BODY MASS AND HYPERTENSION (HTN) IN DIVISION I FOOTBALL ATHLETES

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Introduction

- Obesity is a common risk factor for the development of hypertension (HTN).
- Frequent high intensity exercise training has been shown to reduce fat mass and reduce HTN risk.
- Exercise is shown to reduce incidence of hypertension through the preparatory period of football with a focus on resistive training.

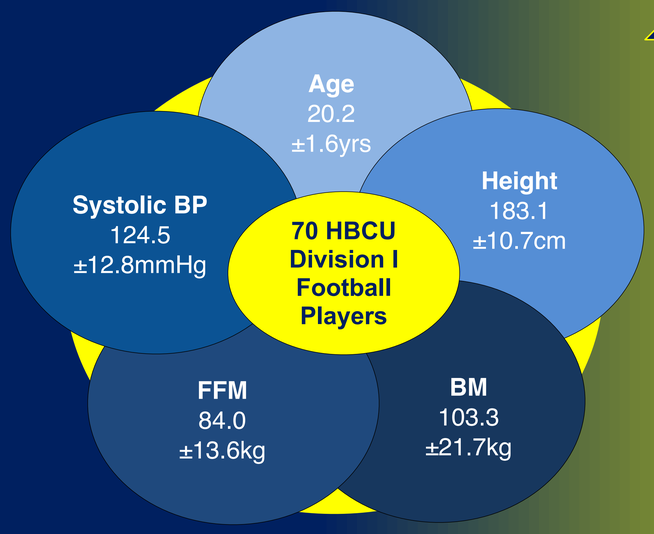
Purpose

To investigate body composition influence on blood pressure

One Kilogram Increase in Body Mass Can Increase Blood Pressure by 5% in D1 Football Athletes Over the Preparatory Season

Methods

- Players had their height, body mass/ composition, & blood pressure measured using bioelectric impedance and electronic BP cuff.
- A stepwise logistic regression model was created to determine if non-blood pressure biometric data collected on the players could predict hypertension status.
- Normotensive MAP is defined by the 2018 American Heart Association Executive (>90). Prior to taking BP, athletes sat for ~5 min.



A significant logistic regression model ($\chi 2 = 15.67$; $p < 0.01$) existed with BM being the sole predictor of HTN status.

The regression accounted for 27% of the variance of hypertensive status and correctly classified 75.8% of cases (n =70).

One kilogram increase in BM would increase blood pressure by 5% (95% CI: 2-8%).

Results

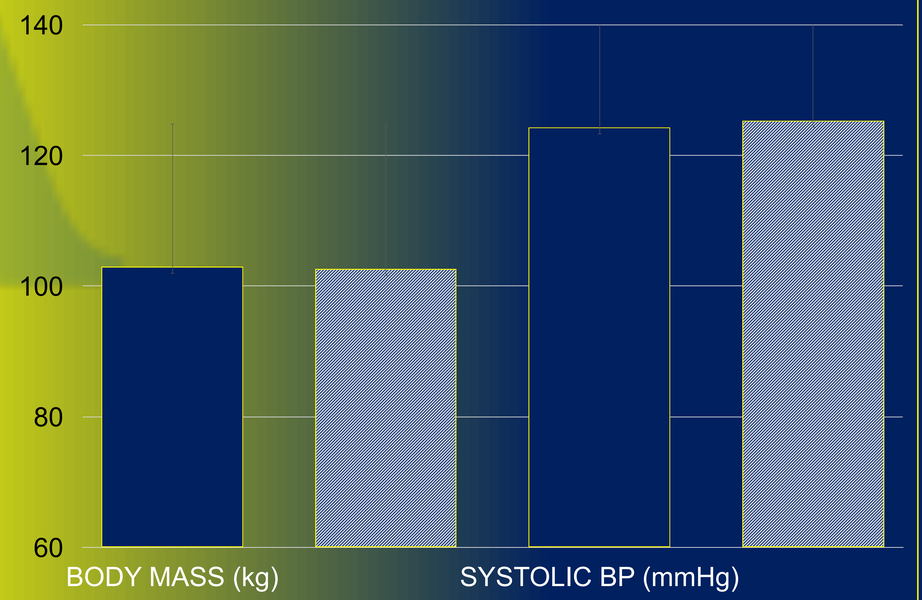


Figure shows body mass and blood pressure changes across preparatory season (April – Oct) .