Introduction
Approximately 2.5 million power balance wristbands were sold across 40 countries in 2010. Now about 300,000 power balance wristbands are sold every year. However, people often fail to properly research these products and are left empty handed with no strides in their growth. Typically, the wristband is sold from as low as $4.00 to $25.99 and is sometimes sold at very high prices in less developed countries. This study was designed to answer the question that many consumers want to know: Does wearing a Power balance wristband improve sport performance? Therefore, the purpose of this study was to determine whether the power balance silicone wristband can increase flexibility and sprint performance.

Methods
Fifteen male Division III tennis players participated in the study. In order to determine the power balance wristband’s influence on performance, subjects completed two different tests with and without a power balance bracelet on their wrist. The two tests included a sit and reach test and a 15-foot sprint.. In the subject pool, there are five freshmen, six sophomores, two juniors, and two seniors. The average age range at which most subjects began playing tennis was 5 to 7 years old. The subjects were unaware of the performance-enhancing claims that have been made about power balance bracelet. This was done to reduce bias towards the power balance bracelet.

Testing Protocol
The 15-foot sprint test involves running a single maximum sprint over 15-feet, with the time being recorded. Sprint time was measured using the Brower Timing System. Subjects warmed up and then performed the 15-foot sprint with and without the power balance wristband in a randomized order.

The sit and reach test was performed twice, one with the power balance and the other without the band. Like the sprint test, testing condition (with and without wristband) was randomized. The test was performed by placing a meter ruler flat on the ground. Masking tape was placed on the 15th mark on the meter ruler. The subject aligned their heels on top of the piece of tape. Both knees were maintained straight during the test. In order to help keep participants knees flat on the ground, the tester had to assist some of the subjects by holding their knees down. Measurements were recorded when subjects could hold a position for 1 second.

Statistical Analysis
Statistical analysis was performed using paired samples t-test. Significance was set at 0.05.

Results and Discussion
The 15-yard dash results showed no significant difference between trials. It took participants about 1.07 seconds to run the dash while wearing the bracelet. Without the bracelet, participants ran the 15-yard dash in around 1.05 seconds.

The sit and reach test results demonstrated no significant difference between the trials, with the group average being 21.62 inches. Overall, these data provide evidence to support the research hypothesis, which was that the power balance bracelet has no effect on flexibility or sprint performance.

Practical Applications
Since the band had no impact on performance, coaches should not spend their money on the power balance wristband. In other words, any benefits that individuals perceive while wearing the bracelet, may be due to the placebo effect. The placebo effect is more of what the individual believes about the product which is the power balance wristband.

<table>
<thead>
<tr>
<th></th>
<th>With Wristband</th>
<th>Without Wristband</th>
<th>p-value</th>
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<tbody>
<tr>
<td>15 ft dash</td>
<td>1.07 ± 0.07</td>
<td>1.05 ± 0.05</td>
<td>0.100</td>
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<tr>
<td>Sit and Reach</td>
<td>21.62 ± 4.19</td>
<td>21.62 ± 4.15</td>
<td>1.000</td>
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</tbody>
</table>

Table 1. Mean comparisons using a paired samples t-test (α <0.05).

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References