

The Ergonomics of Wheelchair Configuration for Optimal Performance in the Wheelchair Court Sports

轮椅结构的人类工程学对轮椅球场运动最佳表现影响

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Abstract: Optimizing mobility performance in wheelchair court sports (basketball, rugby and tennis) is dependent on a combination of factors associated with the user, the wheelchair and the interfacing between the two. Substantial research has been attributed to the wheelchair athlete yet very little has focused on the role of the wheelchair and the wheelchair-user combination. This article aims to review relevant scientific literature that has investigated the effects of wheelchair configuration on aspects of mobility performance from an ergonomics perspective. Optimizing performance from an ergonomics perspective requires a multidisciplinary approach. This has resulted in laboratory-based investigations incorporating a combination of physiological and biomechanical analyses to assess the efficiency, health/safety and comfort of various wheelchair configurations. To a lesser extent, field-based testing has also been incorporated to determine the effects of wheelchair configuration on aspects of mobility performance specific to the wheelchair court sports. The available literature has demonstrated that areas of seat positioning, rear wheel camber, wheel size and hand-rim configurations can all influence the ergonomics of wheelchair performance.

Certain configurations have been found to elevate the physiological demand of wheelchair propulsion, others have been associated with an increased risk of injury and some have demonstrated favourable performance on court. A consideration of all these factors is required to identify optimal wheelchair configurations. Unfortunately, a wide variety of different methodologies have emerged between studies, many of which are accompanied by limitations, thus making the identification of optimal configurations problematic. When investigating an area of wheelchair configuration, many studies have failed to adequately standardize other areas, which has prevented reliable cause and effect relationships being established. In addition, a large number of studies have explored the effects of wheelchair configuration in either able-bodied populations or in daily life or racing wheelchairs. As such, the findings are not specific and transferable to athletes competing in the wheelchair court sports.

This review presents evidence about the effects of wheelchair configuration on aspects of mobility performance specific to the wheelchair court sports to better inform athletes, coaches and manufacturers about the consequences of their selections. It also provides researchers with guidance on the design of future investigations into areas of wheelchair configuration, which are essential.

摘要：在球场运动（篮球，橄榄球和网球）方面，优化移动性轮椅取决于结合使用者的具体情况，轮椅和两者的接触。大量的研究表明轮椅运动员很少集中于轮椅的作用和与轮椅使用者的结合。这篇文章的目的是审核相关的科学文件，关于从人机工程学的角度看轮椅结构对流动性能的影响。从人机工程学的角度来优化性能设计到交叉科学。这导致了实验室的基础调查包括了生理的和生物的分析去评估效率，各种轮椅的配置，安全，舒适和健康。在较小程度上，基于现场测试也被纳入轮椅的配置，以确定影响特定到轮椅法院体育方面的移动性能。现有的文献已经证明，座椅定位，后轮外倾角，车轮尺寸和手轮辘配置方面都可以影响人体工程学的轮椅性能。

已经发现某些配置可以提升生理轮椅的推动，其他人存在着增加受伤的风险和一些已经证明了有利的性能在法院。考虑到所有这些因素才能确定最优轮椅配置。不幸的是，各种不同的方法之间的综合研究，其中许多是伴随着的局限性，从而使识别的最优配置问题。当调查面积轮椅配置，许多研究都未能充分规范其他领域，这阻止了可靠的因果关系成立。此外，大量的研究探索了轮椅的影响无论是健全的人口配置或在日常生活中或比赛轮椅。因此，这些发现并不是很具体，转移到运动员参加轮椅法院体育。本文综述了在移动性能方面的特定到轮椅法院体育运动员，教练员和厂商有关他们的选择所带来的后果，以更好地告知轮椅配置的影响的证据。它还提供轮椅配置领域，这是必不可少的研究人员的指导下对设计未来调查。

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Self-organization processes in field-invasion team sports : implications for leadership.

在现场的侵袭运动队自组织过程：对领导地位的影响。

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Abstract: In nature, the interactions between agents in a complex system (fish schools; colonies of ants) are governed by information that is locally created. Each agent self-organizes (adjusts) its behaviour, not through a

central command centre, but based on variables that emerge from the interactions with other system agents in the neighbourhood. Self-organization has been proposed as a mechanism to explain the tendencies for individual performers to interact with each other in field-invasion sports teams, displaying functional co-adaptive behaviours, without the need for central control. The relevance of self-organization as a mechanism that explains pattern-forming dynamics within attacker-defender interactions in field-invasion sports has been sustained in the literature. Nonetheless, other levels of interpersonal coordination, such as intra-team interactions, still raise important questions, particularly with reference to the role of leadership or match strategies that have been prescribed in advance by a coach. The existence of key properties of complex systems, such as system degeneracy, nonlinearity or contextual dependency, suggests that self-organization is a functional mechanism to explain the emergence of interpersonal coordination tendencies within intra-team interactions. In this opinion article we propose how leadership may act as a key constraint on the emergent, self-organizational tendencies of performers in field-invasion sports.

摘要：在自然界，一个复杂的系统中，代理之间的相互作用（鱼群、蚂蚁的殖民地）是由本地信息创建的。每个代理自组织（调整）的行为，不是通过一个指挥中心，而是基于变量在附近的其他系统的相互作用而出现。自身组织已被提议作为一种机制来解释个体表现与侵袭运动队之间相互作用的趋势，显示在功能上的相互适应行为是不需要中央控制。自身组织的关联性就被视为一种机制，而这种机制被解释为攻击者和防御者之间形式动力学的互动。在文学中，场地的入侵式运动一直存在。然而其他层次的人际协调能力，如团队内部的相互作用，还提出了重要的问题，特别是领导或匹配策略，已经提前被教练规定好。复杂系统的关键特性的存在，如系统退化，非线性或语境上的依赖都从自身组织功能的机制来解释团队内部的相互作用在人际协调的倾向的出现。在这篇评论提出了如何领导可能作为新兴的一个关键的约束，在体育领域侵犯表演者自组织的倾向。

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Recovery in soccer : part ii-recovery strategies.

足球的赛后恢复——

第二部分：恢复战略

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Abstract: In the formerly published part I of this two-part review, we examined fatigue after soccer matchplay and recovery kinetics of physical performance, and cognitive, subjective and biological markers. To reduce the magnitude of fatigue and to accelerate the time to fully recover after completion, several recovery strategies are now used in professional soccer teams. During congested fixture schedules, recovery strategies are highly required to alleviate post-match fatigue, and then to regain performance faster and reduce the risk of injury. Fatigue following competition is multifactorial and mainly related to dehydration, glycogen depletion, muscle damage and mental fatigue. Recovery strategies should consequently be targeted against the major causes of fatigue. Strategies reviewed in part II of this article were nutritional intake, cold water immersion, sleeping, active recovery, stretching, compression garments, massage and electrical stimulation. Some strategies such as hydration, diet and sleep are effective in their ability to counteract the fatigue mechanisms. Providing milk drinks to players at the end of competition and a meal containing high-glycaemic index carbohydrate and protein within the hour following the match are effective in replenishing substrate stores and optimizing muscle-damage repair. Sleep is an essential part of recovery management. Sleep disturbance after a match is common and can negatively impact on the recovery process. Cold water immersion is effective during acute periods of match congestion in order to regain performance levels faster and repress the acute inflammatory process. Scientific evidence for other strategies reviewed in their ability to accelerate the return to the initial level of performance is still lacking. These include active recovery, stretching, compression garments, massage and electrical stimulation. While this does not mean that these strategies do not aid the recovery process, the protocols implemented up until now do not significantly accelerate the return to initial levels of performance in comparison with a control condition. In conclusion, scientific evidence to support the use of strategies commonly used during recovery is lacking. Additional research is required in this area in order to help practitioners establish an efficient recovery protocol immediately after matchplay, but also for the following days. Future studies could focus on the chronic effects of recovery strategies, on combinations of recovery protocols and on the effects of recovery strategies inducing an anti-inflammatory or a pro-inflammatory response.

摘要: 在先前出版的第一部分中, 关于第二部分的审查, 我们调查了足球赛后的疲劳度和恢复后的动力以及物理性能, 同时还有其他的认知, 另外还有主观感知和生物标志. 减轻疲劳等级并且加快赛后的彻底恢复, 以下的这些恢复战略已经被运用到专业的足球队中. 虽然足球队员们的时间已经被安排的满满的, 但是恢复战略对于减轻过度疲劳来说是相当有必要的. 这样更能提高速度, 减少受伤. 赛后疲劳的影响是多方面的, 可能会导致脱水, 糖原衰竭, 肌肉损伤, 精神疲劳等等. 因此, 恢复战略的目的在于抵抗最关键的疲劳原因. 本文中第二部分战略审查在于摄取营养, 冷敷, 睡眠, 运动恢复, 伸展, 止血敷布, 按摩及电击. 有些战略, 比如: 水

合作用, 合理饮食, 睡眠充足. 对于他们能抵抗机械性疲劳也是有效的. 在比赛的最后给运动员喝牛奶, 并且在赛后一小时内给他们吃含有高血糖指数的碳水化合物及蛋白质对于补充肌肉损伤的修复是很有效的。睡眠时恢复战略的基本部分, 比赛后睡眠困扰是很普遍的现象而且会对恢复进程产生消极影响. 在比赛激烈的时候, 为了更快的恢复表现水平和抑制急性发炎, 冷敷是有效果的. 其他被认为可以加速恢复到原来表现水平的措施还没有科学依据可以证明, 这些措施包括: 活性恢复, 伸展, 止血敷布, 按摩和电击. 然而, 这并不意味着这些对恢复没有帮助. 一个与控制条件相比, 被实施的草案协议直到现在都没有十分的引人注目. 草案促进机体恢复到最初的表现水平. 总的来说, 这些通常用在恢复期的方法, 用来支持他们作用的科学依据仍然是缺乏的. 在这个方面, 需要深入的调查. 这项调查是为了帮助运动员在比赛后即建立一种有效的恢复战略, 但也是为了以后. 未来的方案将会专注于恢复战略的慢性效果, 恢复协议的组合和康复战略的减少抗炎活促炎反映的效果.

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Neuromuscular factors associated with decline in long-distance running performance in master athletes.

神经肌肉的影响因素与运动健将长跑能力表现力下降的相关性

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Abstract: This review focuses on neuromuscular factors that may affect endurance performance in master athletes. During the last decade, due to the rapid increase in the number of master or veteran participants in endurance sporting competitions, many studies attempted to identify metabolic factors associated with the decrease in endurance, especially long-distance running performance with ageing, focusing on decreases in maximal oxygen consumption. However, neuromuscular factors have been less studied despite the well-known phenomena of strength loss with ageing. For master athletes to perform better in long-distance running events, it is important to reduce muscle fatigue and/or muscle damage, to improve locomotion efficiency and to facilitate recovery. To date, no consensus exists that regular endurance training is beneficial for improving locomotion efficiency, reducing muscle fatigue and muscle damage, and enhancing recovery capacity in master athletes. Some recent studies seem to indicate that master athletes have similar muscle damage to young athletes, but they require a longer recovery time after a long-distance running event. Further analyses of these parameters in master athletes require more experimental and practical

interest from researchers and coaches. In particular, more attention should be directed towards the capacity to maintain muscle function with training and the role of neuromuscular factors in long-distance performance decline with ageing using a more cellular and molecular approach.

摘要: 这篇文章着重讨论神经肌肉因素对运动员忍耐力的影响。在过去的十年里, 由于运动健将和老运动员在参与忍耐力性质的运动竞赛数量上的增加, 许多研究试图找出变化因素与运动员忍耐力下降有关, 特别是随着运动员年龄的增加在长跑中的表现状况, 状况集中表现在有氧消耗中。然而, 尽管运动员年龄增加, 力量减小的事实众所周知, 但神经肌肉的影响因素很少有人研究。对于运动员来说, 在长跑比赛中, 减少肌肉疲劳和肌肉损伤来提高移动速度和促进身体恢复能力是十分重要的。到目前为止, 常规性的忍耐力训练对于运动员来说可以提高移动速度, 减轻肌肉疲劳和肌肉损伤, 提高身体恢复能力, 这一说法并不是适合所有的运动员。最新研究表明运动健将和新运动员有同样的肌肉损伤, 但是运动健将在长跑后需要更长的恢复时间。关于运动员表现参数的进一步分析, 则需要从研究人员和教练员那里获得更多实验性及实践性的有利数据。特别指出的是, 更多注意力应该放在训练中保持肌肉功能和如何使用一种更精确的方法来确定随着年龄的增长在长跑运动中神经性肌肉因素所扮演的角色。

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Exercise prescription in the treatment of type 2 diabetes mellitus : current practices, existing guidelines and future directions.

治疗 2 型糖尿病的运动处方: 当前的实践, 现有的指导方针和未来的发展方向。

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Abstract: Exercise is an effective treatment for type 2 diabetes mellitus, resulting in stabilization of plasma glucose in the acute phase and improvements in body composition, insulin resistance and glycosylated haemoglobin with chronic exercise training. However, the most appropriate exercise prescription for type 2 diabetes has not yet been established, resulting from insufficient evidence to determine the optimum type, intensity, duration or frequency of exercise training. Furthermore, patient engagement in exercise is suboptimal. There are many likely reasons for low engagement in exercise; one possible contributory factor may be a tendency for expert

bodies to prioritize the roles of diet and medication over exercise in their treatment guidelines. Published treatment guidelines vary in their approach to exercise training, but most agencies suggest that people with type 2 diabetes engage in 150 min of moderate to vigorous aerobic exercise per week. This prescription is similar to the established guidelines for cardiovascular health in the general population. Future possibilities in this area include investigation of the physiological effects and practical benefits of exercise training of different intensities in type 2 diabetes, and the use of individualized prescription to maximize the health benefits of training.

摘要: 运动对 2 型糖尿病是一种有效的治疗方法,可以在急性期改善身体中的成分和维持血糖稳定,慢性运动可以增强胰岛素的抵抗力和糖化血红蛋白。然而,关于 2 型糖尿病最适当的运动处方尚未建立,由于证据不足,不能确定运动训练的方法最佳的类型、强度、持续时间或频率。此外,运用运动处方的大多是次优的病人。有许多可能的原因,一个可能的因素是一个专家机构进行饮食和药物作用的实验,来研究在他们的治疗指南的运动趋势。出版的治疗指南在运动训练的方法上有所不同,但大多数公司认为,2 型糖尿病患者应该每星期进行 150 分钟的中度甚至剧烈的有氧运动。本方在一般人群中是类似于既定的心血管健康指南。今后在 2 型糖尿病的生理作用和不同强度运动训练的实际效益的调查中,应该根据不同的案例得到最健康的运动处方。

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Frustrations among graduates of athletic training education programs.

运动训练教育项目的毕业生遇到的挫折

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Abstract

CONTEXT: Although previous researchers have begun to identify sources of athletic training student stress, the specific reasons for student frustrations are not yet fully understood. It is important for athletic training administrators to

understand sources of student frustration to provide a supportive learning environment.

OBJECTIVE: To determine the factors that lead to feelings of frustration while completing a professional athletic training education program (ATEP).

DESIGN: Qualitative study.

SETTING: National Athletic Trainers' Association (NATA) accredited postprofessional education program.

PATIENTS OR OTHER PARTICIPANTS: Fourteen successful graduates (12 women, 2 men) of accredited professional undergraduate ATEPs enrolled in an NATA-accredited postprofessional education program.

DATA COLLECTION AND ANALYSIS: We conducted semistructured interviews and analyzed data with a grounded theory approach using open, axial, and selective coding procedures. We negotiated over the coding scheme and performed peer debriefings and member checks to ensure trustworthiness of the results.

RESULTS: Four themes emerged from the data: (1) Athletic training student frustrations appear to stem from the amount of stress involved in completing an ATEP, leading to anxiety and feelings of being overwhelmed. (2) The interactions students have with classmates, faculty, and preceptors can also be a source of frustration for athletic training students. (3) Monotonous clinical experiences often left students feeling disengaged. (4) Students questioned entering the athletic training profession because of the fear of work-life balance problems and low compensation.

CONCLUSIONS: In order to reduce frustration, athletic training education programs should validate students' decisions to pursue athletic training and validate their contributions to the ATEP; provide clinical education experiences with graded autonomy; encourage positive personal interactions between students, faculty, and preceptors; and successfully model the benefits of a career in athletic training.

背景: 尽管先前的研究人员已经开始研究了运动训练专业学生的压力的来源, 然而对于学生所遇到的挫折的明确原因仍没有被透彻的了解。对于运动训练专业的管理人员来说, 了解学生们挫折的来源从而给她们提供一个支持的学习环境是十分重要的。

目的: 判决当完成一项专业的运动训练项目任务的时候导致挫败感的因素。

构思: 定性研究。

环境：国家体育训练师协会认可的后专业教育计划

病人或其他参与人员：14位成功的毕业生（12位为女性，2位为男性）认可的本科专业 ATEPs 就读于一个国家体育训练师协会认可的后专业教育计划。

数据收集与分析：我们实施了半结构化采访，基于有基础性理论的方法，并使用开放、轴向和选择性译码程序进行了数据分析。我们对于译码计划进行了谈判和协商，并进行了同等行业人员的任务报告和成员检查，以确保结果的可信度。

结果：数据中显示出四个主题：（1）运动训练学生的挫折似乎源于完成运动训练计划的压力，而导致的焦虑和沮丧情绪。（2）学生与同班同学，教师和指导老师的互动也可以是运动训练学生的挫折源。（3）单调的临床经验，往往让学生感觉松懈。（4）进入运动训练专业的学生因为怕工作与生活的平衡和低补偿问题提出质疑。

结论：为了减少挫折，运动训练教育计划应该确保学生的决定，去追求运动训练并证实他们对运动训练计划的贡献；提供临床教学经验与分级自治；鼓励学生教师之间积极的个人互动；并成功地展示从事运动训练的好处。

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The effect of exercise on the cardiovascular risk factors constituting the metabolic syndrome: a meta-analysis of controlled trials.

锻炼对代谢并发症在构成心血管危险因素中的影响

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Abstract

BACKGROUND: Numerous meta-analyses have investigated the effect of exercise in different populations and for single cardiovascular risk factors, but none have specifically focused on the metabolic syndrome (MetS) patients and the concomitant effect of exercise on all associated cardiovascular risk factors.

OBJECTIVE: The aim of this article was to perform a systematic review with a meta-analysis of randomized and clinical controlled trials (RCTs, CTs) investigating the effect of exercise on cardiovascular risk factors in patients with the MetS.

METHODS: RCTs and CTs ≥ 4 weeks investigating the effect of exercise in healthy adults with the MetS and published in a peer-reviewed journal up to November 2011 were included. Primary outcome measures were changes in waist circumference (WC), systolic and diastolic blood pressure, high-density lipoprotein cholesterol (HDL-C), triglycerides and fasting plasma glucose. Peak oxygen uptake ([Formula: see text]) was a secondary outcome. Random and fixed-effect models were used for analyses and data are reported as means and 95% confidence intervals (CIs).

RESULTS: Seven trials were included, involving nine study groups and 206 participants (128 in exercise group and 78 in control group). Significant mean reductions in WC -3.4 (95% CI $-4.9, -1.8$) cm, blood pressure -7.1 (95% CI $-9.03, -5.2$)/ -5.2 (95% CI $-6.2, -4.1$) mmHg and a significant mean increase in HDL-C $+0.06$ (95% CI $+0.03, +0.09$) mmol/L were observed after dynamic endurance training. Mean plasma glucose levels -0.31 (95% CI $-0.64, 0.01$; $p = 0.06$) mmol/L and triglycerides -0.05 (95% CI $-0.20, 0.09$; $p = 0.47$) mmol/L remained statistically unaltered. In addition, a significant mean improvement in [Formula: see text] of $+5.9$ (95% CI $+3.03, +8.7$) mL/kg/min or 19.3% was found.

CONCLUSIONS: Our results suggest that dynamic endurance training has a favourable effect on most of the cardiovascular risk factors associated with the MetS. However, in the search for training programmes that optimally improve total cardiovascular risk, further research is warranted, including studies on the effects of resistance training and combined resistance and endurance training.

摘要:

背景: 许多萃取分析调查锻炼的结果在不同的人群中都有着同样的心血管危险因素,但都没有特别注意新陈代谢患者,与所有心血管危险因素的锻炼作用有关。

目的: 这篇文章的目的是完成系统性的评论和萃取分析的随机临床对照实验 (Rcts, Cts), 调查新陈代谢并发症患者的心血管疾病危险因素与锻炼影响的结果。

方法: RCTs 和 CTs 的四周健康成年人的新陈代谢并发症的锻炼的结果的调查, 并被列入 2011 年 11 月公开的同行审阅期刊。主要成果是测试腰围、心脏收缩压与舒张压、血压、高密度脂蛋白胆固醇、甘油三酸脂和空腹血糖的变化。氧摄取量是次要的结果。利用随机和固定的作用模型, 分析和数据报告为平均值 95% 的置信区间。包括七次实验结果, 涉及 9 个试验组和 206 名参与者 (128 人的试验组和 78 人的对照组)。重要的平均值腰围 -3.4 (95%CI $-4.9, -1.8$) cm, 血压 -7.1

(95%CI-9.03, -5.2) /-5.2 (95%CI-6.2, -4.1) mmHg 和一个重要的平均增加高密度脂蛋白胆固醇 0.06 (95%CI0.03, 0.09) mmol/L 的动态耐力训练后的观察。平均血糖水平-0.31 (95%CI-0.64, 0.01, P=0.06) mmol/L 保持统计的不变。另外, 一个重要的平均提高 V-oz 的氧摄取量 5.9 (95%CI3.03, 8.7) 毫升每公斤每分钟或 19.3%。

结论: 我们的研究表明: 好的动态耐力作对大部分的新陈代谢危险因素关联的代谢当量是有影响的。然而, 在寻找训练项目以及最好的改善心血管的危险度方面, 更多的研究是保障, 包括阻力训练和耐力训练的综合性研究。

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Practices of weight regulation among elite athletes in

combat sports: a matter of mental advantage?

格斗运动员的体重控制实践: 关于心理优势的问题?

Authors: Pettersson S, Ekström MP, Berg CM.

作者: 佩德森·S、埃克斯特龙、博格

译者: 王博

Abstract:

CONTEXT:The combination of extensive weight loss and inadequate nutritional strategies used to lose weight rapidly for competition in weight-category sports may negatively affect athletic performance and health.

OBJECTIVE:To explore the reasoning of elite combat-sport athletes about rapid weight loss and regaining of weight before competitions

DESIGN:Qualitative study

SETTING:With grounded theory as a theoretical framework, we employed a cross-examinational approach including interviews, observations, and Internet sources. Sports observations were obtained at competitions and statements by combat-sport athletes were collected on the Internet.

PATIENTS OR OTHER PARTICIPANTS: Participants in the interviews were 14 Swedish national team athletes (9 men, 5 women; age range, 18 to 36 years) in 3 Olympic combat sports (wrestling, judo, and taekwondo)

DATA COLLECTION AND ANALYSIS:Semistructured interviews with 14 athletes from the Swedish national teams in wrestling, judo, and taekwondo

were conducted at a location of each participant's choice. The field observations were conducted at European competitions in these 3 sports. In addition, interviews and statements made by athletes in combat sports were collected on the Internet.

RESULTS: Positive aspects of weight regulation other than gaining physical advantage emerged from the data during the analysis: sport identity, mental diversion, and mental advantage. Together and individually, these categories point toward the positive aspects of weight regulation experienced by the athletes. Practicing weight regulation mediates a self-image of being "a real athlete." Weight regulation is also considered mentally important as a part of the precompetition preparation, serving as a coping strategy by creating a feeling of increased focus and commitment. Moreover, a mental advantage relative to one's opponents can be gained through the practice of weight regulation.

CONCLUSIONS: Weight regulation has mentally important functions extending beyond the common notion that combat-sport athletes reduce their weight merely to gain a physical edge over their opponents

摘要:

背景: 大部分运动员在划分体重级别的比赛中选择减肥, 并且采用能迅速减掉体重但不恰当的营养策略, 这种做法可能会对运动员的比赛表现及身体健康产生负面影响。

目标: 研究杰出的格斗运动员在比赛前快速减肥以及增肥的合理性。

方案: 定向研究

背景: 以基础理论作为理论框架, 我们采用包括面谈, 观察报告以及搜索网络资源的交叉实验方法。根据比赛过程以及网上搜索到的格斗运动员的论述得出运动观察报告。

病人和其他参与者: 面谈采访的参与者是来自瑞士国家队的 14 位运动员 (9 名男运动员, 5 名女运动员, 18 到 36 岁之间), 他们都参加过三次奥运会格斗运动 (包括摔跤, 柔道, 跆拳道)。

数据收集及分析: 对来自瑞典国家队在摔跤, 柔道, 跆拳道领域的 14 位运动员的半结构式采访是基于每一位运动员自己的选择。现场观测在欧洲比赛的这三个项目中进行。另外, 对格斗运动员的采访与其陈述从网络上进行收集。

结果: 区别于获得生理上的优势, 体重控制在数据分析过程中显现出了积极的一面: 运动识别, 注意力转移以及心理优势。总的来讲和个体分析而言, 这些格斗类运动员体验到了体重控制带来的积极因素。实施体重控制使运动员产生一种“真正的运动员”的自我形象。体重控制作为赛前准备的一部分, 被认为在心理上是很重要的。同时体重控制成为催生出注意力集中, 身心投入的应对策略。而且, 通过体重控制的实践产生战胜对手的心理优势。

结论: 体重控制产生的心理上的重要作用远超过人们的共同认知——格斗运动员减轻体重只是为了获得超过对手的身体上的优势。

**Perceived skills and abilities required by athletic trainers
in hospital and clinical management positions: a Delphi
study.**

感知竞技体育教练员的医院临床管理职位:德尔福研究所需的技
能和能力

Author: Hazelbaker CB.

作者:哈泽贝克

译者:张苗 左梦迪

Abstract

CONTEXT: Athletic training has expanded from traditional sport-team settings to varied settings involving active populations. Athletic trainers also use their education and abilities in administration to take on roles of management in hospitals and health care clinics.

OBJECTIVE: To begin to explore the knowledge, skills, and abilities needed in the emerging practice setting of health care management.

DESIGN: Delphi study.

SETTING: Directed surveys.

PATIENTS OR OTHER PARTICIPANTS: Eight athletic trainers working as hospital and health care clinic managers in varied geographic settings.

DATA COLLECTION AND ANALYSIS: Three rounds of directed surveys were used and included (1) a series of demographic questions and 1 focused, open-ended question, (2) 32 statements scored on a 6-point Likert-type scale with no neutral statement, and (3) 10 statements ranked in order of importance for the athletic trainer working as a health care manager.

RESULTS: I grouped the results into 2 categories: leadership skills and management tools.

CONCLUSIONS: According to participants, effective health care managers need a strong understanding of business and management tools along with more interpersonal skills in communication and leadership. The results are consistent with the literature and may be applied in athletic training education programs and by athletic trainers seeking health care management positions.

摘要:

背景: 运动训练不断扩大,传统的运动队中的设置更加广泛,涉及人群更加活跃。竞技体育教练员也可以使用他们的教育和管理能力担任管理医院和卫生保健诊所的角色。

目的: 开始探索健康管理在新兴的管理方面所需的知识,技能和能力。

设计: 德尔福研究

地点: 定向调查。

病人或其他参与者: 在不同地理环境中工作的八位竞技体育教练员及医院和医疗保健诊所经理

数据收集和分析: 三轮定向调查,包括:一、一系列的人口问题和重点的开放式问题,二、三十二份报告中采用六点式李克特式衡量表的调查方式,其中没有中立性报告,三、其中十分报告的排列顺序是根据运动教练经理作为医疗保健工作的重要性所排列。

结果: 分为两类:领导能力和管理能力

结论: 根据参与者的调查显示,有效的医疗保健管理者需要一个强大的业务和管理工具和更多的人际交往能力与沟通能力以及领导的理解。结果与文献报道一致,可应用于运动训练教育计划和竞技体育教练员寻求卫生保健管理职位。

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Theory development in sport management. My experience and other considerations

在体育管理方面的理论发展: 我的经验和其他方面的考虑

Author: Janet S. Fink

作者: 珍妮特·S·芬克

译者: 窦艳超

Abstract: This article is designed to generate thought about the development of theory in sport management. A basic overview of theory and theory development is offered along with the author's thoughts on features necessary for generating strong theoretical contributions. Further, the author provides the strategies she utilizes when engaging in these academic

endeavors. Finally, article concludes with a discussion of potential barriers to the development of theory within the field of sport management.

摘要：本文设计的形成基于体育管理理论的发展。理论基本概述和理论发展为作者提供了思想同时产生强有力的理论贡献以及必要的特点。此外，作者提供了他运用在从事这些学术上的努力策略。最后，文章提出了对体育管理领域内的理论发展的潜在障碍的探讨。

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Theory and theory development in sport management

体育管理的理论与理论发展

Author: George B. Cunningham

作者：乔治 B 坎宁安

译者：何其慧

Abstract: Sport Management Review has been the sport management leader in publishing literature reviews and new theoretical frameworks. Despite these advances, scholars have not critically examined theory and its place in sport management scholarship. The purpose of this scholarly exchange is to address these issues, such that five scholars were invited to discuss how they conceptualize theory, the role of theory in the academia, and the process in which they engage when developing their own theories. This article provides an overview of the topic and introduces the articles.

摘要：体育管理评论杂志已经是已出版的体育管理评论文献和新理论框架中佼佼者。尽管取得了这些进展，学者们还没有批判性的仔细研究理论和它在体育管理上的学术地位。这一学术交流的目的是为了解决这些问题，使得五位学者应邀讨论如何概念化理论、学术界理论的作用和当发展他们自己的理论时他们从事的过程。本文提供了一个概括的主题同时介绍一些论文。

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Measuring season ticket holder satisfaction: Rationale, scale development and longitudinal validation

测试季票持有者满意度：基本原理，规模发展和纵向认证

Authors: Heath McDonald, Adam J Karg, Andrea Vocino

作者：希思·麦克唐纳，亚当·卡格，安德里亚沃奇诺

译者：刘建峰

Abstract: Season tickets are examples of sports subscription products, research into which is very limited. Given the nature of subscription markets, there is sufficient reason to expect that the relationship between service quality, satisfaction and renewal might operate differently from transactional markets. This paper seeks to address this deficiency in the research by developing and verifying a scale that identifies and measures the components of professional sport club season ticket packages that are most influential on buyer satisfaction. Survey data were collected over three consecutive years from season ticket holders (STHs) supporting the same team. Three research phases were undertaken using exploratory and confirmatory factor analysis to develop and refine the scale, and a stage of longitudinal modelling to explore levels of invariance within the scale over multiple years. The result is a 19-item scale measuring overall satisfaction as well as five key constructs by which STHs assess the season ticket package: service, home ground, on-field performance, club administration, and personal involvement. The scale provides a parsimonious and robust measure by which sport teams can identify the most effective way to manage STHs' attitudes towards their subscription products, regardless of fluctuations in on-field performance or playing personnel.

摘要：季票是体育产品订阅的一个实例，但对季票的研究却很有限，给出订阅市场的本质，我们就有足够的理由去相信服务质量、满意度和革新之间的关系可能和交易市场操作不同。这篇文章力图在研究中提出这个缺点，研究通过建立和核实一个范围内的数据提出这个缺点，此数据鉴定和测量专业运动员俱乐部季票的成分。此季票对消费者满意度有最重要的影响。调查数据是从连续三年都支持同一支队伍的季票持有者手中收集的。研究的三个阶段用探究性的因素和确定性的因素分析去建立并改善数据，以及一个纵向模型平台去探究不确定性的等级，这些操作用很多年的数据作样本。研究的结果是一个有 19 个项目的数据组，此数据组通过所有季票持有人的满意度和季票持有人对季票包的评价的五个主要构想来得出一些结论，这五个构想包括：服务，主方赛场，场上表现，俱乐部管理和个人参与。测量数据得出了一个粗略的结论，通过这个结论，运动队可以用最有效的方法去控制季票持有人对他们所订阅的产品的态度，忽略场上表现和运动人员的影响。

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Investing in sport management: The value of good theory

投资体育管理：优秀理论的价值

Author: Alison

作者：艾莉森

译者：刘文文

Abstract: This paper reflects on why and how there should (continue to) be an investment in sport management by investing in the application and development of theory. Good theory does not just describe, it explains. Thus, in a fundamentally applied field like sport management it is important that the body of knowledge is derived from theory-based and theory-building research. It is equally important that practice and student learning is founded on good theory that guides explanation, prediction and effective management of the sport enterprise. The paper focuses particularly on how, as scholars, we can invest in theory through research, whether it is borrowing, adapting, and extending theory from other disciplines, or generating new theory within sport management that is intentionally relevant to the field.

摘要：这篇文章表达为什么和应该怎样（继续）在体育管理事业上投资。通过应用和发展理论上投资，优秀的理论不只是被描述，更是去解释事实。因此，在一个有成效的应用领域，比如体育管理。知识本身是从理论的基础和研究中得到的，这一点很重要。练习以及建立在体育事业进行引导解释，预测和有效管理的优秀理论的基础上是同等重要的。这篇文章重点指出，我们作为学者应如何在通过研究的理论上投资，这是无论是借鉴还是改变，还是从其他学科拓展领域，或者在体育管理中产生新理论，这对于领域是极其特别有关的。

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A personal journey in theorizing in sport management

运动管理理论之我见

Author: Packianathan Chelladurai

译者：石凯会

Abstract: The purpose of this article was to articulate the process of theorizing. For the author theory development begins with a discontent and discomfort with existing formulations on a topic. In drawing from this premise, the author provides an overview of the theory development process he

undertook, highlighting five examples: geographic versus functional centrality, athletic teams as coalitions, defining the field of sport management organizational effectiveness, and leadership.

摘要: 这篇文章的目的是清晰地表达推理理论的过程。对作者来说,理论的建立是以对现实存在的规划感到不满或不适的情况而开始的。在这个前提下,作者提供了一个他本人正在从事的理论发展过程概况为研究对象,强调了这五个案例:地理性对抗实用性,作为联盟的运动团体,有效运动管理领域的定义,和领导才干。

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Analyzing the impact of sport infrastructure on sport participation using geo-coded data: Evidence from multi-level models

运用地理编码数据分析体育基础设施对参与体育运动的影响:证据来源于多层次模式

Authors: Pamela Wicker a, Kirstin Hallmann , Christoph Breuer

作者: 帕梅拉·威克 克里斯汀·霍曼 克里斯托弗·布鲁尔

译者: 王喜悦

Abstract: Sport policies aiming at increasing mass participation and club participation have stressed the importance of sport infrastructure. Previous research has mainly analyzed the influence of individual factors (age, income, etc.) on sport participation. Although a few studies have dealt with the impact of sport facilities on sport participation, some methodological shortcomings can be observed regarding the integration of sport infrastructure into the research design. Oftentimes, subjective measures of infrastructure are employed, leading to biased results, for example inactive people have a worse perception of the actual supply of facilities. In fact it is important to measure the available sport infrastructure objectively using a quantitative approach and integrate it into statistical models. Therefore, the purpose of this study is to analyze the impact of individual and infrastructure variables on sport participation in general and in sport clubs using geo-coded data following a multi-level design. For this purpose, both primary data (individual level) and secondary data (infrastructure level) were collected in the city of Munich, Germany. A telephone survey of the resident population was carried

out (n=11,175) and secondary data on the available sport infrastructure in Munich were collected. Both datasets were geo-coded using Gauss–Krueger coordinates and integrated into multi-level analyses. The multi-level models show that swimming pools are of particular importance for sport participation in general and sport fields for participation in sport clubs. Challenges and implications for a more holistic modeling of sport participation including infrastructure variables are discussed.

摘要：体育政策旨在增加大众参与和俱乐部参与数量，已经强调了体育设施的重要性。先前的研究主要分析了个人因素如年龄、收入等对参与体育运动的影响。虽然一些研究已经处理了体育设施对参与体育运动的影响，但关于综合体育基础设施到研究设计上，我们看到一些方法论的缺点。时常地，采用基础设施的主观设施，导致了偏见的结果，比如不活跃的人对于设施的实际洞察力更差。事实上，客观地使用定量方法衡量可利用的体育基础设施，并使其完整应用到统计模型中，显得很重要。因此，这项研究的目的是为了分析通常来说参与运动的个体和基础设施变量，和在运动俱乐部中使用地理编码数据伴随多层次水平设计的影响。基于此项目的，初级数据（个体水平）和二次数据（基础设施水平）两者均在德国慕尼黑这座城市中收集。我们实施居住人口电话调查（n=11,175），并且在慕尼黑收集了可用的运动基础设施二次数据。两个资料组均为地理编码，采用高斯-克鲁格坐标，并完整应用到多层次分析中。多层次模型表明，游泳池对于参与体育运动尤其重要，运动场地对于参加运动俱乐部也很重要。我们将讨论参加运动包括基础设施变量在内的一个更具整体性的建模形式下的挑战与暗示。

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Cultural diversity in community sport: An ethnographic inquiry of Somali Australians' experiences

团体项目运动中的文化多样性：一项关于索马里裔澳大利亚人经历的人种论调查

Author: Ramón Spaaij

译者：腰洪滔

Abstract: Sport organisations aim to grow the participation of culturally and linguistically diverse communities, including newly arrived people from refugee backgrounds. Drawing on multi-sited ethnographic research conducted by the author at community sport organisations in the multicultural city of Melbourne, this paper examines the key factors that affect the sport participation experiences of Somali Australians. It is shown that interpersonal and structural barriers to sport participation predominate, and that the

significance of these barriers varies according to age, gender and time in Australia. The paper concludes that in order to foster inclusive sporting environments in which people from refugee backgrounds can participate in a safe, comfortable and culturally appropriate way, refugee settlement needs to be understood as a two-way process of mutual accommodation requiring adaptation on the part of both the migrant and the host society.

摘要: 运动团体致力于提高文化与语言多样性交流的参与程度, 这包括那些从难民区新到达这里的人, 在有多元文化的城市墨尔本, 一名在运动团体中的发起者进行了这项多场所的人种论的实验, 根据这项实验, 这个论文测试了那些影响索马里裔澳大利亚人运动参与经历的最为关键的因素。结果显示, 人际障碍和结构障碍在运动参与中是占统治地位的, 而且研究发现这些障碍的重要性在于它是随着年龄、性别和澳大利亚的不同时代而变化的。论文总结说, 为了培养起包容性的体育参与环境, 这种环境指的是从难民区来的人可以用安全、舒适和文化合理表达的方式进行参与, 难民区的定居应当被视为是一种双方向的相互妥协的过程, 这个过程要求移民一方和东道主一方的相互适应。

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Get real: Using engagement with practice to advance theory transfer and production

通过交战练习以提高理论传递和理论产物的真实性

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译者: 朱志强

Abstract: The purpose of this paper is to illustrate that strengthening links with practice through authentic and collaborative instruction, research and professional service, significantly reduces these two gap-enhancing problems and represents an ideal opportunity to apply, test and, perhaps most importantly, generate theory. Authenticity, or connectivity with practice, through the use of practical content as well as interaction, provides a valuable mechanism for enhancing, if not accelerating, knowledge production and transfer. The sport management literature widely supports the merits of experiential learning, as an authentic method of advancing knowledge acquisition. Moreover, while sport academia and sport business may comprise distinct cultures, there is a common purpose for research: an understanding of unique, emerging phenomena. As such, authentic research and learning environments have the potential to yield multiple benefits that include (a) enriching student learning outcomes, (b) fostering healthy

relationships with industry, (c) establishing a mechanism for external funding, (d) serving as a platform for scholarship, and (e) challenging faculty to upgrade instructional methods and content; ultimately enhancing professional competency and connectivity of faculty and students alike, and thus, advancing the discipline.

摘要:之所以写这篇文章，是为了通过可信的指导、合作研究和专业的服务来说明巩固与实践的关系，大大地减少巩固与实践之间令人非常迷惑的问题，提供申请、检验一个理论较好契机，最重要的是去创造一种理论。实践的可靠性和连接性通过实践内容相互影响，如果不加速知识产物和转化就不能提供了一个有价值的机制。体育管理文献作为一个可靠的提高知识的获取方法为经验学习的优点提供了广泛的支持。虽然体育学术界和体育商界可能包含着不同的文化，但研究都有一个共同的目的：对于独特新兴现象的理解。如此一来，有根据的研究和学习环境就有潜力创造出多种有利之处包括：一、使学生的学习成果更丰富；二、培养与工业的良好关系；三、为国外资金建立一个机制；四、为学术提供一个平台；五、激励教职工改良教学方法和教学内容。最终提高教职工和学生的专业能力以及教职工和学生之间的关系，因此而提高训练。

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Clinical Integration and How It Affects Student Retention in Undergraduate Athletic Training Programs

临床一体化以及其如何影响学生保留在大学运动训练项目中

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Abstract:

Context : A better understanding of why students leave an undergraduate athletic training education program (ATEP), as well as why they persist, is critical in determining the future membership of our profession.

Objective : To better understand how clinical experiences affect student retention in undergraduate ATEPs.

Design : Survey-based research using a quantitative and qualitative mixed-methods approach.

Setting : Three-year undergraduate ATEPs across District 4 of the National

Athletic Trainers' Association.

Patients or Other Participants : Seventy-one persistent students and 23 students who left the ATEP prematurely.

Data Collection and Analysis : Data were collected using a modified version of the Athletic Training Education Program Student Retention Questionnaire. Multivariate analysis of variance was performed on the quantitative data, followed by a univariate analysis of variance on any significant findings. The qualitative data were analyzed through inductive content analysis.

Results : A difference was identified between the persister and dropout groups (Pillai trace = 0.42, $F_{1,92} = 12.95$, $P = .01$). The follow-up analysis of variance revealed that the persister and dropout groups differed on the anticipatory factors ($F_{1,92} = 4.29$, $P = .04$), clinical integration ($F_{1,92} = 6.99$, $P = .01$), and motivation ($F_{1,92} = 43.12$, $P = .01$) scales. Several themes emerged in the qualitative data, including networks of support, authentic experiential learning, role identity, time commitment, and major or career change.

Conclusions : A perceived difference exists in how athletic training students are integrated into their clinical experiences between those students who leave an ATEP and those who stay. Educators may improve retention by emphasizing authentic experiential learning opportunities rather than hours worked, by allowing students to take on more responsibility, and by facilitating networks of support within clinical education experiences.

摘要:

背景:更好地理解为什么本科学生放弃运动训练教育计划,以及他们为什么坚持,这对未来确定专业人员至关重要。

目的:为了更好地理解临床实验对本科学生坚持训练计划的影响。

设计:基于调查研究,采用定量和定性的混合的方法。

环境:第四区域国家运动训练师协会,本科大学生三年运动计划的坚持情况。

患者或其他参与者:包括对训练计划持之以恒的71名学生和23名半途而废的学生。

数据收集和分析:数据是通过收集和整理运动训练教育计划的调查问卷得到的。经过多元方差进行定量的数据分析,然后由单因素方差分析任何因素的异常表现。定性数据分析是通过归纳的方法得到的。

结果:在持久组和退出组的比较中发现明显差别(皮拉伊跟踪= 0.42, $F_{1,92} = 12.95$, $P = 0.01$)。后续方差分析表明,不同的持久组和退出组在预期方面($F_{1,92} = 4.29$, $P = 0.04$),综合临床($F_{1,92} = 6.99$, $P = 0.01$),动机($F_{1,92} = 43.12$, $P = 0.01$)尺度。几个不同条件在定性数据分析中凸现出来,其中包括关系网络的支持,正宗的体验式学习,角色的认定,投入的时间,专业或者职业变更。

结论:实验表明坚持运动训练计划的学生和那些不坚持的学生,在临床试验上存在微小差异。教师可以通过保留原汁原味的体验式学习机会提高运动训练计划的持久性,而并非利用增加工作时间。让学生承担更多的责任,并在临床教育实验中增加关系网络上的支持。

From: JOURNAL ATHLETIC TRAINING 2013. VOL. 48 NO. 1

Anterior Knee Stiffness Changes in Laxity “Responders” Versus “Nonresponders” Across the Menstrual Cycle

有反映者与无反映者在月经周期的前膝松弛僵硬变化

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译者: 张然 张蕴卓

Abstract:

Context : Although changes in anterior knee laxity (AKL) across the menstrual cycle have been reported, the effects of cyclic knee laxity changes on the underlying characteristics of the load-displacement (stiffness) curve generated during anterior loading of the tibia relative to the femur are relatively unknown.

Objective : To describe the anterior load-displacement curve during anterior loading of the tibia relative to the femur using incremental stiffnesses and to compare underlying stiffness measures between days of the cycle when AKL is at its minimum and maximum.

Design : Descriptive laboratory study.

Setting : University laboratory.

Patients or Other Participants : Fifty-seven recreationally active women.

Main Outcome Measure(s) : Anterior knee laxity and 6 incremental stiffness measures (N/mm) were obtained with an instrumented knee arthrometer on days 1 - 6 of menses and days 0 - 8 postovulation during 2 consecutive menstrual cycles. Participants were then classified in tertiles based on the maximum change (difference between maximum and minimum) in AKL, and incremental stiffness was compared on days of minimum versus maximum laxity between the lowest (<1.24 mm cyclic laxity change = laxity “nonresponders” [n = 19]) and highest (>1.75 mm cyclic laxity change = laxity “responders” [n = 19]) tertiles.

Results : All participants displayed decreasing stiffness initially (0 - 20 N > 20 - 40 N and 40 - 60 N), followed by incrementally increasing stiffness (40 - 60 N < 60 - 80 N < 80 - 100 N < 100 - 130 N) ($P \leq .05$). Responders demonstrated decreased stiffness between the days of minimum and maximum AKL at the 10 - 130-N increment versus the 0 - 20-N and 20 - 40-N increments ($P \leq .05$); nonresponders had no change in stiffness.

Conclusions : Participants who experienced larger magnitudes of changes in AKL also experienced decreases in terminal (100 - 130 N) stiffness during

anterior knee joint loading. Decreases in incremental stiffness at higher anterior directed loads may adversely affect passive restraint systems, resulting in altered arthrokinematics during functional activity.

摘要

背景: 虽然在膝前松弛变化 (AKL) 在整个月经周期已被报道, 循环的膝关节松弛变化对荷载位移基本特性的影响 (刚度) 相对于胫骨的股骨前加载过程中产生的曲线是相对未知。

目的: 描述相对于胫骨的股骨前使用增量刚度在装载前的载荷-位移曲线和比较基础刚度的措施时, 该循环是在它的最大和最小之间。

实验设计: 描述性研究。

设备: 大学实验室。

患者或其他参与者: 57 岁娱乐性活跃的妇女。

主要测定项目: 通过关节动度测量仪测量一到六天的月经期以及在两次月经期中间的 0 到 8 天的排卵期的情况, 获得前膝的松弛度和 6 个增量的 (单位: 牛顿/毫米) 前膝僵硬数据。以前膝松弛度的最大变化 (最小与最大间的不同) 为依据, 参与者被分为有三组, 且在僵硬度最低的组 (在 19 牛顿的力时, 松弛度的周期变化 < 1.24 毫米者的松弛度无反应者) 和僵硬度最高的组 (在 19 牛顿的力时, 松弛度的周期变化 > 1.75 毫米者的松弛度有反应者) 之间, 比较最松弛的日子和最不松弛的日子前膝的僵硬度。

结果: 所有参与者在一开始表示为前膝僵硬度降低 (用 0 至 20 牛顿的力比用 20 至 40 牛顿或 40 至 60 牛顿的力僵硬), 接下来会表现为前膝僵硬度渐增 (在压力小于等于 .05 的情况下, 用 40 至 60 牛顿、60 至 80 牛顿、80 至 100 牛顿、100 至 130 牛顿时, 用力越大越僵硬)。在前膝松弛度最低和前膝松弛度最高之间的时间内, 在压力小于等于 .05 的情况下, 在渐增的 10 至 130 牛顿的力对渐增 0 至 20 牛顿、20 至 40 牛顿时, 有反应者证明了渐减的前膝僵硬度; 无反应者僵硬度没有变化。

结论: 前膝松弛度变化更大的参与者在在前膝用力的过程中最后 (用 100 到 130 牛顿大的力) 也会感到前膝松弛度下降。在更高的前向负荷时, 僵硬加强程度的减弱可能对被动约束系统产生影响, 从而导致功能性活动中关节运动学的改变。

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Does phototherapy enhance skeletal muscle contractile function and postexercise recovery? A systematic review.

光疗是否能增强骨骼肌肉收缩功能和促进高浓度恢复?

----- 一种系统的评论

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译者: 周芳菲、王朋力

Abstract:

CONTEXT: Recently, researchers have shown that phototherapy administered to skeletal muscle immediately before resistance exercise can enhance contractile function, prevent exercise-induced cell damage, and improve postexercise recovery of strength and function.

OBJECTIVE: To critically evaluate original research addressing the ability of phototherapeutic devices, such as lasers and light-emitting diodes (LEDs), to enhance skeletal muscle contractile function, reduce exercise-induced muscle fatigue, and facilitate postexercise recovery.

STUDY SELECTION: Eligible studies had to be original research published in English as full papers, involve human participants, and receive a minimum score of 7 out of 10 on the Physiotherapy Evidence Database (PEDro) scale.

DATA EXTRACTION: Data of interest included elapsed time to fatigue, total number of repetitions to fatigue, total work performed, maximal voluntary isometric contraction (strength), electromyographic activity, and postexercise biomarker levels. We recorded the PEDro scores, beam characteristics, and treatment variables and calculated the therapeutic outcomes and effect sizes for the data sets.

DATA SYNTHESIS: In total, 12 randomized controlled trials met the inclusion criteria. However, we excluded data from 2 studies, leaving 32 data sets from 10 studies. Twenty-four of the 32 data sets contained differences between active phototherapy and sham (placebo-control) treatment conditions for the various outcome measures. Exposing skeletal muscle to single-diode and multidiode laser or multidiode LED therapy was shown to positively affect physical performance by delaying the onset of fatigue, reducing the fatigue response, improving postexercise recovery, and protecting cells from exercise-induced damage.

CONCLUSIONS: Phototherapy administered before resistance exercise consistently has been found to provide ergogenic and prophylactic benefits to skeletal muscle.

上下文: 最近, 研究人员表明管理到骨骼肌立即在抵抗运动可以增强收缩功能, 预防运动诱发的细胞损伤, 改善运动后的强度与功能。

目标: 审慎评估原始研究解决问题的光疗设备, 如激光器和发光二极管 (Led), 以加强骨骼肌收缩功能, 减少运动性肌肉疲劳, 并促进运动后的恢复。

研究选择: 研究原始发表在英语作为完整的论文, 涉及人类参与者, 并接收十分之七的理疗证据数据库 (佩德罗) 规模最低分数。

数据提取: 可参考的数据包括对疲劳的消耗的时间、总的重复次数、总的执行量以及对强度的最大等长收缩、肌电图活动和高浓度生物标记物水平重复的总数量。我们记录了佩德罗分数、光束特性和处理变量和计算的治疗成果和作用大小的数据集。

数据合成: 据统计, 有 12 项随机对照的试验符合标准。然而, 我们排除实验二的数据, 以及实验十中的 32 个数据。32 组数据中有 24 组所载的数据集之间的差异积极光疗和深水 (安慰剂控制) 治疗条件的结果的各种措施。揭露骨骼肌的单二极管和激光或 LED 治疗表明是对物理性能产生积极影响的推迟疲劳发病、减

少疲劳反应、改善下运动后的恢复和保护细胞免受运动损伤。

结论：光疗可促进运动骨骼肌的复合并且是一种预防骨骼肌的断裂的方式。

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文章来源：《运动训练杂志》2013年 第48卷 第1期

Anterior glenohumeral laxity and stiffness after a shoulder-strengthening program in collegiate cheerleaders.

大学啦啦队员在做完伸展运动后，前部盂肱韧带是处于放松还是
僵硬状态

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作者：劳奈·KG、梅茨·B、托马斯·DQ

译者：宋世存，李梦璇

Abstract

CONTEXT: Approximately 62% of all cheerleaders sustain some type of orthopaedic injury during their cheerleading careers. Furthermore, the occurrence of such injuries has led to inquiry regarding optimal prevention techniques. One possible cause of these injuries may be related to inadequate conditioning in cheerleaders.

OBJECTIVE: To determine whether a strength and conditioning program produces quantifiable improvements in anterior glenohumeral (GH) laxity and stiffness.

DESIGN: Descriptive laboratory study. Setting: University laboratory.

PATIENTS OR OTHER PARTICIPANTS: A sample of 41 collegiate cheerleaders (24 experimental and 17 control participants) volunteered. No participants had a recent history (in the past 6 months) of upper extremity injury or any history of upper extremity surgery.

INTERVENTION(S): The experimental group completed a 6-week strength and conditioning program between the pretest and posttest measurements; the control group did not perform any strength training between tests.

MAIN OUTCOME MEASURE(S): We measured anterior GH laxity and stiffness with an instrumented arthrometer. We conducted a group \times time analysis of variance with repeated measures on time ($P < .05$) to determine differences between groups.

RESULTS: A significant interaction was demonstrated, with the control group

having more anterior GH laxity at the posttest session than the strengthening group ($P = .03$, partial $\eta^2 = 0.11$). However, no main effect for time ($P = .92$) or group ($P = .97$) was observed. In another significant interaction, the control group had less anterior GH stiffness at the posttest session than the strengthening group ($P = .03$, partial $\eta^2 = 0.12$). Main effects for time ($P = .02$) and group ($P = .004$) were also significant.

CONCLUSIONS: Cheerleaders who participate in a shoulder-strengthening program developed less anterior GH laxity and more stiffness than cheerleaders in the control group.

摘要

背景: 大约 62% 的啦啦队员在他们职业生涯期间忍受着各种形式的骨伤, 除此之外, 对这些骨伤进行的一系列调查被认为是最理想的预防方法, 其中一个造成伤害的原因可能与啦啦队员的不适当运动有关。

目的: 为了证明力量训练项目在前孟肱韧带的松张中产生了量化的改进。

方案: 进行分类的实验室研究。

组织: 大学实验室

患者与参加者: 41 个啦啦队员作为志愿者进行抽样调查 (其中 21 个是有这方面经历的, 还有 17 个是对照组)。没有一个参与者在近来 6 个月中有前端孟肱韧带受伤或做过手术的病史。

干预: 有经历的那组在预先测验和后续测试中完成了 6 周的力量训练, 而对照组在这两次测验中没有进行力量训练。

主要观察指标: 我们用一个关节动度计检测了前孟肱韧带的张弛和僵硬程度, 并进行了一个组乘以时间的反复测量, 并分析其时间偏差来确定不同群体间的差异。

结果: 实验证明了一个显著的影响, 对照组比加强训练的组的孟肱韧带在前期的测验中更松弛。然而, 对于时间与组别没有主要的影响被研究出来。另外一个显著的影响是, 对照组比训练组在后期的测验中前孟肱韧带的僵硬程度小。对时间与组别的主要影响也是值得注意的。

结论: 啦啦队的参加者在进行力量锻炼后前孟肱韧带的松弛比对照组小, 而前孟肱韧带的坚硬程度比对照组大。

From: JOURNAL OF ATHLETIC TRAINING Vol. 48, No. 1

Distal Biceps Tendon Repair: An Analysis of Timing of Surgery on Outcomes

末端肱二头肌腱修复——

一份关于测定外科效果时间的分析报告

Authors: Anakwenze OA, Baldwin K, Abboud JA

作者: 阿那文斯·OA、鲍尔温·K、阿布德·JA

译者: 张恩博、宋佳远

Context: Surgical repair of the ruptured distal biceps brachii tendon is an

effective treatment in injured patients. Timing of surgery is considered an important factor when managing these patients.

Objective: To compare our outcomes after distal biceps tendon acute (at 4 weeks or less) or chronic (greater than 4 weeks) repair.

Design: Cohort study.

Patients or Other Participants: Of 18 patients in a tertiary practice who underwent distal biceps repair, 12 and 6 underwent acute or chronic repair, respectively. The average durations from injury to surgery were 15.3 (range, 9 to 25) and 50.1 (range, 29 to 75) days for the acute and chronic groups, respectively.

Intervention(s): Distal biceps tendon repair.

Main Outcome Measure(s): Disabilities of the Arm, Shoulder and Hand (DASH) scoring, range of motion, and clinical and radiographic complications.

Results: No differences were noted between the groups in DASH scoring or range of motion. No complications occurred, and radiographic outcomes were satisfactory, without evidence of heterotopic ossification in any patients.

Conclusions: Secure repair of a distal biceps tendon injury may yield similar results, whether it is performed in the acute or chronic setting.

摘要:

背景: 对于在车祸等意外事故中受伤的病人来说,通过外科手术来修复断裂的肌肉肌腱是一种有效的治疗手段。当为这些病人做此种手术,时间被公认为一项重要的因素。

目的: 对比总时间短(4周或少于4周)和时间长(远大于4周)的肌肉肌腱手术的治疗效果。

总监制: Cohort 研究所

病人或其他参与者: 在医生第三期业绩中,18名接受肌肉肌腱手术的病人。其中12名接受急性修复手术,6名接受慢性修复手术。急性修复手术和慢性修复手术组的平均用时分别为15.3天(时间范围9-25天)和50.1天(时间范围29-75天)

预测指标: 受伤胳膊、肩膀、手猛烈运动的疼痛和活动的范围、临床出现的X光线并发症。

结果: 在这两组病人中,术后,受伤部位猛烈运动时带来的疼痛程度和所能旋转的角度这两方面,没显现出不同。且都无并发症,在每个病人中没发现异位移植后的骨化显现,故手术中可以X光线照射。

结论: 不论是肌肉筋骨手术是通过急性还是慢性进行,安全的修复手术可能产生相似的效果,

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文章来源:《运动训练杂志》2013年第48卷第1期

Knee Proprioception and Strength and Landing Kinematics During a Single-Leg Stop-Jump Task

单腿跳停任务期间膝关节本体感觉和运动强度以及着陆

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斯科特·M·莱法特

译者：吴佩珍 赵丹萍

Abstract:

Context : The importance of the sensorimotor system in maintaining a stable knee joint has been recognized. As individual entities, knee-joint proprioception, landing kinematics, and knee muscles play important roles in functional joint stability. Preventing knee injuries during dynamic tasks requires accurate proprioceptive information and adequate muscular strength. Few investigators have evaluated the relationship between knee proprioception and strength and landing kinematics.

Objective : To examine the relationship between knee proprioception and strength and landing kinematics.

Design : Cross-sectional study.

Setting : University research laboratory.

Patients or Other Participants : Fifty physically active men (age = 26.4 ± 5.8 years, height = 176.5 ± 8.0 cm, mass = 79.8 ± 16.6 kg).

Intervention(s) : Three tests were performed. Knee conscious proprioception was evaluated via threshold to detect passive motion (TTDPM). Knee strength was evaluated with a dynamometer. A 3-dimensional biomechanical analysis of a single-legged stop-jump task was used to calculate initial contact (IC) knee-flexion angle and knee-flexion excursion.

Main Outcome Measure(s) : The TTDPM toward knee flexion and extension, peak knee flexion and extension torque, and IC knee-flexion angle and knee flexion excursion. Linear correlation and stepwise multiple linear regression analyses were used to evaluate the relationships of both proprioception and strength against landing kinematics. The α level was set a priori at .05.

Results : Enhanced TTDPM and greater knee strength were positively correlated with greater IC knee-flexion angle (r range = 0.281–0.479, P range = .001–.048). The regression analysis revealed that 27.4% of the variance in IC knee-flexion angle could be accounted for by knee-flexion peak torque and TTDPM toward flexion ($P = .001$).

Conclusions : The current research highlighted the relationship between knee proprioception and strength and landing kinematics. Individuals with enhanced proprioception and muscular strength had better control of IC knee-flexion angle during a dynamic task.

摘要:

环境: 感觉运动系统在维持膝关节灵活性上具有重要性。作为个体存在, 膝关节个体感觉, 着陆运动学和膝关节肌肉在关节的稳定性上扮演者重要角色。动态任务期间预防膝关节受伤需要准确的本体感受的信息和适当的肌肉力量。一些调查者已经评估了膝关节本体感觉、力量和着陆运动学间的关系。

目标: 测试膝关节本体感受、力量和着陆运动学间的关系

设计: 现状研究

地点: 大学研究实验室

病人或其他参加者: 50名身体活跃的男性(年龄=26.4±5.8岁, 身高=176.5±8.0厘米, 体重=79.8±16.6千克)。

干预措施: 做三次测试。膝关节的本体感受通过被动活动观察阈值来预估。膝关节力量通过测力计估计。单腿停跳任务的三维生物力学分析用于计算膝关节弯曲的角度与偏离情况的初步联系

背景: 感觉运动系统的维持一个稳定的膝关节已经认识到的重要性。作为单独的实体, 膝关节本体感觉, 着陆运动学, 膝关节稳定性和肌肉功能起着重要的作用。预防膝关节损伤过程中的动态任务需要准确的本体感觉信息和适当的肌肉力量。一些研究人员评估之间的关系的膝关节本体感觉的力量和着陆运动学。

目的: 研究之间的关系, 膝关节本体感觉的力量和着陆运动学。

设计: 横断面研究。

设置: 大学研究实验室。

患者或其他参与者: 五十名身体活动的男性(年龄= 26.4±5.8年, 高度为176.5±8厘米, 质量= 79.8±16.6公斤)。

干预: 实施三种测试。评估通过阈值检测被动运动是膝关节本体感觉意识(ttdpm)。用测力计进行膝关节的力量。一种三维生物力学分析单腿站跳任务被用来计算初始接触(IC)膝关节屈曲角度和膝关节屈曲游览。

主要观察指标: 测试(S)的 ttdpm 对膝关节屈伸膝关节屈伸, 峰值扭矩, 和 IC 的膝关节屈曲角度和膝关节屈曲游览。线性相关及多元逐步线性回归分析被用来评估的本体感觉和力量对着陆运动学关系。该 α 级别设置为 05。

结果: 增强 ttdpm 和更大的膝关节的强度与更大的集成电路的膝关节屈曲角度呈正相关 ($r = 0.281$ - 范围 0.479, $P =$ - 范围.001.048)。回归分析表明, 在 IC 的膝关节屈曲角度 27.4%的变异可以膝关节屈肌峰力矩和 ttdpm 占对屈 ($P = .001$)。

结论: 目前的研究显示膝关节本体感觉和关系强度和着陆运动学。具有增强的本体感觉和肌力个体的动态任务时有更好的控制 IC 的膝关节屈曲角度。

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