**Body Mass Index in Men’s Collegiate Athletics Compared Between University and Conference Teams**

**Introduction**

Body mass index (BMI) is a numeric measure that many health professionals use as an indicator of obesity. Historically, using BMI as a physiological marker for body type casting for athletes has been questioned with respect to its validity since the formula does not delineate between adipose and lean body mass when labeling one’s body weight. To our knowledge, no studies have previously assessed the BMI of Men’s student athletes participating in the National Collegiate Athletic Association’s Division I Big East Conference (BEC).

**Purpose**

The purpose of this study was to assess the body mass index (BMI) of specific for the football, soccer, baseball and basketball men’s athletics for the University of South Florida (USF) and the 15 member institutions participating in the Big East Conference during the 2006 – 2007 academic year.

**Subjects**

A total of 1661 student athletes participating on the football, soccer, baseball, and basketball men’s athletic teams in the Big East Conference during the 2006 – 2007 academic year were included. (Figure 1)

**Methods**

Information was collected via commercially available websites listing the respective height and weight for each subject according to their team roster. From this information, BMI was calculated using a standard internationally acceptable formula for each subject and averages were identified by specific sport and position for both USF and the BEC.

**Results**

The average BMI’s calculated for BEC sports were 29.5 (football, +/- 4.17), 23.5 (soccer, +/- 1.46), 25.4 (baseball, +/- 2.21), and 24.8 (basketball, +/- 2.05). Average BMI’s calculated for USF sports were 29.6 (football, +/- 4.62), 22.6 (soccer, +/- 1.07), 25.8 (baseball, +/- 2.44), and 23.9 (basketball, +/- 2.03). (Figure 2) With the exception of USF place-kickers, the calculated BMI data categorized all football positions in the BEC and USF as overweight (BMI of 25.0-29.9). Defensive and offensive linemen were additionally categorized as obese (BMI > 30.0). Calculated BMI’s of all soccer positions in the BEC and USF were categorized as normal (BMI of 18.5-24.9), while all baseball positions in the BEC and USF were categorized as overweight. Centers and forwards in BEC basketball were categorized as overweight while only the center (n=1) at USF was considered overweight. (Figure 3)

**Conclusion**

In all, the BMI’s of USF men’s athletes compared similarly with BMI’s of the BEC, though BMI may not be an adequate indicator of performance levels. Further research should attempt to correlate the relationship between BMI and performance, as well as BMI and post-athletic career health outcomes.

**Recommendations**

A continued assessment of BMI trends should be identified for intercollegiate athletes to further validate the method for BMI as a relative indicator of body composition. In addition, analysis of such information should also be performed for female college athletes who do not readily make available body weights in media guides or website rosters. Individuals using traditional terminology used to describe BMI categories should recognize that currently some athletes may be successful with performance while being classified as “overweight” and “obese”.

**Figure 1. Total number of subjects by sport**

**Figure 2. Average BMI BEC**

**Figure 3. BMI category by sport and position**