Hand/Wrist Rehabilitation Pearls

Sonja Kranz OTR/L, CHT

26th Annual Mayo Clinic Symposium on Sports Medicine
November 11-12, 2016
Disclosure

Relevant Financial Relationship(s)
None

Off Label Usage

OR None
Learning Objectives

• Participants will be able to identify common wrist injuries
• Determine when a client can start stage II program
• Will be able to progress rehabilitation after wrist injury
• Can name specific exercises for wrist rehabilitation
Common Wrist Sports Injuries

- Wrist ECU conservative or post surgical
- UT split tear
- DRUJ
- Fractures
- Scapolunate Ligament Injury
How can hand therapy assist in returning to a specific sport?
What needs to be addressed?

• History of injury

• Surgical or conservative intervention

• Orthotic requirements

• Treatment plans
Initial 6 week immobilization
Wrist supports: Exos/prefabricated
Taping methods for pain relief, support as needed

(consider _______________)

©2011 MFMER | slide-9
- Kinesiotaping
Rehabilitation for the Athlete:  
Second Stage:  usually 6 weeks

Pain is the guide: not activities that result in pain at the time of the activity, later that day, or the next day
In the absence of tenderness:

- Work first on active range of motion of the forearm and the wrist.

- Progress to passive range of motion per pain tolerance.

- May begin progressive strengthening
Therapy

- 6 Weeks
  - Begin with pain free active range of motion for wrist and forearm
  - As tolerated, advance to pain free passive range of motion with prolong stretch
Once patient achieves ~ 90% of motion may begin progressive strengthening

- Isometrics
- Rep band/weight
- Advance to BTE as needed

*Be in Control of the Hammer!*
Proprioceptive Strengthening

- With eyes closed have trainer hold or push the end position on bat/tennis racket

- Have trainer slightly add some additional resistance (pull on the Thera-Band)
Dart Throwing
Flexbar
Flex Bar

__________ or push on the weight) briefly and suddenly. The goal is to have you be able to instantly respond to this additional force through your reflexes.

- Grasp one end of the __________ and begin to wiggle the free end of the bar back and forth. Go as fast and hard as you can tolerate
Keep your wrist steady and do not let your elbow lift up off the table.

Figure 3
It has a built in gyroscope that can be activated by pulling on a small cord or even has an “autowind” model called the Autostart.

Once the gyroscope spins, the goal is to keep it spinning by moving your wrist.
Powerball

™ (Powerballs.com).
Other Exercises

- Use bat or __________
  ___________ to simulate strike
  of ball (ie. resists against hand
  or soft object)

- Grip strengthening using Hand
  Helper™, with graded
  resistance
Conditioning

Overall upper back, shoulder and biceps/triceps strengthening without weight bearing or lifting weight

- Progress to graded weight strengthening (isometric, eccentric and isotonic) or ________________ resistance

- Cardiovascular conditioning
Swing for Tennis or Baseball

For swing, start with getting the feel of holding a bat with a Whiffle or plastic (______) Junior size racket

Start going through motions of swing mechanics

Progress with standard type bat/racket

Progress to with standard ball

Progress to full swing, full speed.
Baseball Throw

Progress to throw with Whiffle ball

Progress to easy throw with standard ball

Progress to full throw with standard ball
Ping Pong

• Mimics eye hand coordination

• Range of motion

• Proprioception

• Spatial awareness
When to progress?

Listen to the athlete~
If any swelling or pain develops, reduce exercises and allow more time.

Trainers and Therapist excel at this!
Final thoughts

Work closely with athletic trainer/coach

Understand the sport specific demands on the wrist~ watch videos or study up

Help the athlete distinguish what type of pain may be acceptable as they return to sport or play
Case Studies

• Professional baseball player

• 23 year old female tennis player

• 19 year old college basketball athlete
Resources

Ping pong photo taken from https://www.sciencedaily.com/releases/2012/08/120808104454.htm

©2015 Mayo Foundation for Medical Education and Research
MC7221PF
5 of 5 mc7221pf

Dynaflex Powerball ™(Powerballs.com).


THANK YOU!