Fundamentals of Strength Training For Seated Athletes

Coach AJ Munoz-Bond M.S., CSCS, CFSC, USATF 1
Coach Greg Hasterok, Head Tennis Coach SDSU
About Coach A.J. Munoz-Bond

- Dual M.S. SDSU
- Director & Head S&C SDSU Adapted Athletics
- Owner AJ True Strength
- Work in greater San Diego Area
About Coach Greg Hasterok

● Team USA World Team Cup Member
  ○ Gold Medalist (2013, 2015)
  ○ Silver Medalist (2014)
● Career High World Ranking of #5 Singles, #3 Doubles
● Net Generation Regional Provider For California
### Identify Common Dysfunctions

<table>
<thead>
<tr>
<th>Disability</th>
<th>Anterior Dominance</th>
<th>Posterior Weakness</th>
<th>Poor ROM</th>
<th>Abdominal Deficits</th>
<th>Grip Strength Deficits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spina Bifida</td>
<td>check</td>
<td>check</td>
<td>Possible</td>
<td>Possible</td>
<td>Possible</td>
</tr>
<tr>
<td>SCI</td>
<td>check</td>
<td>check</td>
<td>Possible</td>
<td>Possible</td>
<td>High SCI Only</td>
</tr>
<tr>
<td>Limb Deficiency</td>
<td>check</td>
<td>check</td>
<td>Possible</td>
<td>Possible</td>
<td>UE Only</td>
</tr>
<tr>
<td>Cerebral Palsy</td>
<td>check</td>
<td>check</td>
<td></td>
<td>Possible</td>
<td>UE Only</td>
</tr>
</tbody>
</table>
Results: Injury Location

- Upper extremity pain most prevalent
- Shoulder reported in 90% of surveys
- Chronic/Overuse injuries 52% of total
  - Shoulder impingement
  - Tendonitis

(Kasitinin et al. 2020)
Anatomy - Structural

- Scapula forms **foundation**
- GH joint inherently **unstable**
- Poor positioning and/or movement **impairs function**
Anatomy - Functional

- Scapular stabilizers form base
- Rotator Cuff creates scaffolding
- Inefficient movement leads to:
  - Pain
  - Injury
Equipment - Part 1: Anatomy of the Wheelchair
Equipment - Part 2: Gym

- Creativity is key, equipment helps
  - No breaks?
  - Active hands
  - Cables and bands
  - Para Bench
  - Gait Belt
  - Ski Erg
General Approach

- Communication is key
- Help if asked
  - Build independence
- Same BUT Different
  - Athlete vs Gen. Pop.
  - Goals: Client vs Yours
  - What works vs what doesn’t
  - Strategy
Movement Pattern Paradigm

- Choose yours and own it!
  - Horizontal Push/Pull
  - Vertical Push/Pull
  - Rotation/Anti Rotation
  - Hip Flexion/Extension
Programming Basics

- May have to work unilaterally only
- High volume pulling
- Low volume pushing
- Bulletproof the rotator cuff
- Scapular stabilizers
- CORE??
Find Your Stability

- What is the core?
- Stability-Mobility Continuum
- Lumbopelvic
  - May be artificial
- Scapulothoracic
  - Most attention needed
Adapting

- No “one best way”
- Don’t over complicate
- Creativity is key
- Be open to evolving what you know
- Focus on desired stimulus
Seated Warm-Up Together

- 30 Seconds of everything
  - Arm circles (4)
  - Swords
  - Chair twists
  - Scarecrows
  - Pull apart series (2)
  - Back slaps
  - Partner MB series
Time to Pair Up!

- Four (4) Stations
- Station 1: MB Side Toss
- Station 2: Pallof Press
- Station 3: Fan Drill
- Station 4: Single Arm Serratus Rotations
Keep in Touch!

Website: AJTRUESTRENGTH.COM
IG: @AJTRUESTRENGTH
Website: https://arc.sdsu.edu/adaptedathletics
IG: @SDSUADAPTEDITLETHLETICS