



## Indiana University Health

IU Health Physicians Orthopedics & Sports Medicine

## GYMNASTICS ELBOW INJURIES [OCD CAPITELLUM; RADIAL EPIPHYSIS FRACTURE] (NON-OP)

## NON-OP PHYSICAL THERAPY PROTOCOL

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| Patient Name:        | <u>Date</u> :                              |  |  |
|----------------------|--------------------------------------------|--|--|
| X Evaluate and Treat | <u>X</u> Provide patient with home program |  |  |
| Frequency: 2-3       | x/week x 6 weeks                           |  |  |



Activity Progression Based on Upper Extremity Weightbearing Status  $^a$ 

| Weightbearing<br>Precautions                                              | Vault                                                                                                                                                                                                    | Bars                                                                                                                                                                                                                                                                | Beam                                                                                    | Floor                                                                                                                                                                                                                                                                                             | Benchmarks<br>to Progress<br>to Next Level                                                                                                                                                             |
|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nonweightbearing                                                          | Running drills, squats,<br>sprints                                                                                                                                                                       | Visualization. I, T,<br>and Y positioning<br>for periscapular<br>strengthening                                                                                                                                                                                      | Dance, leaps, turns,<br>jumps on low beams                                              | Dance, leaps, turns,<br>jumps, endurance<br>routines, standing<br>saltos (levels 6-10)                                                                                                                                                                                                            | Physician clearance,<br>full ROM, pain-free<br>ROM                                                                                                                                                     |
| Partial weightbearing<br>without clearance<br>for vault/floor<br>tumbling | Wheel roll outs, inch<br>worm walks, elbow<br>plank holds, side<br>planks on elbow                                                                                                                       | Hanging, pull to chest<br>(partial body weight<br>pull ups), lever<br>pulls/candlestick<br>from the floor, band<br>work for scapular<br>stability and rotator<br>cuff, leg lifts, tuck<br>ups, stalder leg<br>raises, and pull ups<br>with variety of hand<br>grips | Dance, leaps, turns,<br>Jumps, any<br>acrobatic elements<br>without UE<br>weightbearing | Open kinetic chain strength biceps/ triceps, rotator cuff strengthening, overhead presses, flys, lat pulls, quadruped work for overhead shoulder stability and weight shifting progressions; wall push up progressions; front tumbling without UE weightbearing on tumble track progress to floor | Physician clearance,<br>no reports of pain,<br>good proximal<br>strength, and<br>scapular stability<br>during exercise,<br>athlete awareness<br>of fatigue and<br>proper mechanics<br>during exercises |
| Full weightbearing on<br>protected surfaces                               | Front hand springs and<br>bounders on tumble<br>track, short approach<br>roundoff rebound drills<br>(Yerchenko level 6-10),<br>or half ons for<br>Tsukharas Handstand<br>flat back drill (levels<br>2-5) | Strap bar work tap<br>swings, giants,<br>clear hips, stalders;<br>kips, casts<br>handstands,<br>dismounts to loose<br>foam                                                                                                                                          | Cartwheels,<br>handstands, back<br>walk overs                                           | Roundoffs, front hand<br>springs, bounders,<br>roundoff back hand<br>spring; connections/<br>passes onto Resi as<br>level appropriate;<br>cartwheels,<br>handstands, walk<br>overs on regular<br>floor                                                                                            | No pain reports, and<br>athlete is able to<br>display correct and<br>consistent form on<br>strengthening and<br>basics; progression<br>is a combination of<br>time and<br>performance                  |
| Full weightbearing<br>with flight elements<br>Weeks 1-4                   | Timers for front entry<br>vaults, Tsukharas,<br>Yerchenkos for 2 weeks<br>from full run, then flip<br>into loose foam                                                                                    | Pirouette skills,<br>blinds, circling<br>skills to handstand,<br>transition releases<br>that don't land in<br>handstand,<br>dismounts to Resi                                                                                                                       | Handsprings,<br>roundoff dismounts,<br>flight series                                    | Use of rod floor for 1 week if available; then, progress to regular floor with mesh 4 mats or sting mat 1 additional week; then, regular floor Roundoffs, front hand springs, bounders, roundoff back hand spring                                                                                 | Vault: max of 3 days<br>per week<br>Floor: max of 3 days<br>per week<br>Recommend<br>alternating vault/<br>floor days                                                                                  |
| Full weightbearing<br>weeks 4 +                                           | Full participation,<br>progress landing<br>surfaces over the next<br>2-4 weeks                                                                                                                           | Release skills, Pak<br>saltos, and shoot<br>over to handstand                                                                                                                                                                                                       | Progress to full routines                                                               | Progress to individual<br>tumbling passes<br>will vary per level                                                                                                                                                                                                                                  | Lift restrictions of<br>days/week for any<br>given event;<br>monitor athlete for<br>symptoms and<br>modify if necessary                                                                                |

 $<sup>^</sup>a$ max, maximum; ROM, range of motion; UE, upper extremity.

^Adapted from Bonazza et al AJSM 2021

By signing this referral, I certify that I have examined this patient and physical therapy is medically necessary. This patient  $\underline{\underline{X}}$  would not benefit from social services.

| <br>Date: |  |
|-----------|--|
|           |  |