

# Screening and Prehab

**By Physiohealth**

# Introduction

- ▶ What is screening and Prehab
- ▶ Basic V sport specific screening
- ▶ Injury prevention
- ▶ Linking screening to training and conditioning
- ▶ Linking screening to performance

# What is screening

- ▶ Routine assessment
- ▶ Various musculo-skeletal components
- ▶ Can also assess psychological aspects
- ▶ Helps determine ability to perform sport and conditioning
- ▶ Determines any physical problems that cause predispose an individual to injury
- ▶ Can be use to help with skill acquisition enhance performance

# Prehab

- ▶ A specific program to prevent injury
- ▶ Based on screening results/ risk areas and linked to performance goals
- ▶ Done in pre-season as part of pre-condition
- ▶ Done before training to help muscle activation and patterning
- ▶ Activating neural muscular chain
- ▶ Contains both Strengthening elements and movement patterning program
- ▶ Initially static progress to functional exercises and sports specific skill

# Basic screening

- ▶ Looks at general
- ▶ joint and muscle ranges of motion (ROM),
- ▶ indicators of movement control and stability,
- ▶ postural and movement alignment, and
- ▶ proprioceptive balance
- ▶ Very genetic does not take into consideration sporting skill, position, roles and responsibility of athlete; basketball very different skills compared to football, midfielder v's goalkeeper
- ▶ Still important as set parameters and indication of underlining problems

# Sports specific screening

- ▶ Looks at the specific skills involved in the sports
- ▶ Working with coaches looking at performance goals.
- ▶ Not always about 'perfect technique'—more concerned with injury prevention
- ▶ Activating similar neural pathways and muscle activation patterning that would occur during sport
- ▶ Give indication of how movements is occurring during sport

# Functional tests that relate to the sports



- ▶ Star excursion test (football/netball/basketball) while a Y lower limb test (badminton)
- ▶ Y upper limb test (badminton)
- ▶ Zig/zag hop test (netball)
- ▶ Superman (goal keepers not out field player)

# Star excursion

- ▶ For details of how to perform test
- ▶ See Physiohealth website or face book “how to videos”
- ▶ [www.physiohealth.com.au](http://www.physiohealth.com.au)
- ▶ Facebook: Physiohealth





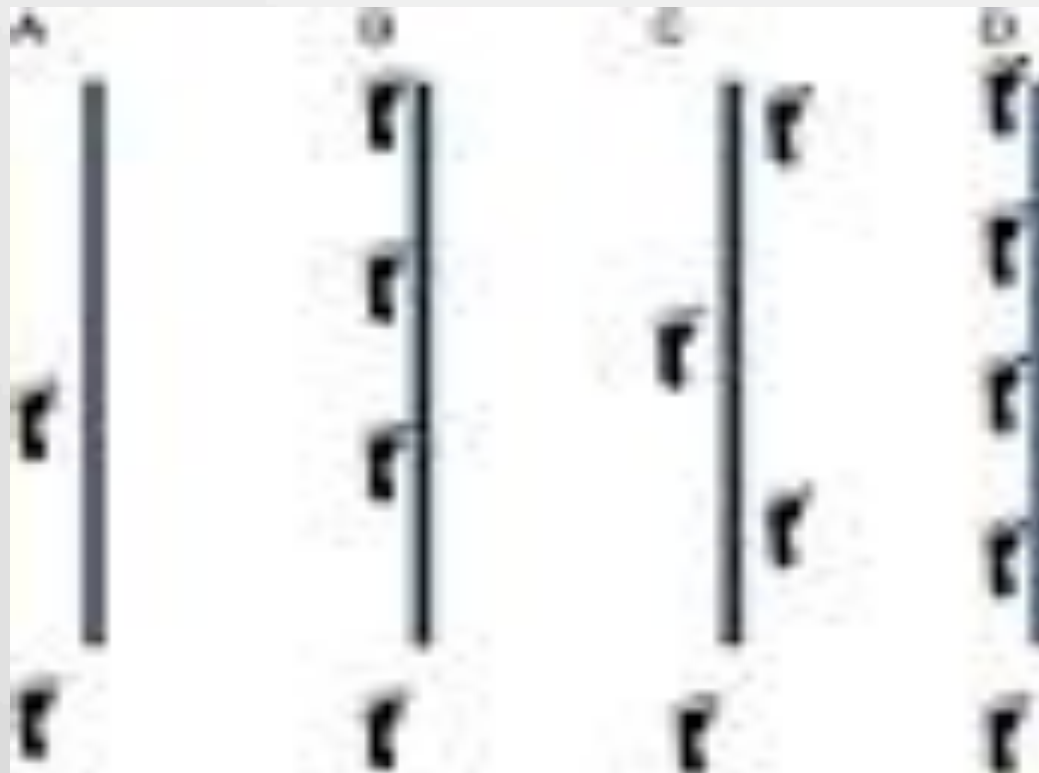
# Y lower limb test



# Y Upper limb test



# Hop tests



- ▶ Areas of weakness or poor movement patterning are highlighted
- ▶ Traffic light system used
- ▶ Green within normal limited
- ▶ Amber concern
- ▶ Red– high risk
- ▶ From screening develop specific prehab program to improve amber and red areas

# When to do screening

- ▶ Should be done during close season and before beginning of pre-season training
- ▶ With highlighted areas being repeated every 6 weeks and program changed every 10–12 weeks
- ▶ Done early so that specific program can be implemented and changes occurs before season limiting risks of over training and reducing injury risk and before loading of pre-season

# What age to do Screening?

- ▶ Normally about 13
- ▶ But done younger if having niggling injuries or prone to injury – may be a more simplified version
- ▶ If concerns of over training.
- ▶ Been identified as a talent.

# When to do screening

- ▶ Should be done during close season and before beginning of pre-season training
- ▶ Full screening done on a yearly basis
- ▶ With highlighted areas being repeated every 6 weeks and program changed every 10–12 weeks
- ▶ Done early so that specific program can be implemented and changes occur before season limiting risks of over training and reducing injury risk and before loading of pre-season

# Linking screening to conditioning

- ▶ Screening highlight problems
- ▶ Poor movement patterning increase muscle uses and ineffective energy uses = quicker fatigue
- ▶ Working on patterning improves neural muscle activation and therefore efficacy of muscle recruitment reducing energy use
- ▶ Means the body moves more effectively so increases conditioning = takes longer to fatigue



# Screening linking to performance

- ▶ As looking at specific movement linked to skill
- ▶ Developing neural pathways which are sport specific
- ▶ Develop changes within cortex into brain
- ▶ Translate directly
- ▶ If body can do the right movement it will be easier to acquire the skill
- ▶ Fatiguing less so can before at higher level for longer
- ▶ Helps prevents over use injuries

# Prehab and training

- ▶ Exercises done before training to activate neural pathways help prevent injury.
- ▶ Specific to skills working on during session
- ▶ Part of warm up
- ▶ Initially some basic core work
- ▶ Progressing to functional
- ▶ Star excursion
- ▶ Single leg squat with correct alignment
- ▶ Arabesque with rotation
- ▶ Walking lunges and multi plan lunges
- ▶ Split leg squats
- ▶ Then start running drills and directional work