355 VITAMIN D STATUS AND MUSCLE INJURY RISK IN ELITE MALE FOOTBALL PLAYERS OVER 3 SEASONS

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Background Vitamin D has a role in skeletal muscle function and metabolism, however, its influence on muscle injury risk remains unclear.
Objective To evaluate the association between Vitamin D status and muscle injury risk.
Design Prospective cohort study.
Setting Elite male football team from Spanish LaLiga.
Participants 41 players were prospectively followed from 2016–2017 to 2018–2019.
Assessment of Risk Factors Injuries and exposure time were recorded by the team doctor following the FIFA consensus. Blood analyses were performed in 4 different season periods (July, October, January and May).
Main Outcome Measurements Serum 25-hydroxyvitamin D levels were compared between periods using Student's T-test. The association of Vitamin D with 56 muscle injuries requiring 4 or more days of absence was investigated using a Cox-frailty model. The influence of days of absence due to all injuries on between-period changes in Vitamin D was assessed using linear mixed models.
Results Vitamin D levels were highest in July (mean±SD; 48.1 ±9.9 ng/ml, $p<0.001$ vs. other periods), and lowest in January (27.3±7.9 ng/ml, $p<0.001$). There were no differences between October (37.3±8.3 ng/ml) and May (34.5±10.7 ng/ml, $p=0.89$). There was no association between continuous Vitamin D levels and muscle injuries adjusting for season period [hazard ratio=1.01, 95% confidence interval (CI) =0.97–1.05, $p=0.66$]. Players in the lowest period-specific quartile, i.e. with the lowest vitamin D levels, had a 2.29 times lower risk of injury (95% CI=0.97–5.41, $p=0.06$, 1.30 muscle injuries/1000 h) compared with players in the middle (3.24/1000 h) and highest (2.87/1000 h) quartiles combined. Days of absence were negatively associated with changes in Vitamin D levels after adjusting for season period (B=-0.06, 95% CI=-0.13–0.01, $p=0.06$).
Conclusions The association of Vitamin D status with muscle injuries should be further explored as studies are contradictory. Seasonal variations and being injured should be considered when supplementing with Vitamin D.

356 ABSTRACT WITHDRAWN

357 CAN IBUPROFEN PREVENT ACUTE MOUNTAIN SICKNESS IN MODERATE ALTITUDE?

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Background Anyone traveling to a high altitude is at risk of developing acute mountain sickness (AMS). The rate of AMS among tourist population to moderate altitudes in USA was 25%, at first 12h.
Objective To understand if ibuprofen can be used to prevent AMS in athletes.
Design Healthy adult athletes from Brazilian Team received ibuprofen 600 mg, once, 6h before ascent to moderate altitude. Questionnaires were recorded 12h and 24h after ascent. Outcome measures were incidence and severity of acute mountain sickness as calculated on the Lake Louise Questionnaire (LLQ) score. Presence of AMS sickness was defined by a LLQ score of greater than 3 in the presence of a headache.
Setting Healthy adult athletes from the Brazilian Team who participated in South American Games, 2018.
Patients (or Participants) 104 adult athletes from different modalities.
Interventions (or Assessment of Risk Factors) Participants received ibuprofen 600 mg, once, 6 hours before ascent to Cochabamba, before South American Games, 2018.
Main Outcome Measurements Because of possibility of gravity of symptoms, non-steroidal anti-inflammatory drugs, acetazolamide, dexamethasone and other drugs have been studied for the prevention of AMS. However, athletes cannot use some drugs because of the effect of doping, as diuretics and corticosteroids. So, it is important to understand if NSAIDs can prevent AMS.
Results 12 hours after ascent, 17,3% of athletes had a diagnosis of AMS (94% was a mild and 6%, severe), and after 24h, 35,6% (83% was a mild and 17%, severe). Main symptom at 12h after ascent was headache and second was fatigue and/or weakness. After 24h, main symptom was fatigue and/or weakness and second was sleep disorders.
Conclusions Based on our research ibuprofen seems efficacious for the prevention of AMS in elite athletes, occurring during first 12 hours after ascent compared with health general tourist population and may therefore represent an alternative for preventing AMS.

358 SELF-MEDICATION IN FITNESS CENTERS

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Background Self-administration of medicines or dietary supplements without any physician's advice appears to be more frequently practiced by amateur athletes.
Objective The aim is to assess the prevalence of self-medication among amateur athletes who visit fitness centers and to identify the main factors influencing the self-medication. We postulate that the practice of self-medication among athletes attending fitness centers is high.
Design Cross-sectional study. Data was collected by an anonymous self-administrated questionnaire.
Setting The study was made in collaboration with 11 fitness centers in Liège (Belgium).
Patients (or Participants) Our final sample was composed of 338 amateur athletes.
Interventions (or Assessment of Risk Factors) We assessed the prevalence of self-medication based on the sex, age, BMI, socioeconomic status, health status, duration of club