Comparison of Bioelectrical Impedance Analysis Instruments and Skinfold Calipers in the Determination of Percent Body Fat in Division I Tennis Players

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Body composition, specifically percent body fat, is an important measurement performed in both the clinical and educational settings. Very reliable and accurate systems for measuring body composition are available for use, but they are time-consuming and very expensive, such as dual x-ray absorptiometry and hydrostatic weighing. Attempting to find technology that is inexpensive and easy to operate in determining body composition is a difficult task. However, bioelectrical impedance analysis machines offer the possibility of fulfilling this need in the educational and clinical settings. The question that needs to be answered is whether the bioelectrical impedance analyzers are a reliable and accurate tool in determining body composition in the clinical or educational setting. In this research, there will be three different trial sessions. Each session will consist of four different body composition tests. The results of these tests will be analyzed using Pearson's *r* correlation to show statistical significance between trials and instruments.

Information about the Author:
Michael Woodson is a triple major in biology, chemistry, and exercise science with a minor in human biology. He is also on the tennis team at Valparaiso. His interest in the topic stemmed from work with body composition machines in the Exercise Prescription course.

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