1- The effects of 14-week betaine supplementation on endocrine markers, body composition and anthropometrics in professional youth soccer players: a double blind, randomized, placebo-controlled trial

By:

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Abstract

Objective Betaine supplementation may enhance body composition outcomes when supplemented chronically during an exercise program. The purpose of this study was to evaluate the effect of betaine supplementation on development-related hormones, body composition, and anthropometrics in professional youth soccer players during a competitive season. Methods Twenty-nine players (age, 15.45 +/- 0.25 years) were matched based upon position and then randomly assigned to a betaine group (2 g/day; n = 14, BG) or placebo group (PG, n = 15). All subjects participated in team practices, conditioning, and games. If a subject did not participate in a game, a conditioning protocol was used to ensure workload was standardized throughout the 14-week season. Growth hormone (GH), insulin-like growth factor-1 (IGF-1), testosterone, cortisol, height, weight, and body composition were assessed at pre-season (P1), mid-season (P2) and post-season (P3). Anthropometric variables were also measured following a one-year follow-up (F). Results Significant (p < 0.05) group x time interactions were found for testosterone and testosterone to cortisol ratio (T/C). Both variables were greater in BG at P2 and P3 compared to P1,

however, the testosterone was less in the PG at P3 compared to P2. There was no significant group by time interactions for GH, IGF-1, lean body mass, or body fat. There was a significant ($p < 0.05$) group x time interaction in height and weight at F, with the greater increases in BG compared to PG. Conclusion Betaine supplementation increased testosterone levels and T/C ratio in youth professional soccer players during a competitive season. Betaine supplementation had no negative effects on growth (height and weight) and may attenuate reductions in testosterone due to intense training during puberty.

Keywords

Author Keywords

Nonfunctional over-reachingYouth sportsLean massFootballTestosterone

2- A comparison of measured versus self-reported anthropometrics for assessing obesity in adults: a literature review

By:

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Abstract

Aims: Up-to-date information on the accuracy between different anthropometric data collection methods is vital for the reliability of anthropometric data. A previous review on this matter was conducted a decade ago. Our aim was to conduct a literature review on the accuracy of self-reported height, weight, and body mass index (BMI) against measured values for assessing obesity in adults. To obtain an overview of the present situation, we included studies published after the previous review. Differences according to sex, BMI groups, and continents were also assessed. Methods: Studies published between January 2006 and April 2017 were identified from a literature search on PubMed. Results: Our search retrieved 62 publications on adult populations that showed a tendency for self-reported height to be overestimated and weight to be underestimated when compared with measured values. The findings were similar for both sexes. BMI derived from self-reported height and weight was underestimated; there was a clear tendency for underestimation of overweight (from 1.8%-points to 9.8%-points) and obesity (from 0.7%-points to 13.4%-points) prevalence by self-report. The bias was greater in overweight and obese participants than those of normal weight. Studies conducted in North America showed a greater bias, whereas the bias in Asian studies seemed to be lower than those from other continents. Conclusions: With globally rising obesity rates, accurate estimation of obesity is essential for effective public health

policies to support obesity prevention. As self-report bias tends to be higher among overweight and obese individuals, measured anthropometrics provide a more reliable tool for assessing the prevalence of obesity.

Keywords
Author Keywords
Accuracyanthropometrybody mass indexbody heightbody weightobesityself-report
Keywords Plus
BODY-MASS INDEXMEASURED WEIGHTMEASURED HEIGHTETHNIC-DIFFERENCESVALIDITYACCURACYHEALTHWOMENBMIINFORMATION

3- Dietary inflammatory index and anthropometric measures of obesity in a population sample at high cardiovascular risk from the PREDIMED (PREvencion con DIeta MEDiterranea) trial

By:

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Abstract

The dietary inflammatory index (DII) is a new tool to assess the inflammatory potential of the diet. In the present study, we aimed to determine the association between the DII and BMI, waist circumference and waist: height ratio (WHtR). We conducted a cross-sectional study of 7236 participants recruited into the PREvencion con DIeta MEDiterranea trial. Information from a validated 137-item FFQ was used to calculate energy, food and nutrient intakes. A fourteen-item dietary screener was used to assess adherence to the Mediterranean diet (MeDiet). Sex-specific multivariable linear regression models were fitted to estimate differences (and 95% CI) in BMI, waist circumference and WHtR across the quintiles of the DII. All nutrient intakes, healthy foods and adherence to the MeDiet were higher in the quintile with the lowest DII score (more anti-inflammatory values) except for intakes of animal protein, saturated fat and monounsaturated fat. Although an inverse association between the DII and total energy was

apparent, the DII was associated with higher average BMI, waist circumference and WHtR after adjusting for known risk factors. The adjusted difference in the WHtR for women and men between the highest and

lowest quintiles of the DII was 1.60% (95% CI 0.87, 2.33) and 1.04% (95% CI 0.35, 1.74), respectively. Pro-inflammatory scores remained associated with obesity after controlling for the effect that adherence to a MeDiet had on inflammation. In conclusion, the present study shows a direct association between the DII and indices of obesity, and supports the hypothesis that diet may have a role in the development of obesity through inflammatory modulation mechanisms.

Keywords
Author Keywords
InflammationDietObesityBMIWaist circumferenceWaistheight ratio
Keywords Plus
C-REACTIVE PROTEINLOW-GRADE INFLAMMATIONSYSTEMIC INFLAMMATIONCARDIOMETABOLIC RISKWAIST CIRCUMFERENCEMETABOLIC SYNDROMESEX-DIFFERENCESWEIGHT-LOSSMARKERSPATTERN

4- New Japanese neonatal anthropometric charts for gestational age at birth

By:
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Abstract
BackgroundMore than 10years have passed since the previous Japanese neonatal growth charts were published, therefore the aim of this study was to develop an updated set of Japanese neonatal growth charts.
MethodsWe used data from the registry database of the Japan Society of Obstetrics and Gynecology from 2003 until 2005. A total of 150471 singleton live births without stillbirth or severe congenital malformation were enrolled in the preliminary analysis. It was found that the distribution of the 10th centile charts based on these subjects was skewed toward lower birthweight for preterm infants, because of the significantly lower birthweight in the 10th centile in neonates delivered by cesarean section than those delivered vaginally. Therefore, the data of subjects delivered by cesarean section were also excluded.
ResultsFinally, 104748 singleton vaginal births at 22-41weeks of gestation were used to construct a new set of Japanese neonatal anthropometric charts. The birthweight chart is parity and sex specific. The differences between the Japanese fetal growth chart and the new neonatal birthweight chart were small. ConclusionThe present new neonatal anthropometric charts may reveal unrestricted growth pattern mimicking fetal growth. Use of these charts may result in recognition of abnormal fetal growth and risk in

preterm infants. Further studies are needed to evaluate the risk for adverse neonatal and long-term outcome among small-for-gestational-age infants using these neonatal charts.