

The background features abstract, overlapping geometric shapes in various shades of blue, ranging from light sky blue to deep navy blue. These shapes are primarily located on the left and right sides of the frame, creating a modern, dynamic feel. The central area is a plain white space where the text is located.

Most Prevalent Mobility and Stability Issues In WCGA Gymnasts

Top Six Mobility Issues at WCGA

- ▶ Poor Wrist Mobility
- ▶ Poor Shoulder Flexion Mobility and Shortness of Latissimus Dorsi Muscle
- ▶ Decreased Mobility of Thoracic Spine
- ▶ Poor Hip Extension Mobility
- ▶ Poor ankle Mobility
- ▶ Tight Hamstrings

Poor Wrist Flexibility/Mobility

Substitution	Symptoms	Solution	In Gym Examples
Elbow hyperextension Shoulder flexion posturing in upper extremity weight bearing leading to poor handstand alignment	Wrist jamming (pain) with tumbling and vault Elbow Hyperextension injuries Carpal Bone Injuries	Dowel stretch with elbow extension and elbow flexion Don't allow gymnasts to hyperextend elbows during stretch!!!! Elbow flexion (biceps) strength Eccentric wrist extension strength	Elbow Hyperextension: Raina, Shyann, Makenzie, Aver, Maddie, Lexi Carpal Bone Injuries: Ella, Sierra

Poor Wrist Mobility Substitutions



Poor Shoulder Flexion Mobility

Shortness of Latissimus Dorsi Muscle

Substitution	Symptoms	Solution	In Gym Examples
Overuse of lumbar spine extension which leads to compression of low back	Low back pain OR Shoulder Pain in end range Difficulty with getting hands to vault board quickly and/or Difficulty with reaching for backhand springs, etc. Poor handstand alignment	Lat stretches Training to facilitate use of shoulder flexion and thoracic extension vs. overextension of lumbar spine for skills. Open shoulder with pelvic tilt protocol AND/OR Lat Stretches End range shoulder stretches End range shoulder strengthening	Olivia R., Ava (bull dog,) Ella, Gina - Hyperextension of low back. Hannah, Elizabeth - Getting hands back for vault board/tumbling. Reed - Shoulder pain Mel - substitutes poor shoulder mobility in end range with increased thoracic extension (position on bars is an example)

Poor Shoulder Mobility and Decreased Lat length Substitutions



Decreased Mobility of Thoracic Spine

Substitution	Symptoms	Solution	In Gym Examples
Increased compression of thoracic spine OR Impingement of shoulders in end range OR Increased lumbar spine extension Poor handstand alignment	Thoracic spine pain and/or Low back pain OR Shoulder Pain in end range Difficulty with getting hands to vault board quickly and/or Difficulty with reaching for backhand springs, etc.	Thoracic spine mobilization Training to facilitate use of shoulder flexion and thoracic extension vs. overextension of lumbar spine for skills. Self-Release techniques to decrease muscle hypertonicity in thoracic spine.	Elizabeth, Hannah, Graham, Brayden, Nyah, Olivia

Substitutions: Increased lumbar spine use, inability to reach backward for tumbling, shoulder impingement in end range.



Poor Hip Extension Mobility

Substitution	Symptoms	Solution	In Gym Examples
Hyperextension of lumbar spine	Low Back Pain	Hip Flexor stretches -with careful observation to ensure no substitutions!!!!!!	Olivia R., Ava (bull dog,) Ella, Gina, David, Brayden, Graham, Sydney
Increased hip angle	Facet inflammation/fracture	Back Extensor stretches	
Uneven length of hip flexors contribute to SI dysfunction	SI dysfunction/pain Back leg difficulty with split motions	Lower abdominal strengthening Glut Med strengthening	
	Excessive lumbar extension with split motions	Open Hip with pelvic tilt protocol	
	Hip position in splits is rotated which can contribute to SI problems		

Poor hip extension length substitutions



Poor Ankle Mobility

Substitution	Symptoms	Solution	In Gym Examples
Knee valgus in landing position Uneven mobility can lead to SI dysfunction	Frequent ankle jamming/pain (coming up short) Pain in front of ankle Heel cord strain/sprain/tear Altered landing position leading to knee pain Uneven load with compression leading to SI pain	Ankle mobilization with strap Ankle stretches with knee in extension and knee in flexion with careful observation to avoid substitutions Squats on dowel with careful observation to avoid substitutions Lunges with careful observation to avoid substitutions Jumps with careful observation to avoid substitutions	Cassie, Briana, Natalie, Carly, Maddie, Makenzie, Nyah, Ava R. Shianne, lots and lots!!

Poor ankle mobility can lead to knee valgus.
Ankle stretching should include the ankle
joint not just heel cord stretching



Tight Hamstring Length

Substitution	Symptoms	Solution	In Gym Examples
Strain to back with splits, leaps, jumps	Forward leg difficulty with leaps/jumps	Hamstring stretches focusing on stabilizing pelvis with hamstring lengthening	Zachary, Brinley, Nyah, Lily, Many many
Uneven hamstring length can contribute to SI dysfunction	Excessive lumbar extension with split positions	End range strengthening with stabilized pelvis	
Overstretching of back flexors	Hip position in splits is rotated which can cause SI problems	Careful attention to substitution with split stretching and strengthening	

Zach is stretching his back not his hamstrings.
Lily is stretching correctly and has very limited
hamstring length. Brinley is demonstrating
limitations in split.



Top Five Stability Issues at WCGA

- ▶ Poor Wrist Extension Strength
- ▶ Poor Shoulder Strength in End Range
- ▶ Poor Posterior Chain Strength often accompanied with over contraction of hip flexors and poor lower abdominal control
- ▶ Decreased Knee Strength/Control
- ▶ Poor Ankle Stability

Poor Wrist Extension Strength

Substitution	Symptoms	Solution	In Gym Examples
Elbow hyperextension Shoulder flexion posturing in UE weight bearing (Compounded with elbow flexion and wrist extension)	Wrist jamming (pain) with tumbling and vault Elbow hyperextension injuries Carpal bone injuries Poor end range wrist extension control and eccentric wrist extension control	Dowel stretch with elbow extension and elbow flexion. Don't allow gymnasts to hyperextend elbows during this stretch!!!! Concentric Elbow Flexion (Biceps) strength. Eccentric wrist extension strength	Raina, Shyann, Makenzie, Avery, Maddie, Lexi - Elbow hyperextension Sierra, Ella - Carpal bone injuries

Poor Shoulder Strength in End Range

Substitution	Symptoms	Solution	In Gym Examples
<p>Poor Shoulder Flexion Mobility</p> <p>Shortness of Lat muscle group</p> <p>Overuse of lumbar spine extension which leads to compression of low back</p>	<p>Low back pain OR Shoulder Pain in end range</p> <p>Difficulty with end range contraction of shoulder flexion and abduction</p> <p>Weakness of scapular retractors and rotator cuff muscles</p>	<p>Lat stretches Training to facilitate use of shoulder flexion and thoracic extension vs. overextension of lumbar spine for skills. Open shoulder with pelvic tilt protocol AND/OR Lat Stretches End range shoulder stretches End range shoulder strengthening</p>	<p>Olivia R., Ava (bull dog,) Ella, Gina - Hyperextension of low back. Hannah, Elizabeth - Getting hands back for vault board/tumbling. Reed - Shoulder pain Ava R - chronic scapular pain</p>

Poor Posterior Chain Strength often accompanied with over contraction of hip flexors and poor lower abdominal control

Substitution	Symptoms	Solution	In Gym Examples
Hyperextension of lumbar spine Increased hip angle Decreased strength of Glut Med, Multifidus, Back Extensors, and lower abdominals	Low Back Pain Facet inflammation/fracture SI dysfunction/pain Muscle imbalance and asymmetry can lead to SI dysfunction and LBP	Hip Flexor stretches - with careful observation to ensure no substitutions!!!!!! Lower abdominal strengthening Glut Med strengthening Control/contraction of back extensors Open Hip with pelvic tilt protocol Controlled dynamic contraction with Protocol using push/pull and med ball exercises	In general I have found that our gymnasts have very weak posterior chain strength and control. They are very strong in the "hollow" position which serves them well for gymnastic skills. However, most back injuries occur with extension and rotation. This is the area which I feel we are most vulnerable and can improve on the most.

Decreased Knee Strength/Control

Substitution	Symptoms	Solution	In Gym Examples
Knee valgus in landing and take off position Locking out knee	Knee pain Tightness/pain in ITB Pain with Growth Spurts	Monitor growth spurts as knee pain is more prevalent during this time Roll out quads and ITB Knee strengthening with focus on vastus medialis Landing/take-off drills with proper knee positioning Lunges and knee dips with monitoring of proper knee position	Hannah, Ella, Lauren, Lilly

Poor Ankle Stability

Substitution	Symptoms	Solution	In Gym Examples
Knee valgus in landing position	<p>Frequent ankle sprains</p> <p>Frequent ankle jamming/pain (coming up short)</p> <p>Pain in front of ankle</p> <p>Heel cord strain/sprain/tear</p> <p>Altered landing position leading to knee pain</p> <p>Uneven load with compression leading to SI pain</p>	<p>Ankle strengthening protocol</p> <p>Lunges with careful observation to avoid substitutions</p> <p>Jumps with careful observation to avoid substitutions</p> <p>**Ankle strengthening should be done without tape in order to strengthen full ROM!!</p>	<p>Cassie, Briana, Natalie, Carly, Maddie, Makenzie, Nyah, Ava R. Shianne, lots and lots!!</p>