The Physiology of Softball/Baseball

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ESS 110
THE BASICS
## Estimated Energy and Muscular Fitness Demands for Softball/Baseball

The American Sport Education Program’s and My Own

<table>
<thead>
<tr>
<th></th>
<th>Aerobic</th>
<th>Anaerobic</th>
<th>Flexibility</th>
<th>Strength</th>
<th>Endurance</th>
<th>Speed</th>
<th>Power</th>
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</thead>
<tbody>
<tr>
<td>Baseball (ASEP: hitting and fielding)</td>
<td>L</td>
<td>M–H</td>
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<tr>
<td>Baseball (ASEP: baserunning)</td>
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<tr>
<td>Baseball/Softball (My overall initial estimations)</td>
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<td>L–M</td>
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</tbody>
</table>
What the Research Says...

| The ATP-PCr System (Anaerobic)                  | *Szymanski says 80% of baseball  
*For pitchers Potteiger says high  
*Hagerman says high for baseball  
*Flyger says high for softball  
*Gaoqu says mostly ATP-PC for softball |
|-----------------------------------------------|--------------------------------------------------------------------------------|
| The Glycolytic System (Anaerobic, Aerobic)     | *Szymanski says 15% of baseball  
*Szymanski says 5% of baseball  
*For pitchers Potteiger says low  
*Hagerman says low for baseball  
*Flyger says low for softball  
*Gaoqu says least for softball |
| The Oxidative System (Aerobic)                 |                                                                                   |
Conclusions

• ASEP’s estimations as well as my own initial estimations are consistent with my research
• Softball/Baseball have HIGH anaerobic demands and LOW aerobic demands
• No need for aerobic training, however lots of power training methods such as Plyometric training, agilities as well as strength training programs are good training methods for Softball/Baseball, speed training is also crucial
References