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# *SHSS5063*

## *Ankle Late and Pre D/c Rehabilitation*

*Trawsnewid Addysg; Trawsnewid Bywydau*  
*Transforming Education; Transforming Lives*



[www.uwtsd.ac.uk](http://www.uwtsd.ac.uk)

# Learning Outcomes

- To be able to produce a problem, aims and plans list to target a specific late and/or pre d/c condition
- Understand that rehabilitation should be based on criteria that need to be fulfilled before progression to next stage.

# Initial Rehab Framework

## Flexibility and ROM

- Active
  - 15-30sec
  - 4-5 reps
- Passive
  - 15-30sec
  - 4-5 reps
- Prolonged
  - Up to 20mins
  - 3min if FWB

## Proprioception

## Maintain CV and Other Joints

## M. Endurance and Strength

- Isometric
  - 20° Intervals in P+ free range
  - 5-6 sec hold (ease on & off)
  - 10 reps
  - 10 sec rest per rep
- Concentric & Eccentric
  - Strength Endurance
    - Up to 3 sets 25 reps
    - 30sec recovery per set
    - <67% 1RM
  - Strength
    - 2-6 sets
    - 6 reps
    - •85%
    - 1RM •2-5min recovery

# Moving from I/M to Late Phases

- Progression of Foot Exercises
  - Towel Scrunches
  - Picking up marbles
  - Band resisted Toe flexors/ extensors
  - ROM
    - Painfree 90% of baseline
    - Symmetry in static balance
    - No reaction to low load functional training

# Moving from I/M Phases

- Intermediate
  - Introduction of Strength
  - Lower Limb Dominant Exercise
    - SL Squat, SL Lunge, Leg Press, Bulgarian, Nordic
    - Romanian Dead Lift, Glute-Hams Raise, Hip Thruster
  - Body Weight initially, with emphasis on control of mvt
  - Triple Extension (involved in propulsion/accel – PF/Knee&Hip Ext)
  - Triple Flexion (involved with absorption/decel – DF/Knee&Hip Fx)  
.... Eccentric component
  - Introduction of load-sparing alternatives and pool plyometrics ....  
With the emphasis on perfecting technique
  - Contralateral limb strengthening - results in measurable strength changes on affected limb.

# Rehab Phases

- Microcycle
  - Day of fitness and loading
  - Day of specific injury rehabilitation
- Mesocycle
  - Overall goal of the rehab period.....
    - Linking with rehab phases

# Moving into Late Phases

- **Late Stage**

- Is the spring doing its job?
- Pool CMJs
- Trampete force absorption and reactivity
- Progressive landing drills
- Progression of force absorption and reactivity/return
- Short shuttles to develop deceleration
- Multi functional plyometric drills (stiff-foot short-step bounds and skipping drills).

# Late stages

- Sand Training
- Lateral and torsional stress
  - One  $\frac{1}{4}$  turn hops
  - Lateral step and hold (against external load)
  - Maximal lateral hop and stick drills
  - Sports specific movement patterns

# S&C Weight Bearing Training

- Barbell/Dumbbell
  - Lunge
  - Step-Up
  - Split-stance dead lift
  - Alekna
- Weighted vest endurance circuits
  - Squat, lunge, Step up, box switch
- Sled pulls (forward & reverse towing)

# Occulsion training

- Involves placing tourniquet cuff around proximal muscle group and inflating cuff to 100mmHg whilst athlete completes unloaded strength drill
- Potential to reduce overall load on muscle group whilst allowing for physiological changes.

# Moving from Late Phase

- Late Criteria
  - No effusion
  - Full ROM
  - Triple Hop Test for distance/ Cross Over Test
  - If linear running ok... move to agility

# Moving into Pre D/c Phase

- Target is to focus on reintegration of full functional kinetic chain (Ankle, knee, hip, pelvis, spine and UL).
- Purpose is to condition and cause adaptation of the CNS on unpredictable stimuli.

# Variables that can be changed: Pre D/c Phase

- Obstacle Courses
- H Drills
- High speed running drills
- Vertical Hop tests
- YoYo Test
- SL Strength
- Worst case scenario training

# Functional areas for clarification: Pre D/c Phase

- Specialist Skills – kicking, spiking, tackling
- Contact drills
- High speed landing drills
- Return to play – partial match play

# Return to contact training

- Low intensity/Kneel/Falling Mechanics, Wrestling, Impact Absorption, Front hits, Fend

# Case Study Time!

- 32 year old Footballer
  - Insertional achilles tendinopathy
  - Had for three years
  - Treated for two months
  - Now ready to progress

# Problem, Aims and Plans

- For each of the following input what you think would be appropriate for this specific condition from the case study.

|         | Objective Measure | Timescale |
|---------|-------------------|-----------|
| Problem |                   |           |
| Aims    |                   |           |
| Plans   |                   |           |