



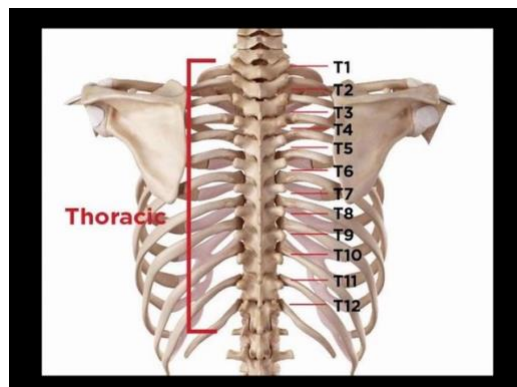
## **Shoulder Maintenance 101: A beginner's guide to shoulder mobility & warm-up**

By: Fanchon Ohlrogge, MA, ATC, MFDc

A good pre-practice warm-up and stretch is a staple in gymnastics. However, adding upper body specific warm-up and mobility exercises can help reduce pain and injuries for athletes both male AND female gymnasts (Garber, et al., 2011). Adding this to your routine before starting bars (UB, PB, HB), still rings, or pommel horse can help create better muscle balance (front and back of shoulders), shoulder blade position/movement, and can better prime your muscles for activity (Cools et al., 2021). It's never too early to start implementing prevention or prehab practices into every gymnast's routine!

**Mobility:** A structure or segment of your body that has the ability to move to allow for range of motion to achieve a functional movement (Kisner & Colby, 2007)

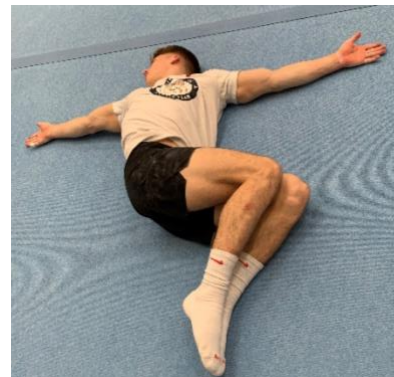
**Thoracic spine mobility:** The thoracic spine needs the ability to extend and rotate for a good overhead arm position (handstand position, back handspring, etc). The ability of the thoracic spine to adequately move effects how the shoulder blade may move. Limitations in this mobility can contribute to changes in biomechanics, ultimately leading to overuse injuries and pain in other parts of your shoulder (i.e., front of shoulder pain/pinching).



- 1) Open books – 10x each side
  - a. Lying on side with knees bent and together
  - b. Arms stacked on top of each other



- c. Next, lift your top arm up and over as far as you can rotate your upper body
  - d. Keep your hips and legs in the same position throughout the movement



- 2) Foam roller extensions – 1x working through each thoracic vertebra (1-12)
  - a. Lay against a foam roller near the bottom of your T-spine (near bottom portion of ribs)
  - b. Cross your arms across body to help control your motion on foam roller

- c. Lean back on foam roller while keeping hips on the ground – can lean back 2-5x each segment
- d. Move up one vertebrae or segment and repeat the 2-5x leans until you reach the top
- e. Reference the skeleton picture above to help give a visual aid



### 3) Thread the needle – 10x each side

- a. Start on hands and knees with neutral spine (hollow position)
- b. Take one arm and reach toward your opposite side pocket as far as you can reach
- c. Keep hips/lower back in same position, focusing on rotating and reaching with your upper half only
- d. Return to starting position and repeat 10x on each side



4) Kneeling T-spine extension (aka Preacher stretch) 1x30 sec

- a. Kneel or stand at a block or tabletop object
- b. Rest elbows on tabletop and lean your hips backward and allow shoulder joint to open as far as you can without pain – can feel a good lat stretch with this movement too
- c. Hold for 30 sec



**Warm-up:** Helps increase the elasticity of muscles by increasing the blood flow and reduce muscle stiffness, which, in turn, can help reduce the risk of injury (American College of Sports Medicine, 2014).

- Use slow and controlled movements – make these quality exercises to benefit your muscles the most! Going through your warm-up too fast is less beneficial and not worth the time you’re spending on it.
- Adjust the number of reps if they feel too easy or you don’t feel warmed up enough. Increase by increments of 2-5 (i.e., start with 1x10, increase to 1x12 or 1x15)
- Light – medium resistance bands are optimal for a warm-up set. You don’t want to be fatigued before starting your event workout!

1) Scapula Pinches 1x10

- a. Start standing upright
- b. While keeping traps/neck neutral, try making your shoulder blades touch (straight back motion, not a shrug)

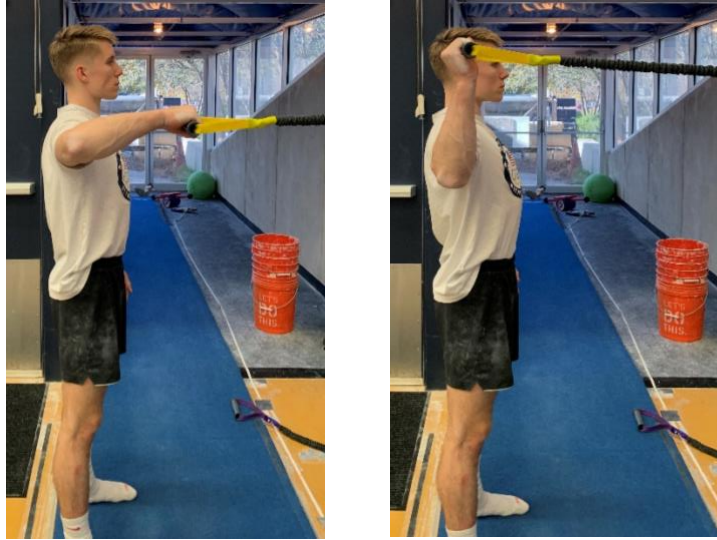
- c. Hold for 3–5 seconds, gradually increasing hold as it feels easier.  
Try to work up to 10 seconds each pinch.
- d. Relax for 2 seconds and then repeat for 10 reps total



- 2) External Rotation/Internal Rotation at 90 degrees w/resistance band 1x10
  - a. Tie a resistance band to an object about shoulder height
  - b. Start with palm down holding resistance band, elbow in line with shoulder
  - c. **ER:** Keeping elbow at same position, with control, pull resistance band until forearm is upright
  - d. Return to starting position while controlling the resistance band back down (don't let it "whip" your arm back forward).
  - e. Repeat 10x
  - f. **IR:** face the opposite direction from the resistance band anchor and pull resistance band away from the anchor. Repeat 10x



*External Rotation (ER) @ 90*



*Internal Rotation (IR) @ 90*



- 3) External Rotation/Internal Rotation at 0 degrees w/ resistance band 1x10
- a. Tie a resistance band to an object about bellybutton height
  - b. Start with palm neutral (thumb facing ceiling) holding resistance band, elbow at your side (hint: if you need help keeping elbow at side during this exercise, add a rolled-up towel between your elbow and side to keep your form)

- c. **ER:** Keeping elbow at same position, pull resistance band until forearm in upright
- d. Return to starting position while controlling the resistance band back down (don't let it "whip" your arm back forward).
- e. Repeat 10x
- f. **IR:** Face opposite direction and pull resistance band toward you. Repeat 10x

*External Rotation (ER) @ 0*



*Internal Rotation (IR) @ 0*



4) ATYT 1x10

- a. Resistance bands anchored about shoulder – head height
- b. Start with arms about shoulder height and palms down



- c. Pull resistance bands downward like you are making an “A”



- d. Move arms back to shoulder height in slow controlled motion



- e. Move arms straight out to sides making a “T”



- g. Move arms back to shoulder height in slow controlled motion  
h. Then move arms upward to a “Y” position



- i. Return arms to starting position and repeat the “T”  
j. This series counts as 1 rep (A-T-Y-T). Repeat 10x

5) Push up plus 1x12

- a. Start in plank/push up position
- b. Staying tall in this position, push palms against the floor (like a blocking motion off floor or vault)
- c. Hold for 3-5 seconds
- d. Relax back to neutral starting position
- e. Hint: this is a small movement, so if you feel like you aren't moving much, you are still doing it correctly



6) Physioball roll-up (on wall) 1x12

- a. Hold physioball against wall about shoulder height and pin it against the wall with elbows
- b. Push elbows straight forward into the physioball and hold this position throughout the exercise
- c. Roll physioball upward against the wall up as far as you can control it (this will be a small movement, it's more important to hold the elbow forward against the ball than how much the ball roll up the wall)
- d. Return ball down to starting position/height, again elbows pressing forward against ball
- e. Repeat 12x

- f. Hint: don't lean your body into your elbows. It should be a push forward motion like on a block on vault/floor and the push up plus exercise



7) Bear Hugs w/ resistance band 1x12

- Anchor resistance bands low, about knee/calf height
- Facing away from anchor site, hold palms toward you



- c. Pull resistance bands forward and hands toward each other
- d. Push through your shoulders, similar to the Physioball Roll Up and Push Up Plus
- e. Return to start position and repeat 12x



#### References:

- Cools, A.M., Maenhout, A.G., Vanderstucken, F., Declève, P., Johansson, F.R., Borms, B. (2021). The challenge of the sporting shoulder: From injury prevention through sport-specific rehabilitation toward return to play. *Annals of Physical and Rehabilitation Medicine*, 64(4), 101384, ISSN 1877-0657, <https://doi.org/10.1016/j.rehab.2020.03.009>.
- Garber, C. E., Blissmer, B., Deschenes, M. R., Franklin, B. A., Lamonte, M. J., Lee, I. M., Nieman, D. C., Swain, D. P., & American College of Sports Medicine (2011). American College of Sports Medicine position stand. Quantity and quality of exercise for developing and maintaining cardiorespiratory, musculoskeletal, and neuromotor fitness in apparently healthy adults: guidance for prescribing exercise. *Medicine and science in sports and exercise*, 43(7), 1334–1359. <https://doi.org/10.1249/MSS.0b013e318213fefb>.
- Kisner, C., Colby, L.A., (2007). *Therapeutic Exercise: Foundations and Techniques*, 5<sup>th</sup> Edition. F.A. Davis Company.

Photo model credit: Shane Wiskus, OLY