

YOUNG ATHLETES RISK STRATIFICATION PROTOCOL

(Lower limb; hip, thigh, foot)

This self-evaluation screening tool does not substitute for advice from an appropriately qualified medical or allied health professional (Eg. GP, Physiotherapist, Chiropractor, or Exercise Physiologist). It is designed to raise awareness of common lower limb risk factors that may attribute or lead to sports related injuries.

The screening system in no way guarantees against injury. No responsibility or liability can be accepted by Fitness Embassy® for any injury that may arise from participating in the baseline assessments contained in this tool.

Name: _____

Date of Birth: _____ Male: Female: Date: _____

STAGE 1 - KNEE PRE-SCREEN: Stage 1A Knee Joint Mobility Questionnaire

Please circle response

1. Can you place both hands flat on the floor without bending your knees in the standing position? Yes No



2. Can you lock out your knees in the standing position? Yes No



3. Have you ever dislocated your knee on more than one occasion? Yes No

4. Has your brother, sister or parent had a knee operation before? Yes No

5. Do you consider yourself clumsy and/or fall often? Yes No

6. Do you currently have knee pain that wakes you up at night? Yes No

IF YOU ANSWERED 'YES' to question 6 and you are woken up at night due to knee pain you may be considered a high risk of experiencing further knee pain and/or injury by participating in this practical self-evaluation tool. You are recommended to contact an appropriately qualified allied health professional is recommended (Eg. GP, Physiotherapist, Chiropractor, or Exercise Physiologist).

Signature: _____

Date: _____

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STAGE 1B - KNEE DROP TEST

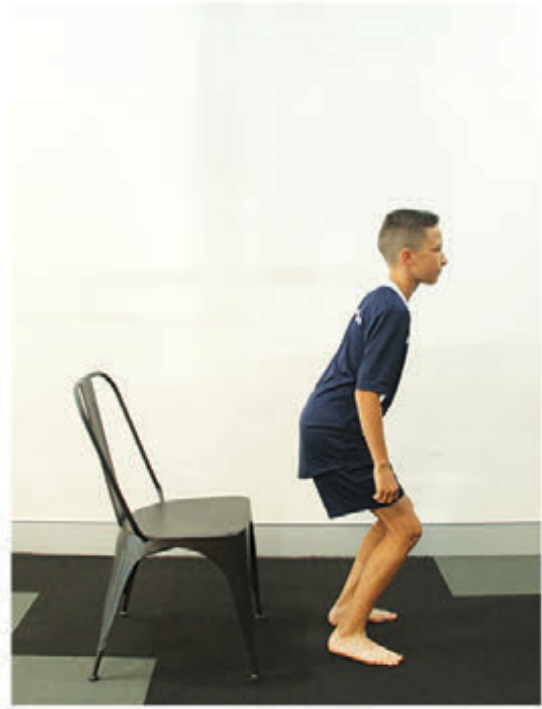
Instructions: Partner required – observer

1. Stand on a chair with Right foot forward
2. Drop down off the chair and land onto both feet at the same time

Step 1



Step 2



Please circle response

Additional notes:

7. Did the subject's knees point inwards when dropping onto the floor? (Right)

Yes No

8. Did the subject's knees point inwards when dropping onto the floor? (Left)

Yes No



IF YOU ANSWERED 'YES' to any of the 8 questions, you may be considered a moderate to high risk of injury when participating in lower limb dominant sports (Eg. Soccer). Referral to an appropriately qualified allied health professional is recommended (Eg. GP, Physiotherapist, Chiropractor, or Exercise Physiologist).

IF YOU ANSWERED 'NO' to all of the 8 questions, you may be considered a low risk when participating in lower limb dominant sports (Eg. Soccer). Proceed to Stages 2 to 7.

Signature: _____

Date: _____

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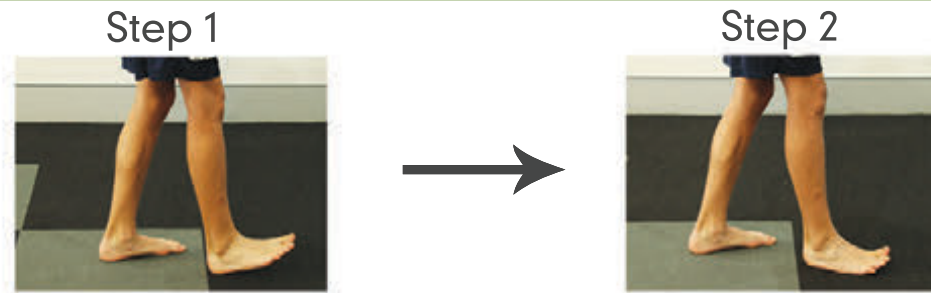
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STAGE 2 - FOOT PROPRIOCEPTION TESTS

2A - Barefoot Piano Walk Test

Instructions: Partner required – observer

1. Look straight ahead
2. Walk in a straight line making contact with the floor in this order including:
 - Heel first
 - Followed by the outside little toe through to your big toe
 - Imagine playing the piano with your toes from the little toe up to the big toe
 - You may wish to spread out your toes to assist you
3. Continue to walk in a straight line playing the piano with your feet for 10 steps in total



LOW RISK Subject is able to walk in a straight line playing the piano with all toes from little toe to big toe using both feet for at least 8/10 steps

MODERATE RISK Subject is able to walk in a straight line playing the piano with all toes from little toe to big toe using both feet for a maximum 4/10 steps

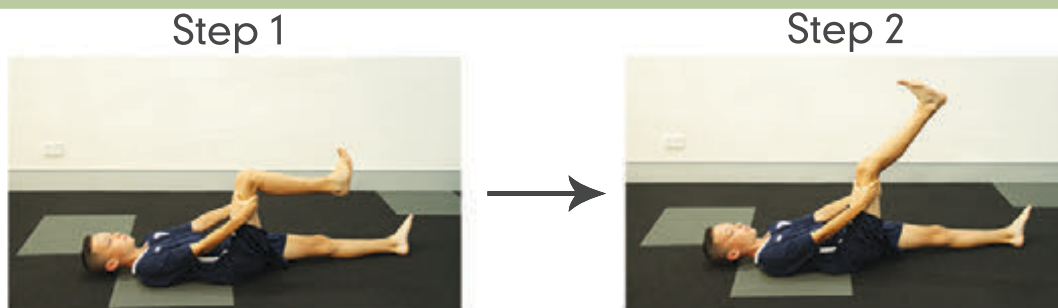
HIGH RISK Subject is unable to walk in a straight line and cannot play the piano with their toes

STAGE 3 - FLEXIBILITY TESTS

3A - Active Hamstring Stretch

Instructions: Partner required – observer

1. Lay flat on your back with both legs straight onto the floor
2. Bend your Right knee, supporting the thigh behind the knee with your hands
3. Slowly straighten the knee until a full stretch is maintained for 3 seconds.
Keep your head and neck relaxed onto the floor
4. Repeat steps 1-3 to the left thigh



LOW RISK Subject's knee - full extension (straight)

MODERATE RISK Subject's knee is $>45^\circ$ but not full extension

HIGH RISK Subject's knee extends $<45^\circ$

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Date: _____

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3B - Active Hip Flexor Range of Motion

Instructions: Partner required – observer

1. Lay flat on your stomach with both legs straight onto the floor
2. Bend your Right knee. Bring you Right heel towards your buttock as far as you can until a full stretch is maintained in your thigh for 3 seconds. Keep your hips on the floor
3. Repeat Steps 1-2 to the Left knee

Step 1



Step 2



LOW RISK Subject's heel touches the buttock

MODERATE RISK Subject's knee flexes $<45^\circ$

HIGH RISK Subject's knee flexes at 90°

3C - Butterfly Adductor Flexibility Test

Instructions: Partner required – Measure with ruler

1. Sit on the floor with your knees bent and the bottom soles of your feet facing each other
2. Grab your ankles with both hands and pull them as close to your groin as possible. Do NOT rock to further the stretch
3. Measure the distance between your heels to your groin using a ruler

Step 1



Step 2



LOW RISK $< 5\text{cm}$

MODERATE RISK 10cm

HIGH RISK $> 15\text{cm}$

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3D - Barefoot Knee to Wall Ankle Flexibility Instructions: Partner required – Measure with ruler

1. Stand facing the wall in a bodyweight lunge position with both heels on the floor and hands by your side
2. Place the Right knee and big toe against the wall with the left leg at the back
3. Increase the distance between the Right big toe until the knee can no longer touch the wall
4. Measure the maximum distance between the Right big toes and the wall
Repeat Steps 1-4 to the Left foot

Step 1



Step 2



LOW RISK > 11cm

MODERATE RISK < 8cm

HIGH RISK < 5cm

STAGE 4 - BALANCE AND STABILITY TESTS

4A - Barefoot Balance Test

Instructions: Partner required – Timer and Counter

1. Place your hands on your hips
2. Balance on your non-dominant leg with the opposite leg's knee bent like in the image (20° of hip flexion and 45° of knee flexion)
3. Close your eyes and conduct the balance test for 20 seconds in duration
4. Your partner will count every time your foot swivels or hops, if your raised foot touches the floor, hands come off your hips, eyes open
5. Note: Every count is considered an error

Step 1



Step 2



LOW RISK < 3 errors

MODERATE RISK < 5 errors

HIGH RISK < 10 or >10 errors

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Date: _____

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4B - Barefoot Stork Balance Test

Instructions: Partner required – timer and counter

1. Keep your eyes open for this test
2. Place your hands on your hips. Balance on your non-dominant leg with the non-supporting foot placed on the inside of the weight bearing leg
3. Raise the heel off the floor and remain on the ball of the foot throughout the test and start the timer
4. Record the maximum time until the subject's heel touches the floor, swivels or hops, or the hands comes off the hips.
5. Repeat steps 1 to 4 for THREE attempts and record the best time achieved



LOW RISK > 50 seconds

MODERATE RISK > 25-39 seconds

HIGH RISK < 10 seconds

STAGE 5 - PELVIC TILT ACTIVATION/POSTURAL ASSESSMENT

5A - Pelvic Tilt Control Test

Instructions: Partner required – Observer

1. Stand in a relaxed position with your arms by your side
2. Pull your belly button (naval) into your spine
3. The waistline of your shorts or pants must be level with the floor and maintained for 10 seconds

Step 1



Step 2



LOW RISK Waistline shorts/pants level with the floor for 10 seconds

MODERATE RISK Waistline shorts/pants level with the floor for <10 seconds

HIGH RISK Unable to tilt waistline shorts/pants level with the floor

Signature: _____

Date: _____

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