



2022 NSCA *NATIONAL* CONFERENCE

July 6-9, 2022 | New Orleans & Online
#NSCACon22

› *KNOWLEDGE*
› *ADVANCEMENT*
› *COMMUNITY*

CONFLICT OF INTEREST STATEMENT

I have no actual or potential conflict of interest
in relation to this presentation.

RETURN TO PLAY CONSIDERATIONS FOR LOWER EXTREMITY INJURIES

Loren Landow
Head Strength and Conditioning Coach
DENVER BRONCOS
Owner of Landow Performance

Who Is YOUR
Team?

Who is The
Quarterback?

Strength/Conditioning

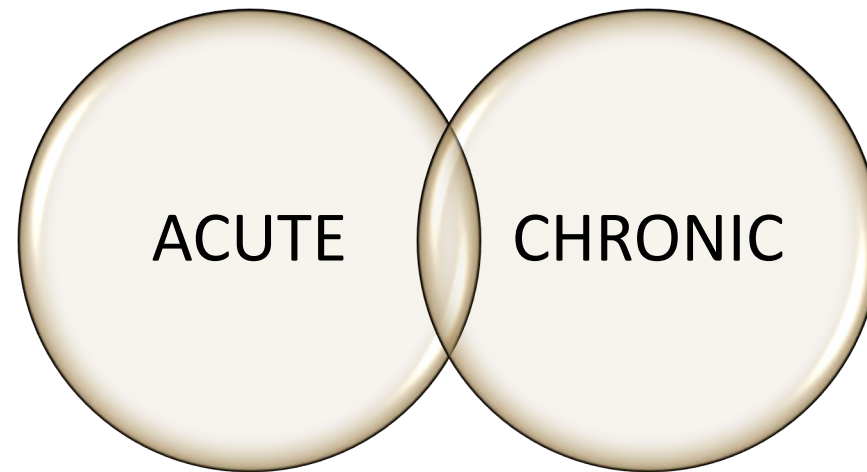
AT/PT

Doctor

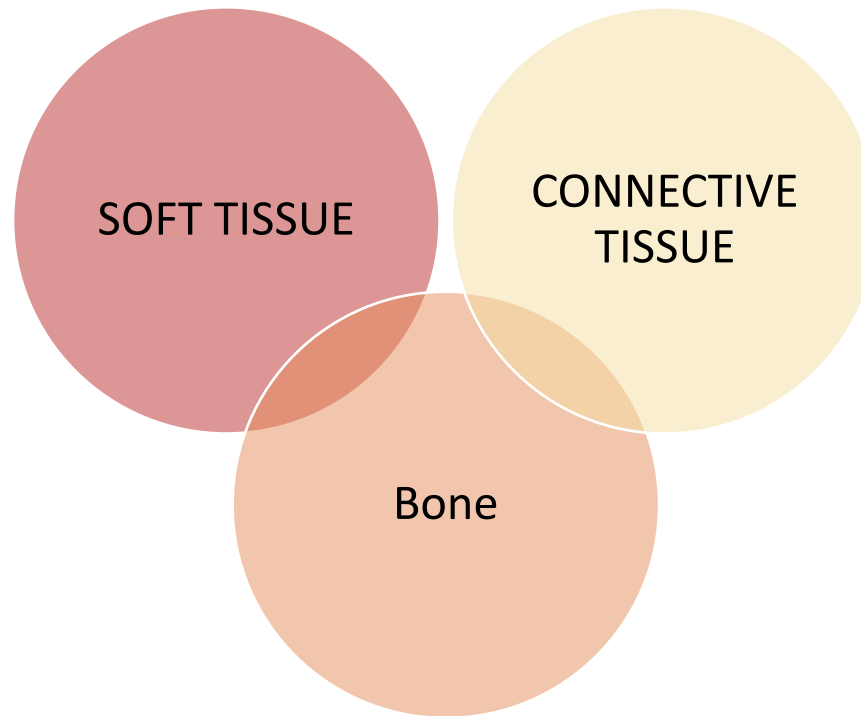
Nutritionist

SPORT PSYCHOLOGY

What was the Mechanism of Injury?



WHAT TISSUE WAS VIOLATED?



When are they set to return?

Timelines determines decision making.

Short Term In-season?

Moderate Term In-season?

Next season?

DURING THE SEASON

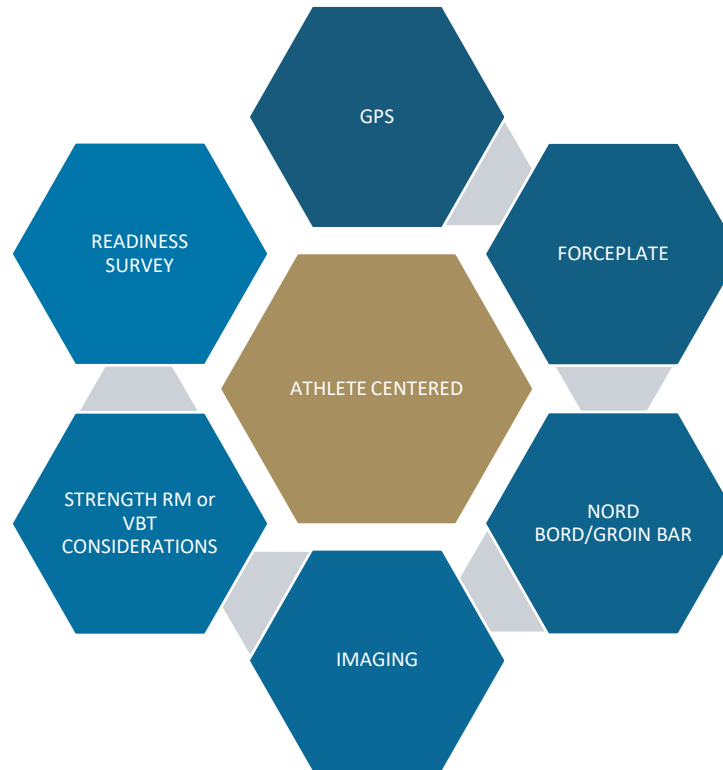
WHAT ARE THE PHYSICAL DEMANDS OF THEIR
SPORT/PRACTICE? CONTACT VS NON-CONTACT
SPORTS/ CAPACITY VERSUS HIGH POWER BASED
SPORT/ HYBRID SPORT

WHAT GAPS OR LAGS IN PHYSICAL QUALITY WITH
THEIR DOWN TIME? THE LONGER THE DOWN TIME
THE MORE NECESSARY THE THINKING PROCESS AND
ADDITIONAL STRESSORS YOU WILL NEED TO PROVIDE
WITH DECLINE OF PREVIOUS ADAPTATION.

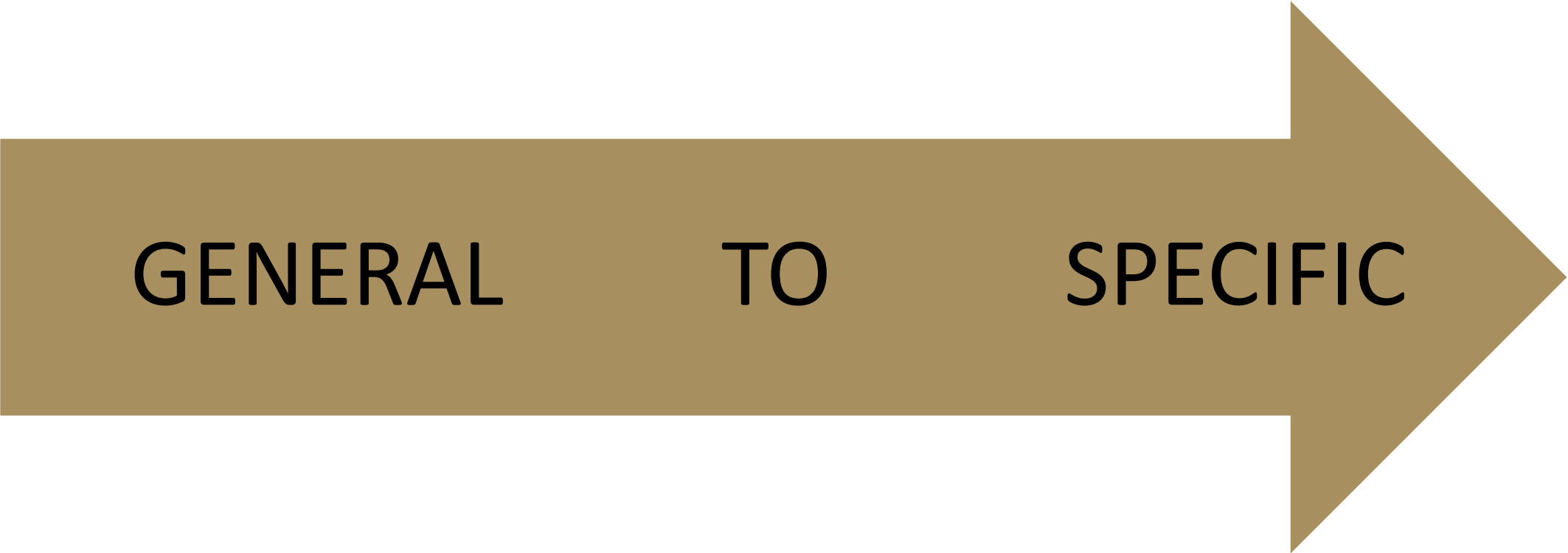
WHAT CAN THEY STILL DO? PHYSICAL AND
EMOTIONAL :UPPER EXTREMITY
CONDITIONING/LOWER BODY SINGLE LEG WORK
(BILATERAL TRANSFER); Hormonal response KEY!

TECHNOLOGY CONSIDERATIONS

KEEP IT ATHLETE CENTERED “lost in the weeds”



GPP VERSUS SPP



GENERAL TO SPECIFIC

Common mistakes

Too much specificity too early

Training stressors become menu items versus finding the best logical sequence for best adaptations

Minimal to no movement re-education with locomotion (running with poor gait habits)

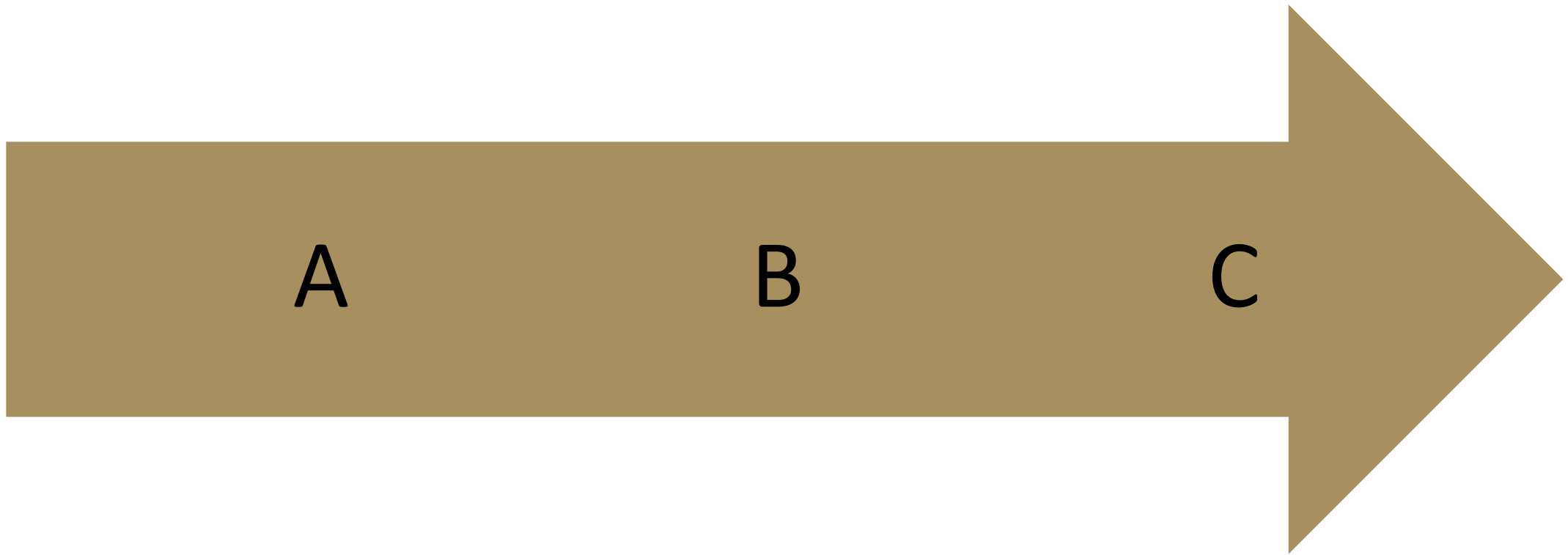
Avoidance of necessary recovery days or deload weeks

Poor Work to rest intervals during metabolic and speed work

Poor use of eyes from practitioner

Constantly asking “how does your _____ feel”

Length of INJURY DICTATES WHAT PROGRAM



Short TERM Injury or the “A Plan”

Typically, 2-4 weeks

- Athlete continues the in-season periodization model for upper extremity
- Fitness work tends to be Upper Body Ergometer or of like equipment (research that shows correlation of UBE and sprint fitness retention. Bike Intervals (seat height considerations)
- As weight bearing increase (pool running, Alter G, Versa Climber, Sled Marches)
- Teaching and rehearsal of mechanics ASAP; introduce ladder drills to work on low force deceleration.
- Two times per week Elastic Medicine Ball Series (EMB; for high contact sports)
- Proprioceptive rich programming
- Phase 1 thru Phase 6 movement progressions

Moderate Term Injury or “B Plan”

4-8 weeks

- Periodization plan now becomes blocked programming for the Upper extremity and Introduction to lower extremity
- Fitness work tends to be Upper Body Ergometer or of like equipment (research that shows correlation of UBE and sprint fitness retention. Bike Intervals (seat height considerations)
- As weight bearing increase (pool running, Alter G, Versa Climber, Sled Marches)
- Teaching and rehearsal of mechanics ASAP; introduce ladder drills to work on low force deceleration.
- 3-4 times per week Elastic Medicine Ball Series (EMB; for high contact sports)
- Proprioceptive rich programming
- Weekly body weight check/Nutritional component is key
- Phase 1 thru Phase 6 movement progressions

Next Season or “Plan C”

- Comprehensive KPI analysis and needs analysis of the player prior to injury
- Start building Block periodization models that will best fill the KPI gaps
- Set Short term and Long-term goals to best maintain motivation
- Body weight checks 1 time per week to make sure athlete isn't trending too high or too low from playing weight.
- Body comp testing monthly to ensure that training and nutrition are trending the right way.
- Normative checks on force plate metrics (once ability to do so is restored)
- Phase 1 thru Phase 6 movement progressions

PHASE 1

Mobility/Stability/Neuromuscular Re-Education

Exercise

- A)Single Leg figure 4 hold
- B)Single Leg claw
- C)PVC A March
- D)High Side Step
- E)High Crossover Step

Volume

- A)1-3 sets x 3 reps @ 10 sec hold
- B)1-3 sets x 8ea
- C)1-3 sets 3 reps @ 10 yards
- D)1-3 sets 3 reps @ 10 yards
- E)1-3 sets 3 reps @ 10 yards

PHASE 2

Mobility/Stability/Neuromuscular Re-Education

Exercise

- A)Fast Claw
- B)Walking Step over
- C)PVC A march
- D)PVC A skip
- E) Acceleration wall march
- F)Frontal Plane Low Shuffle
- G)Frontal Plane Low Crossover

Volume

- A)1-3 sets x 10ea
- B)1-3 sets x 3 reps @ 10 yards
- C)1-3 sets x 3 reps @ 10 yards
- D)1-3 sets x 3 reps @ 10 yards
- E)1-3 sets x 4 reps @ 10 seconds
- F) 1-3 sets x 4 reps @ 10 yards
- G) 1-3 sets x 4 reps @ 10 yards

PHASE 3

Increase of Velocity/Mobility/Stability

Exercise

- A)Fast Claw (velocity focus)
- B)Heel slides
- C)PVC A March
- D)Accel 1-2 counts
- E)Low Shuffle w decel; Increase Velocity
- F)Carioca small step with rotation

Volume

- A)3 sets x 10ea
- B)3 sets x 3 reps @ 10 yards
- C)3 sets x 3 reps @ 10 yards
- D)3 sets x 10 reps
- E)3 sets x 4 reps @ 5 yards
- F)3 sets x 4 reps @ 15 yards

PHASE 4

Increase Velocity and Force Application

Exercise

- Heel Slides (slow/fast on cue)
- Step over runs (increased velocity)
- Straight leg shuffle or ankling
- Accel 1-2 count / and 1-2 switch
- Acceleration Loaded March
- Shuffle / Crossover Reactive Decel
- Carioca small step with rotation

Volume

- 3 sets x 3 reps @ 10 yards
- 3 sets x 3 reps @ 10 yards
- 3 sets x 3 reps @ 5-10 yards
- 3 sets @ 5-10 reps each
- 3 sets x 3 reps @ 15 yards
- 2 sets x 3 reps per side @ 5-10 yards
- 3 sets x 3 reps per side @ 15-20 yards

PHASE 5

Increase Force and Velocity

Exercise

- Resisted Heel slide “slow fast “ cue
- Step over runs
- Tempo Runs / Curve Runs / S runs
- Acceleration 1-2-3 count and Switch 1-2-3
- Straight leg shuffle to bound
- Heavy Resisted March
- Shuffle / Cross over continuous
- Carioca Knee Punch with Rotation

Volume

- 3 sets x 3 reps @ 10 yards
- 3 sets 3 reps @ 15 yards
- 3 sets 2 reps @ 20-50 yards
- 3 sets 2 reps @ 10-15 yards
- 3 reps @ 15-20 yards
- 3 reps x 2 sets @15 -20 yards
- 3 reps x 2 sets @ 4-8 seconds
- 3 reps @ 20 yards

PHASE 6

Exercise

- Acceleration / Switch 1-2-3
- Resisted March Increase drive
- Sprint 10-20 m @ 80% with decel
- Curve Sprint 85+
- Shuffle Reactive/Cross over reactive
- Carioca Transitions to Acceleration

Volume

- 3 reps @ 10-15 yards
- 2 sets @ 3 reps @ 10-15 yards
- 3 sets of 3 reps Rest 90 per rep
- 2 sets of 3 reps Rest 90 per rep
- 3 sets @ 6-10 seconds
- 2 sets 3 reps 15-20 yards

THANK YOU,

- **NSCA**
- **Dan Pfaff**
- **Greg Roskopf**
- **Tom Purvis**
- **Steve Plisk**