Descriptive epidemiology study.

Setting:

Mini-basketball teams in Kobe, Japan.

Patients or other participants:

A total of 95 players in 7 community-based mini-basketball club teams (age range, 9 through 12 years).

Main outcome measure(s):

Data on all practice and game injuries for the 2013-2014 season were collected using an injury report form. Injury rates were calculated according to site, type, and mechanism.

Results:

The overall injury rate was 3.83 per 1000 athlete-hours (AHs). The game injury rate (12.92/1000 AHs) was higher than the practice injury rate (3.13/1000 AHs; P < .05). The most common anatomical areas of injury during games and practices were the head and neck (36.4%, 4.70/1000 AHs) and the upper limbs (47.8%, 1.50/1000 AHs). Sprains (42.9%, n = 39) were the most common type of injuries overall, followed by contusions (29.7%, n = 27). Most game injuries resulted from body contact (45.5%, 5.87/1000 AHs), whereas most practice injuries resulted from other contact (56.5%, 1.77/1000 AHs).

Results:

Game injury rates were higher than practice injury rates in Japanese mini-basketball players. The high practice injuryrate in this study may be due to specific factors related to growth, such as individual differences in height, or to skills, such as inexperience in ball handling.

Keywords:

elementary school-age players; injury epidemiology; injury surveillance

Recovery and Performance in Sport: Consensus Statement

09

International Journal of Sports Physiology and Performance, 2018, 13, 240-245

Michael Kellmann, Maurizio Bertollo, Laurent Bosquet, Michel Brink, Aaron J. Coutts, Rob Duffield, Daniel Erlacher, Shona L. Halson, Anne Hecksteden, Jahan Heidari, K. Wolfgang Kallus, Romain Meeusen, Iñigo Mujika, Claudio Robazza, Sabrina Skorski, Ranel Venter and Jürgen Beckmann

The relationship between recovery and fatigue and its impact on performance has attracted the interest of sport science for many years. An adequate balance between stress (training and competition load, other life demands) and recovery is essential for athletes to achieve continuous high-level performance. Research has focused on the examination of physiological and psychological recovery strategies to compensate external and internal training and competition loads. A systematic monitoring of recovery and the subsequent implementation of recovery routines aims at maximizing performance and preventing negative developments such as underrecovery, nonfunctional overreaching, the overtraining syndrome, injuries, or illnesses. Due to the inter- and intraindividual variability of responses to training, competition, and recovery strategies, a diverse set of expertise is required to address the multifaceted phenomena of recovery, performance, and their interactions to transfer knowledge from sport science to sport practice. For this purpose, a symposium on Recovery and Performance was organized at the Technical University Munich Science and Study Center Raitenhaslach (Germany) in September 2016. Various international experts from many disciplines and research areas gathered to discuss and share their knowledge of recovery for performance enhancement in a variety ofs ettings. The results of this meeting are outlined in this consensus statement that provides central definitions, theoretical frameworks, and practical implications as a synopsis of the current knowledge of recovery and performance. While our understanding of the complex relationship between recovery and performance has significantly increased through research, some important issues for future investigations are also elaborated.

Keywords: load, monitoring, enhancement, physiology, psychology, fatigue

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