How People With Cerebral Palsy Respond to Power Wheelchair Soccer
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Abstract
Purpose: Cerebral palsy is a disease that is contracted during development or infancy. It can make movements difficult through weakness, muscle spasticity, and poor selective motor control making it difficult for a child to develop cardiorespiratory fitness. Physical activity is very important for individuals with a physical disability and has been shown to reduce the risk of secondary diseases that are associated with many disabilities and diseases. Power wheelchair soccer has many positive outcomes and benefits for those with a disability. Many individuals who take part report that it helped increase their personal relationships and social interactions with others. Physical activity is very important for individuals with a physical disability and has been shown to reduce the risk of secondary diseases that are associated with many disabilities and diseases.

Methods: VO\textsubscript{2}, RER and METs were assessed on 14 athletes using objective measurements using a portable gas analyzer during 20 minutes of continuous play. Results: The average rest VO\textsubscript{2} for the players with cerebral palsy was 5.69 while in game was 5.62. The average rest RER was .84 while in game was .89. The average rest METs were 1.63 while in game METs were 1.6. Conclusion: Compared to spinal muscular atrophy, muscular dystrophy, and arthrogryposis, the players with cerebral palsy did not respond as notably when looking at VO\textsubscript{2}, RER, and METs.

Results

<table>
<thead>
<tr>
<th>DISABILITY TYPE</th>
<th>VO\textsubscript{2} and Disability</th>
<th>RER and Disability</th>
<th>METs and Disability</th>
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</thead>
<tbody>
<tr>
<td>Cerebral Palsy</td>
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<td>Spinal Muscular Atrophy</td>
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<td>Muscular Dystrophy</td>
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<td>Arthrogryposis</td>
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Discussion

The cerebral palsy players did not respond in any of following categories:
- VO\textsubscript{2}
- RER
- METs

It did not appear that any of the athletes responded in RER.
- RER is the ratio between carbon dioxide production and oxygen consumption and shows what type of fuel the body is using during exercise.

The athletes with spinal muscular atrophy, muscular dystrophy, and arthrogryposis demonstrated increased VO\textsubscript{2} and METs.

References

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