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Geographic Disparity Of Female Athlete Triad Awareness And Access To Resources In The NCAA
Anna G. Warner1, Katherine H. Rizzzone2, Robert D. Chetlin3, Scott Davis4, Timothy Harvey5, Paul M. Gordon, FACSM6. 1University of Rochester Medical Center, Rochester, NY. 2Mercyhurst University, Erie, PA. 3Marshall University, Huntington, WV. (Sponsor: Paul Gordon, FACSM)

Email: anna_warner1@baylor.edu

(No relationships reported)

The Female Athlete Triad is a pervasive, multifactorial morbidity among college athletes. The geographic disparity of female athlete triad awareness and access to resources in NCAA is unknown.

PURPOSE: To determine geographic disparities in awareness of Triad components and resource access in the National Collegiate Athletic Association (NCAA).

METHODS: Division I-III NCAA compliance officers were sent an email containing a request to disseminate a web-based survey to cross country coaches in their respective conferences. The web-linked instrument included: a study synopsis; an informed consent statement, and; the IRB-approved survey tool. Respondents were grouped geographically based upon conference headquarters location, regions included: Northeast, Midwest, South, and West. Statistical analysis, using JMP software, included frequency distributions and chi-square tests for categorical association.

RESULTS: Coaches (n = 143; age = 40.7 ± 11.9 yrs; coaching experience = 14.1 ± 10.3 years) from 45 conferences participated. Location impacted coaches’ awareness of the term “female athlete triad” (p = 0.0183), which was highest in the West (90%), and; lowest in the South (74%). Geography did not influence Triad component recognition (p = 0.3907) (i.e. low energy availability, amenorrhea, low bone mineral density), however, only 54% of coaches correctly identified all Triad components. Coaches who had Triad awareness were more likely to possess understanding that menstrual irregularities are not a normal result of exercise (p = <0.001). No relationship was identified between location and access to body compositional resources, respectively. Western cross-country athletes (p = 0.0276) had the highest access to sport psychologists (50%); lowest access was in the Midwest (20%).

CONCLUSIONS: Triad awareness and geographic resource disparities exist: Western coaches have a higher level of Triad awareness and superior access to psychological counseling, whereas; the South and Midwest had the lowest, respectively. Greater uniform access to resources amongst NCAA schools, regardless of geographic region, may positively impact Triad prevalence and outcomes.

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Refinement Of Breathing Reserve Estimates In Fit Individuals
Garrett Loomer, James Sawalla Guseh, Emily Planeau, Aaron Baggish, FACSM. Massachusetts General Hospital, Boston, MA.

(No relationships reported)

Breathing reserve as a cardiopulmonary exercise test metric has been used to ascertain a pulmonary mechanical limit to exercise. In athletes, breathing reserve estimates are often found to be abnormal (<10% or negative) and are typically attributed to enhanced effort and a desire to achieve peak performance.

PURPOSE: The purpose of this study was to determine how to accurately measure breathing reserve in fit individuals, like athletes, during a cardiopulmonary exercise test (CPET).

METHODS: Using prospectively collected information, CPET data from over 1,200 patients was analyzed to refine breathing reserve estimates in fit individuals. Fit individuals were defined as having a peak oxygen consumption (VO2peak) greater than 120% predicted based on normative data. CPET results of 680 fit individuals (VO2 >120%) were compared to findings from the general population (PF <120%)

RESULTS: A third of fit individuals (33%) are labeled with abnormal breathing reserve without overt lung disease as compared to the general population (4.6%). This finding is likely due to the fact that fit individuals achieve a significantly greater ventilatory rate with average respiratory rates of 50 b/min as compared to 38 b/min in the general population (p <0.0001).

CONCLUSION: The results demonstrate that current algorithms used to predict exercise breathing reserve need to be refined to distinguish health from disease in fit individuals.

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Using EVH Challenges To Objectively Monitor The Long Term Management Of Elite Swimmers With EIB
John W. Dickinson1, William Gowers1, Guy Evans2, Jane Carre1, Matt Ashman1, Anna Jackson1, James Hopker1, 1University of Kent, Chatham Maritime, United Kingdom. 2GB Swimming, Loughborough, United Kingdom. (Sponsor: Dr. James Hull, FACSM)

Email: J.W.Dickinson@kent.ac.uk

(No relationships reported)

Ecciputal voluntary hyperpnoea (EVH) challenges can provide objective evidence to support the diagnosis and long term management of athletes exercise-induced-bronchoconstriction (EIB). However, the repeatability of the EVH challenge has been questioned.

PURPOSE: To investigate the use of EVH challenges to objectively monitor the long-term management of elite swimmers with EIB.

METHODS: Twenty-seven elite-international swimmers (14 males, 13 females; 20±2yrs) completed EVH challenges, separated by a calendar year. Following initial assessment, EIB positive athletes were prescribed appropriate inhaler therapy in accordance to greatest fall in FEV1; (FEV1max) and asked to maintain therapy throughout the year. Athletes were grouped dependent on adherence to inhaler therapy (Non-adherent = EVH1 – EVH2 = -15; Adherent = EVHmax – EVH2 = 12). Differences between screening visits were analysed using paired sample t-tests and presented as mean ± SD. The test-retest repeatability between EVH1 and EVH2 was expressed as mean bias with 95% limits of agreement (LOA) and Pearson’s correlation coefficient (r).

RESULTS: FEV1max was significantly lower in EVH1 (-11.8 ± 3.8%) than EVH2max (-24.0 ± 11.3%; p=0.01). Baseline FEV1 was greater in EVHmax than EVH2max (p=0.04). EVH -->EVH2 FEV1max did not differ significantly between screening visits (EVH1 = -13.1 ± 4.6% and EVH2 = -12.3 ± 5.6%; p=0.32). There was agreement between FEV1max in EVH1 – EVH2 (mean bias 0.6%, 95% LOA: -5.9; 7.1), and significant strong positive correlation (r =0.813, p<0.001).

CONCLUSION: Elite swimmers with EIB adherent to inhaler therapy increased baseline FEV1 and reduced FEV1 fall post-EVH. The EVH challenge demonstrated acceptable long-term test-retest repeatability in elite swimmers. EVH challenge is clinically useful to assess elite swimmers for EIB, and as a follow-up assessment to evaluate the effectiveness of inhaler therapy.

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Sexual Behaviors And Birth Control Use In Collegiate Student-athletes
Madison Hauge, Zachary K. Winkelmann, Nancy A. Uriegas, Toni M. Torres-McGehee. University of South Carolina, Columbia, SC.

Email: mhauge@email.sc.edu

(No relationships reported)

In 2017, the Center for Disease Control reported 2.3 million new cases of sexually transmitted diseases in the United States. Specifically, in sports medicine, collegiate student-athletes (SA) are considered an at-risk population due to the risk-taking behaviors associated with athletics.

PURPOSE: To describe birth control (BC) methods used by female and male collegiate SA.