24" for HEALTH

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Carta del Presidente

Queridos amigos y amigas,

Ya tenemos aquí el número 4 de la revista 24" for Health.

Este número, como podeis observar, presenta temas muy diversos desde la cardiología del deporte al manejo de diversas lesiones muy frecuentes en nuestro deporte tanto de rodilla como de tobillo.

Espero que el trabajo realizado por nuestros compañeros nos aporte nuevos conocimientos y perspectivas para nuestra labor diaria.

Como siempre, os animo a compartir vuestras experiencias con todos nosotros.

Un saludo.

Juan José Pérez Toledano
Presidente de la AEMB.

AEMB Asociación Española de Médicos de Baloncesto

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Nonoperative Management of Femoroacetabular Impingement: A Prospective Study

01

The American Journal of sports Medicine

Andrew T. Pennock, MD, James D. Bomar, MPH, Kristina P. Johnson, ATC, OPA-C, Kelly Randich, DPT, Vidyadhar V. Upasani, MD*

The literature has given little attention to the nonoperative management of femoroacetabular impingement (FAI) syndrome despite a rapidly expanding body of research on the topic.

Purpose:

To perform a prospective study utilizing a nonoperative protocol on a consecutive series of patients presenting to our clinic with FAI syndrome.

Study Design:

Cohort study; Level of evidence, 2.

Methods:

Between 2013 and 2016, patients meeting the following criteria were prospectively recruited in a nonoperative FAI study: no prior hip surgery, groin-based pain, a positive impingement test, and radiographic FAI syndrome. The protocol consisted of an initial trial of rest, physical therapy, and activity modification. Patients who remained symptomatic were then offered an image-guided intra-articular steroid injection. Patients with recurrent symptoms were then offered arthroscopic treatment. Outcome scores were collected at 12 and 24 months. Statistical analysis was performed to identify risk factors for the need for operative treatment and to determine patient outcomes based on FAI type and treatment.

Results:

Ninety-three hips (n = 76 patients: mean age, 15.3 years; range, 10.4-21.4 years) were included in this study and followed for a mean ± SD 26.8 ± 8.3 months. Sixty-five hips (70%) were managed with physical therapy, rest, and activity modification alone. Eleven hips (12%) required a steroid injection but did not progress to surgery. Seventeen hips (18%) required arthroscopic management. All 3 groups saw similar improvements in modified Harris Hip Score (P = .961) and nonarthritic hip score (P = .975) with mean improvements of 20.3 ± 16.8 and 13.2 ± 15.5, respectively. Hips with cam impingement and combined cam-pincer impingement were 4.0 times more likely to meet the minimal clinically important difference in modified Harris Hip Score (P = .004) and 4.4 times more likely to receive surgical intervention (P = .05) than patients with pincer deformities alone. Participants in team sports were 3.0 times more likely than individual sport athletes to return to competitive activities (P = .045).

Conclusion:

A majority (82%) of adolescent patients presenting with FAI syndrome can be managed nonoperatively, with significant improvements in outcome scores at a mean follow-up of 2 years.

Clinical Relevance:

A nonoperative approach should be the first-line treatment for young active patients with symptomatic FAI syndrome.

https://doi.org/10.1177/0363546518804805

Exercise, orthoses and splinting for treating Achilles tendinopathy: a systematic review with meta-analysis

02

British Journal of Sports Medicina. Volume 52, Issue 24

Fiona Wilson1, Margaret Walshe2, Tom O'Dwyer1, Kathleen Bennett3, David Mockler4, Christopher Bleakley5

Objectives:

To assess the efficacy of exercise, orthoses and splinting on function, pain and quality of life (QoL) for the management of mid-portion and insertional Achilles tendinopathy, and to compare different types, applications and modes of delivery within each intervention category.

Design:

Systematic review and meta-analysis.

Data sources:

Medline, CINAHL, Embase, AMED, WHO ICTRP, Web of Science, PEDro and Cochrane Library from inception to October 2017. Citation tracking of published studies and conference proceedings and contacting experts in the field.

Study eligibility criteria:

Controlled clinical trials evaluating either exercise, orthoses or splinting for the management of Achilles tendinopathy.

Methods:

Independent reviewers undertook searches, screening and risk of bias appraisal. Primary outcomes of interest were function, pain and QoL.

Results:

Twenty-two studies were included (1137 participants). Moderate level evidence favoured eccentric exercise over control for improving pain and function in mid-portion tendinopathy. Moderate level evidence favoured eccentric exercise over concentric exercise for reducing pain. There was moderate level evidence of no significant difference in pain or function between eccentric exercise and heavy slow resistance exercise. There was low level evidence that eccentric exercise was not superior to stretching for pain or QoL. There was moderate level evidence that a combined exercise protocol was not superior to a lower dosage protocol for improving functional performance. There was moderate to low level evidence of a significant difference in pain (mean difference (MD) 6.3 mm, 95% CI –4.45 to 17.04, moderate) or function (MD 1.83 Victoria Institute of Sport Assessment points, 95% CI –7.47 to 11.12, low) between high-dose and low-dose eccentric training. There was high to moderate level

evidence of no difference in pain (moderate) or function (high) between orthoses and control. There was low level evidence of no significant benefit in adding a night splint to an eccentric exercise programme for function, and moderate level evidence for no reduction in pain (MD –3.50, 95% CI –10.49 to 3.48). Eccentric exercise was not superior to splinting for pain (moderate evidence) or function (low level evidence).

Summary:

We conditionally recommend exercise for improving pain and function in mid-portion Achilles tendinopathy. The balance of evidence did not support recommendation of one type of exercise programme over another. We conditionally recommend against the addition of a splint to an eccentric exercise protocol and we do not recommend the use of orthoses to improve pain and function in Achilles tendinopathy.

https://bjsm.bmj.com/content/52/24/1564

Performing high-level sport is strongly associated with urinary incontinence in elite athletes: a comparative study of 372 elite female athletes and 372 controls.

03

Br J Sports Med. 2018 Dec;52(24):1586-1590. doi: 10.1136/bjsports-2017-097587. Epub 2017 Jun 22.

Carvalhais A1,2,3, Natal Jorge R3,4, Bø K5.

Objectives:

To evaluate the prevalence of urinary incontinence (UI) in female elite athletes compared with controls and to investigate potential risk factors for UI among elite athletes.

Methods:

This cross-sectional study included 372 elite athletes (athletes group, AG) and 372 age-matched controls (control group, CG). The median age was low (19 years) and the vast majority were nulliparous. Potential risk factors, including clinical, demographic and sports practice characteristics, were collected by using a questionnaire. The International Consultation on Urinary Incontinence Questionnaire-Urinary Incontinence-Short Form was applied to estimate the prevalence of UI. OR with 95% CIs were used to estimate the association with UI. The final model was adjusted for constipation, family history of UI and history of urinary infection.

Results:

The prevalence of UI was 29.6% and 13.4% in AG and CG, respectively (p<0.001). The following prevalences were obtained: AG: 19.6% and CG: 3.5% (p<0.001) for stress UI, AG: 3.8% and CG: 5.4% (p=0.292) for urgency UI and AG: 5.9% and CG: 0.8% (p<0.001) for mixed UI. After adjustment, performing high-level sport (adjusted (adj) OR=3.31; 95% CI 2.20 to 4.97), family history of UI (adj OR=1.54; 95% CI 1.04 to 2.29), history of urinary infection (adj OR=1.53; 95% CI 1.05 to 2.23) and constipation (adj OR=1.79; 95% CI 1.07 to 2.98) were associated with UI.

Conclusion:

The prevalence of UI among Portuguese female elite athletes is high and the odds of UI were three times higher than in controls. Also, constipation, family history of UI and history of urinary infections were significantly associated with UI.

https://www.ncbi.nlm.nih.gov/pubmed/28642223

Urinary incontinence and disordered eating in female elite athletes

04

J Sci Med Sport. 2019 Feb;22(2):140-144. doi: 10.1016/j.jsams.2018.07.008. Epub 2018 Jul 20.

Carvalhais A1, Araújo J2, Natal Jorge R3, Bø K4.

Objectives:

TTo evaluate the association between urinary incontinence and disordered eating, in elite female athletes.

Design:

This cross-sectional study included 744 young and healthy Portuguese women: 372 elite athletes and 372 age-matched non-athletes, mean age 21±5.3years.

Methods:

Data regarding clinical, demographic, and sport practice characteristics were collected by questionnaire. The International Consultation on Incontinence Questionnaire-Urinary Incontinence-Short Form was applied to identify urinary incontinence. The Eating Disorder Examination Questionnaire was applied to identify disordered eating. Odds ratios with 95% confidence intervals (95% CI) were used to estimate the association between UI and disordered eating.

Results:

The prevalence of urinary incontinence in athletes and non-athletes was 29.3% and 13.4%, p<0.001, respectively. No difference in prevalence of disordered eating was found between athletes (17.7%) and non-athletes (20.2%), p=0.435. Urinary incontinence was associated with disordered eating only in the athletes. After adjustment for age, type of sport, smoking and alcohol intake, athletes with disordered eating presented increased odds of urinary incontinence of any type over athletes without disordered eating (OR=3.09; 95% CI: 1.74-5.50).

Conclusions:

Athletes with disordered eating were three times more likely to present urinary incontinence than women without disordered eating. There is a need for further studies to elaborate on mechanisms for this association.

Keywords:

Eating behaviour; Pelvic floor dysfunction; Prevalence; Sports practice; Stress urinary incontinence

https://www.ncbi.nlm.nih.gov/pubmed/30098973

High blood pressure response to exercise predicts future development of hypertension in young athletes.

05

Eur Heart J. 2019 Jan 1;40(1):62-68. doi: 10.1093/eurheartj/ehy810.

Caselli S1,2, Serdoz A1, Mango F1, Lemme E1, Vaquer Seguì A1, Milan A3, Attenhofer Jost C2, Schmied C4, Spataro A1, Pelliccia A1.

Due to superior exercise performance, athletes show higher blood pressure (BP) at peak exercise compared to untrained individuals. Thus, higher reference values for peak exercise systolic and diastolic BP were reported specifically for athletes. However, the prognostic significance of high blood pressure response (HBPR) to exercise has not yet been clarified in this population.

Methods and Results:

One hundred and forty-one normotensive athletes with HBPR to exercise were compared to 141 normotensive athletes with normal blood pressure response (NBPR) to exercise, matched for gender, age, body size, and type of sport. All athletes were followed up for 6.5 ± 2.8 years. Over follow-up, no cardiac events occurred; 24 athletes were diagnosed essential hypertension (8.5%). Specifically, 19 (13.5%) belonged to the HBPR compared with 5 (3.5%) in the NBPR group (P = 0.003). Kaplan-Meier analysis confirmed that the incidence of hypertension during follow-up was higher in the HBPR group (log-rank χ2P-value = 0.009). Multivariable analysis by Cox proportional hazard survival model showed that resting BP and HBPR at baseline evaluation were the strongest predictors of incident hypertension (χ2 for the model 30.099; P < 0.001). Specifically, HBPR was associated with a hazard ratio of 3.6 (95% confidence interval 1.3-9.9) of developing hypertension. Over follow-up exercise capacity, as well as morphologic and functional cardiac parameters in athletes from both groups did not change significantly.

Conclusion:

The present study showed that an exaggerated BP response to exercise increased the risk for incident hypertension in highly trained and normotensive athletes over a middle-term period.

https://www.ncbi.nlm.nih.gov/pubmed/30590485

IOC consensus statement: dietary supplements and the high-performance athlete

06

Br J Sports Med 2018;52:439–455.

Ronald J Maughan,1 Louise M Burke,2,3 Jiri Dvorak,4 D Enette Larson-Meyer,5 Peter Peeling,6,7 Stuart M Phillips,8 Eric S Rawson,9 Neil P Walsh,10 Ina Garthe,11 Hans Geyer,12 Romain Meeusen,13 Lucas J C van Loon,3,14 Susan M Shirreffs,1 Lawrence L Spriet,15 Mark Stuart,16 Alan Vernec,17 Kevin Currell,18 Vidya M Ali,19 Richard GM Budgett,20 Arne Ljungqvist,21 Margo Mountjoy,22,23 Yannis P Pitsiladis,19 Torbjørn Soligard,20 Uğur Erdener,19 Lars Engebretsen20 Consensus statement

Nutrition usually makes a small but potentially valuable contribution to successful performance in elite athletes, and dietary supplements can make a minor contribution to this nutrition programme. Nonetheless, supplement use is widespread at all levels of sport. Products described as supplements target different issues, including (1) the management of micronutrient deficiencies, (2) supply of convenient forms of energy and macronutrients, and (3) provision of direct benefits to performance or (4) indirect benefits such as supporting intense training regimens. The appropriate use of some supplements can benefit the athlete, but others may harm the athlete’s health, performance, and/or livelihood and reputation (if an antidoping rule violation results). A complete nutritional assessment should be undertaken before decisions regarding supplement use are made. Supplements claiming to directly or indirectly enhance performance are typically the largest group of products marketed to athletes, but only a few (including caffeine, creatine, specific buffering agents and nitrate) have good evidence of benefits. However, responses are affected by the scenario of use and may vary widely between individuals because of factors that include genetics, the microbiome and habitual diet. Supplements intended to enhance performance should be thoroughly trialled in training or simulated competition before being used in competition. Inadvertent ingestion of substances prohibited under the antidoping codes that govern elite sport is a known risk of taking some supplements. Protection of the athlete’s health and awareness of the potential for harm must be paramount; expert professional opinion and assistance is strongly advised before an athlete embarks on supplement use.

https://bjsm.bmj.com/content/52/7/439

American Medical Society for Sports Medicine position statement on concussion in sport

07

Br J Sports Med

Kimberly G Harmon,1 James R Clugston,2 Katherine Dec,3 Brian Hainline,4 Stanley Herring,5 Shawn F Kane,6 Anthony P Kontos,7 John J Leddy,8 Michael McCrea,9 Sourav K Poddar,10 Margot Putukian,11,12 Julie C Wilson,13 William O Roberts14

AbsTrACT Sport-related concussion (SRC) is a common injury in recreational and organised sport. Over the past 30 years, there has been significant progress in our scientific understanding of SRC, which in turn has driven the development of clinical guidelines for diagnosis, assessment and management of SRC. In addition to a growing need for knowledgeable healthcare professionals to provide evidence-based care for athletes with SRC, media attention and legislation have created awareness and, in some cases, fear about many issues and unknowns surrounding SRC. The American Medical Society for Sports Medicine (AMSSM) formed a writing group to review the existing literature on SRC, update its previous position statement, and to address current evidence and knowledge gaps regarding SRC. The absence of definitive outcomes-based data is challenging and requires relying on the best available evidence integrated with clinical experience and patient values. This statement reviews the definition, pathophysiology and epidemiology of SRC, the diagnosis and management of both acute and persistent concussion symptoms, the short-term and long-term risks of SRC and repetitive head impact exposure, SRC prevention strategies, and potential future directions for SRC research. The AMSSM is committed to best clinical practices, evidence-based research and educational initiatives that positively impact the health and safety of athletes.

bACkground And purpose The American Medical Society for Sports Medicine (AMSSM) represents over 3800 sports medicine physicians who have completed specialty training in sports medicine after a residency programme in family medicine, internal medicine, paediatrics, emergency medicine, or physical medicine and rehabilitation, many of whom have extensive expertise in concussion evaluation and management, including serving as sideline team physicians at all levels of sport. Sport-related concussion (SRC) is an important topic for sports medicine physicians and there is a rapidly expanding knowledge base in this area. SRC has become a focus of both public concern and media attention. The purpose of this statement is to provide a narrative review of the existing literature and best practices to assist healthcare providers with the evaluation and management of SRC, and to establish the level of evidence, current knowledge gaps and areas requiring additional research. The first AMSSM position statement on SRC was published in 2013 and this is an update to that statement.1

https://bjsm.bmj.com/content/52/7/439

The NBA and Youth Basketball: Recommendations for Promoting a Healthy and Positive Experience.

08

Sports Med. 2018 Sep;48(9):2053-2065. doi: 10.1007/s40279-018-0950-0.

DiFiori JP1, Güllich A2, Brenner JS3, Côté J4, Hainline B5, Ryan E 3rd6, Malina RM7.

Participation in sports offers both short-term and long-term physical and psychosocial benefits for children and adolescents. However, an overemphasis on competitive success in youth sports may limit the benefits of participation, and could increase the risk of injury, burnout, and disengagement from physical activity. The National Basketball Association and USA Basketball recently assembled a group of leading experts to share their applied research and practices to address these issues. This review includes the group's analysis of the existing body of research regarding youth sports participation and the related health, performance, and psychosocial outcomes. Based upon this, age-specific recommendations for basketball participation are provided that aim to promote a healthy and positive experience for youth basketball players.

https://www.ncbi.nlm.nih.gov/pubmed/30590485

Vital statistics and early death predictors of North American professional basketball players: A historical examination.

09

J Sports Sci. 2018 Jul;36(14):1648-1655. doi: 10.1080/02640414.2017.1409607.

Lemez S1, Wattie N2, Lawler T3, Baker J4.

While empirical evidence suggests that elite athletes have superior lifespan outcomes relative to the general population, less is known regarding their causes of death. The purpose of this study was to critically examine the mortality outcomes of deceased National BasketballAssociation and American Basketball Association players. Death data were collected from publicly available sources until 11 December 2015, and causes of death were categorized using the International Classification of Diseases, Tenth Revision (ICD). Mortality was measured through: i) cause-specific crude death rates (CDR), ii) estimates of death rates per athlete-year (AY), and iii) binary and multinomial regression analyses. We identified 514 causes of death from 787 deceased players (M = 68.1 y ± 16.0) from 16 different ICD groups, 432 of which were from natural causes. Findings showed similar leading causes of death and CDRs to sex- and race-matched controls, higher death rate differences per AY within time-dependent variables (i.e., birth decade, race, and height), and a higher likelihood of dying below the median age of death for black and taller players, although this was highly confounded by birth decade. More complete knowledge of mortality outcomes would provide broad public health applications and disarm harmful stereotypes of elite athlete health.

Keywords:

Basketball; death; health; longevity; mortality

PMID:29183260 DOI: 10.1080/02640414.2017.1409607

https://www.ncbi.nlm.nih.gov/pubmed/30590485

Anthropometric Parameters, Age, and Agility as Performance Predictors in Elite Female Basketball Players.

10

J Strength Cond Res. 2018 Jun;32(6):1723-1730. doi: 10.1519/JSC.0000000000002043.

Garcia-Gil M1, Torres-Unda J, Esain I, Duñabeitia I, Gil SM, Gil J, Irazusta J.

In addition to technical, tactical, and psychological skills, performance in playing basketball depends on anthropometry and physical fitness. However, limited information is available regarding such features in women. We hypothesized that anthropometry and physical fitness are associated with female basketballperformance, and consequently, performance could be predicted using the results of certain anthropometric measures and fitness tests. Body parameters (age, height, body mass, skinfold thicknesses, limb perimeters, and lengths) were measured. Physical fitness capacities (jumping, agility with and without the ball, and speed) were measured by specific tests. In addition, game performance was assessed using technical statistics (rebounds, assists, and points) and the performance index rating (PIR). Teams ranked better in the regular season had smaller mean fat skinfold thickness and spent less time in the agility tests (T-Drill). Correlation analyses indicated that players with better PIR were older, taller, and had a longer arm span and greater contracted arm perimeter (CAP). Furthermore, those players had better results in the T-Drill test. Multiple regression analysis indicated that combined age, height, CAP, fat skinfold thickness, and time in T-Drill test yielded a strong predictor of PIR per time played. In conclusion, the results of the present study indicate that some anthropometric and physical fitness characteristics of female elite basketball teams and players are highly associated with performance-related parameters. In addition, a regression model has been developed to predict the performance of female basketball players.

https://www.ncbi.nlm.nih.gov/pubmed/29786629

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