

# THE KNEE PROGRAM

## ELITE MANUAL

**KNEE:** Knee injury  
prevention for Netballers  
to Enhance performance  
and Extend play







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# INTRODUCTION

The elite KNEE program is designed to match the movement demands of high level competition, is heavily integrated with ball work and progressions are provided to further expand movement skills.

The key elements include dynamic take-off and landing technique with increased emphasis on symmetry of landing, rapid deceleration technique and both predictable and unpredictable change of direction technique with use of a netball. The addition of a defender adds an additional degree of unpredictability.

A key factor with this program is having the adaptability to rehearse safe landing techniques in circumstances that require it, whilst also rehearsing change of direction technique to optimise performance. The Elite KNEE program allows those athletes participating in multiple teams to consistently work on ACL injury prevention and performance enhancement regardless of circumstance.

**A KEY FACTOR WITH THIS PROGRAM IS HAVING THE ADAPTABILITY TO REHEARSE SAFE LANDING TECHNIQUES IN CIRCUMSTANCES THAT REQUIRE IT, WHILST ALSO REHEARSING CHANGE OF DIRECTION TECHNIQUE TO OPTIMISE PERFORMANCE.**





# HOW TO USE

The following will give coaches an understanding of how to use the resource, how the resource has been structured and the key coaching points for successful implementation.

## CATEGORIES

### Warmup/Footwork

**Purpose:** To switch on the brain for activity and to prepare the body for movement, enhancing footwork patterning in preparation for dynamic activity.

**Implementation:** To be completed as a sequential process, all activities in the warm up/footwork category should be done at the start of the program each time.

### Strength

**Purpose:** Promote strength and develop a stable base upon which the body moves. It specifically targets the muscles that control the trunk, hips, pelvis and knees known to be protective of injury.

**Implementation:** One exercise from each section should be completed every time the program is delivered. For example the coach may choose one activity from each of quadriceps, gluteals/hamstrings and core sections of the Strength category each session.

### Balance/Landing

**Purpose:** To improve players ability to take off and land safely on single or double leg and capacity to absorb force in more challenging circumstances. Use of the ball during exercises further increases specificity of training, ensuring the overhead arm position required of most netball landings is focused on and attended to.

**Implementation:** Four exercises from the Balance/Landing category should be completed every time the program is delivered. For example the coach may choose one activity from each of take-off/landing, single leg, double leg and repeated effort or a combination of these.

### Agility

**Purpose:** To develop a solid movement foundation upon which skills are honed. The agility exercises aim to improve movement efficiency when changing direction, decelerating and then reaccelerating. The agility category targets how to absorb force in landing/decelerating but also how to generate force when reaccelerating.

Use of the ball during tasks increases specificity of training. The elite program extends these principles further to accommodate not only pre-planned change of direction but also the response to unpredictable stimulus.

**Implementation:** Four exercises from the Agility category should be completed every time the program is delivered. For example the coach may choose one activity from each of running, deceleration, change of direction and netball plane of movement or a combination of these.

### KEY PRINCIPLES

	GOOD TECHNIQUE	POOR TECHNIQUE
<b>TAKE OFF</b>	<ul style="list-style-type: none"><li>Feet shoulder width apart</li><li>Feet facing forwards</li><li>Hips bent</li><li>Knees bent</li><li>Knees in line with feet</li><li>Use arms to drive movement</li></ul>	<ul style="list-style-type: none"><li>Feet wide</li><li>Feet turning outwards</li><li>Hips stiff/upright posture</li><li>Knees stiff/upright posture</li><li>Knees collapsing inwards</li></ul>
<b>LANDING</b>	<ul style="list-style-type: none"><li>Hips bent</li><li>Knees bent</li><li>Roll down through feet</li><li>Feet straight ahead</li><li>Knees in line with feet</li><li>Trunk stable</li></ul>	<ul style="list-style-type: none"><li>Hips stiff/upright posture</li><li>Knees stiff/upright posture</li><li>Feet stiff</li><li>Feet not aligned</li><li>Knees collapsing inwards</li><li>Poor posture</li></ul>
<b>DECELERATION</b>	<ul style="list-style-type: none"><li>Multiple small steps</li><li>Hips bent</li><li>Knees bent</li><li>Chest up</li><li>Trunk stable</li></ul>	<ul style="list-style-type: none"><li>1 large step</li><li>Hips stiff/upright posture</li><li>Knees stiff/upright posture</li><li>Poor posture</li></ul>
<b>CHANGE OF DIRECTION</b>	<ul style="list-style-type: none"><li>Hips bent</li><li>Knees bent</li><li>Small steps</li><li>Trunk stable</li><li>Outside leg absorb the landing</li><li>Inside leg drive acceleration</li><li>Foot leads direction change</li></ul>	<ul style="list-style-type: none"><li>Hips stiff/upright posture</li><li>Knees stiff/upright posture</li><li>Wide stance with large step</li><li>Poor posture</li><li>Outside leg absorbs and drives</li><li>Inside leg absorbs and drives</li><li>Foot not leading direction change</li></ul>

## MANUAL

The Elite program manual contains the specific information relevant to this level, including the key principles, instructions for each exercise and specific player cues and coaching points. Coaches should make themselves familiar with this information to support their understanding and ability to influence development with their players.

## KEY POINTS

### Players

Coaches should use these cues and language to make players aware of how their body should be feeling and moving as they participate in the activities. This is a crucial aspect of supporting players' development of correct technique.

### Coaches

This information will support coaches understanding of specific cues to look for as players complete the activities and aid in coaches identifying areas to develop and highlighting excellent technique.

### +/- ball

Coaches will come across this throughout the resource in different activities. It simply means this activity can be done with or without a ball and the instructions clearly articulate how to do this.

Videos can be accessed via a smart phone or tablet for on court reference when needed.

## VIDEO

Each exercise has a demonstration video with voice over providing clear instruction on how players should complete the exercise as well as supporting technical information and athlete cues. Videos can be viewed individually or as a sequence for each category.

Videos can be accessed via a smart phone or tablet for on court reference when needed.



# KEY COACHING POINTS

## FAMILIARISATION AND PLANNING

- Coaches should spend time studying the content, key principles, instructions and coaching points before beginning the program with their players. It is important that coaches feel confident delivering the activities as well as understanding the key principles and how to support player development
- A key aspect of successful implementation is planning. The KNEE Program should be utilised as the warm up aspect of the training session and therefore not impinge on the normal training structure or timeframes
- Encourage the players to familiarise themselves with the program. This involves the player in the process and places responsibility on them to have a sound working knowledge of the activities and key principles.

**Demonstrating activities is a vital aspect of the program.**



## DEMONSTRATION AND IMPLEMENTATION

- Demonstrating activities is a vital aspect of the program. As all players learn differently it is important to give verbal instructions coupled with a demonstration of the activity highlighting correct technique. This combination of observation and practice enhances learning
- In the early stages of implementing the program players should be given the opportunity to slowly go through activities to understand how to move and the functionality required. This should happen each time a new activity is introduced
- As players and coaches gain confidence more focus can be applied to making players aware of areas to focus on. The combination of observation of correct technique and practice results in more effective learning
- Education forms the backbone of the program. Players should be educated on the importance of injury prevention and given ownership and responsibility to ensure they are engaged in the learning process. This is a key area of player-centred coaching, Netball Australia's preferred coaching approach.


## GRADUAL INTRODUCTION

- Introduce sections of the program gradually over a period of weeks rather than all at once. This process allows for players to absorb and learn new information as well as facilitate skill mastery
- For example the Warm Up/Footwork section could be introduced in isolation over two weeks. Once proficient, strength exercises could be added and so on until all elements of the program are included in the team warm up.

## VARIABILITY

- Multiple exercises are provided within each section to provide variability and allow for progression. It is not intended that a player perform every exercise during a warm up. It is preferable to keep it simple by performing fewer exercises well than multiple exercises poorly
- It is important to vary the exercises as appropriate to ensure continued motivation and transference of skill. Try not to have the program look exactly the same each session.

**It is important to vary the exercises as appropriate to ensure continued motivation and transference of skill**




## SMART PHONE AND TABLET

- Visual feedback is a great way of raising players' awareness of their areas for development. Using a smart phone or tablet can assist players in understanding aspects of their technique that require refinement and will lead to skill acquisition
- Before videoing a player to provide technical feedback it is imperative you gain permission from the player or parent.

## FEEDBACK

- The provision of feedback is essential to the success of the program to ensure risky movements are eliminated
- Coaches should provide players with 'external feedback' using analogies that emphasise the desired result of the movement, rather than focusing on actual body position. As an example a coach may instruct a player to 'imagine sitting back in a chair' when landing, as opposed to 'bend your knees' when landing. Medical research has shown this subtle difference in feedback delivery produces a faster and more effective improvement in skill
- The timing of this feedback is also critical. Aligning with player centred coaching principles, coaches should make players aware of technical faults and empower them to be responsible for their development in this area. Coaches should always be guiding this development process
- It is important that the provision of feedback is variable. Initially players require more frequent feedback, however as technique improves it is important that feedback is reduced to prevent dependence
- Feedback can be visual also. Many activities involve players facing each other which allows for immediate feedback on correct or incorrect technique whilst promoting motivation for improvement.

**The provision of feedback is essential to the success of the program to ensure risky movements are eliminated**



# WARM UP/FOOTWORK

**Purpose:** To switch on the brain for activity and to prepare the body for movement, enhancing footwork patterning in preparation for dynamic activity.

**Implementation:** To be completed as a sequential process, all activities in the warm up/footwork category should be done at the start of the program each time.

## PARTNER CIRCLING JOG

### Instructions

#### Starting Position:

- In pairs, spread out along the goal line.

#### Instruction:

- Player 1 jogs slowly straight down court
- Player 2 commences slightly after player 1
- Runs towards player 1
- While facing forwards side shuffles around player 1
- Then jogs backwards five steps before repeating the process in the opposite direction
- Continue length of the court
- On return swap roles.

*Full court.*

### Key Points

#### Players:

- Light feet
- Stay tall
- Eyes up
- Use your arms.

#### Coaches:

- Ensure torso remains upright and stable
- Ensure hip/knee/ankle in line
- Ensure arms drive movement
- Ensure short ground contact.

## 'A' SKIP

### Instructions

#### Starting Position:

- Spread out along goal line.

#### Instruction:

- With arms held with elbows bent at 90°
- Push up through toes and swing opposite arm and leg, driving knee up to 90° in a controlled skip movement to half way
- Control/roll down through forefoot on landing.

*½ court.*

### Key Points

#### Players:

- Light feet
- Stay tall
- Eyes up
- Use your arms.

#### Coaches:

- Ensure hip/knee/ankle in line
- Ensure arms drive movement.

*As proficiency improves: increase speed of swing through leg to drive movement.*



## HIGH KNEES

### Instructions

#### Starting Position:

- Spread out across court at half way.

#### Instruction:

- Run forwards with high knee drive coordinated with driving elbows back
- Continue to goal line
- Combine with A Skip.

*½ court.*

### Key Points

#### Players:

- Light feet
- Stay tall
- Eyes up
- Use your arms
- Make quick contact with the floor landing through ball of foot.

#### Coaches:

- Ensure arms drive movement
- Ensure trunk remains upright and stable
- Ensure knees lift high.

## BUTT FLICKS

### Instructions

#### Starting Position:

- Spread out along goal line.

#### Instruction:

- Run forwards kicking heels towards buttock to half way
- Do not lift your knees up.

*½ court.*

### Key Points

#### Players:

- Stay tall and strong through trunk
- Move legs quickly
- Use your arms.

#### Coaches:

- Ensure arms drive movement
- Ensure trunk remains upright and stable.

### CALF BOUNCES

#### Instructions

##### Starting Position:

- Spread out across court at halfway.

##### Instruction:

- Keeping knees as straight as possible
- Bounce through feet strongly pushing through toes progressing slightly forwards each skip
- Continue to goal line
- Drive arms with elbows bent at 90°
- Combine with Butt Flicks.

*½ court.*

#### Key Points

##### Players:

- Stay tall
- Make quick contact with the floor
- Bounce through feet landing through ball of foot.

##### Coaches:

- Ensure athlete keeps knees stiff and uses toes to propel movement
- Ensure athlete rolls down through forefoot on landing to assist in absorbing landing
- Ensure arms drive movement.

### SIDE SKIP AND SQUAT

#### Instructions

##### Starting Position:

- Standing side on at goal line, sit backwards into a semi squat position.

##### Instruction:

- Side skip x4 in semi squat position
- On 4th step squat back hold one second
- Then pivot 180°
- Repeat side skip x4 in semi squat position
- On 4<sup>th</sup> step squat back and hold one second
- Repeat to half way.

*½ court.*

#### Key Points

##### Players:

- Stay strong through trunk
- Sit back but keep eyes up
- Chest up
- Do not let feet touch.

##### Coaches:

- Ensure strong squat position with attention to lower back
- Ensure feet straight ahead and hip, knees and feet in alignment
- By not letting feet touch creates an awareness of back foot position and keeps centre of mass wider.

## LATERAL HIGH KNEES

### Instructions

#### Starting Position:

- Spread out across court at half way facing side on to court.

#### Instruction:

- Sidestep with high knee drive coordinated with driving elbows back
- Pivot 180° half way through and continue to goal line
- Combine with Side Skip + Squat.

*½ court/back.*

### Key Points

#### Players:

- Light feet
- Knees wide
- Stay tall
- Eyes up
- Use your arms
- Make quick contact with the floor landing through ball of foot.

#### Coaches:

- Ensure arms drive movement
- Ensure trunk remains upright and stable
- Ensure knees lift high and do not turn in.

## FORWARD AND BACKWARD, LATERAL SHUFFLE

### Instructions

#### Starting Position:

- Spread out along the goal line
- Sit backwards into semi squat position
- Shoulders, hips, knees and feet facing forwards
- Knees in line with feet.

#### Instruction:

- Remain in semi squat position use short sharp footwork balanced over feet
- Use arms to drive the movement
- Take x2 forwards steps
- Take x2 sideways steps (x1 left/x1 right)
- Repeat to half way
- Repeat backwards to the goal line.

*½ court.*

### Key Points

#### Players:

- Stay in a strong, compact posture
- Fast, light feet
- Swing your arms
- Eyes up.

#### Coaches:

- Short sharp footwork balanced over feet
- Ensure bend through hips and knees
- Shoulders hips knees and feet facing forwards
- Knees in line with feet
- Use arms to drive movement.



### FORWARD AND BACKWARD, LATERAL BOUND

#### Instructions

##### Starting Position:

- Spread out along the goal line
- Sit backwards into semi squat position
- Shoulders, hips, knees and feet facing forwards
- Knees in line with feet.

##### Instruction:

- Remain in semi squat position use short sharp footwork balanced over feet
- Using arms to drive the movement
- Take x2 forwards steps
- Take x1 sideways bound right and hold one second
- Return to midline with x2 forwards steps.

- Take x1 sideways bound left hold 1 second
- Repeat to half way
- Repeat backwards to the goal line *½ court.*

#### Key Points

##### Players:

- Land quietly in a strong athletic position
- Keep eyes up.

##### Coaches:

- Absorb landing by bending through hip/knees
- Ensure hips level
- Knee in line with foot
- Foot straight ahead.

### WALKING LUNGE AND ROTATION

#### Instructions

##### Starting Position:

- Spread out along goal line with hands on hips.

##### Instruction:

- Walking lunge forwards by taking a large step forwards and dropping back knee down to just off the floor
- Keep trunk upright and tuck buttocks under to stretch through front of thigh
- Rotate trunk away and hold two seconds
- Repeat to ½ way.

*½ court.*

#### Key Points

##### Players:

- Drop hip and bend knee
- Keep chest up.

##### Coaches:

- Keep hips level with knee in line with foot
- Don't let the front knee come forwards of the shin.

## WALKING HAMSTRING/GLUTEALS

### Instructions

#### Starting Position:

- Spread out across court at half way.

#### Instruction:

- While walking forwards, bring right leg forwards with heel on ground keeping knee straight bend through hips to stretch hamstring
- Step forwards again and cross right foot over left knee to stretch gluteals
- Repeat on other leg
- Repeat to goal line.

*½ court.*

### Key Points

#### Players:

- Drop hip and bend knee.

#### Coaches:

- Keep hips level with knee in line with foot.

## TARGET DYNAMIC STRETCH

Individual directed dynamic stretching targeting identified areas requiring attention.

# STRENGTH

**Purpose:** Promote strength and develop a stable base upon which the body moves. It specifically targets the muscles that control the trunk, hips, pelvis and knees known to be protective of injury.

**Implementation:** One exercise from each target group should be completed.

## QUADRICEPS

### REVERSE LUNGE AND DRIVE

#### Instructions

##### Starting Position:

- Start facing wall 1 metre from wall with hands on hips.

##### Instruction:

- Step backward into reverse lunge then rapidly drive swing leg up to make high contact with foot onto the wall.

*As proficiency improves increase speed of movement while maintaining control.*

**2x12 reps each leg.**

#### Key Points

##### Players:

- Stay strong through torso
- Eyes up
- Maintain balance.

##### Coaches:

- Ensure knee in line with foot and foot straight ahead
- Ensure hips remain level
- Making contact with wall via high leg drive maximises available stance leg gluteal activation throughout range and encourages active acceleration throughout the motion.

### LUNGE WITH PARTNER PUSH

#### Instructions

##### Starting Position:

- In pairs with partner circling.

##### Instruction:

- As partner pushes FIRMLY in any direction, athlete reacts by dropping into a split leg lunge position.

**2x12 reps each leg.**

#### Key Points

##### Players:

- Stay strong through torso
- Eyes up
- Stay tall
- Knees 'wide' on landing.

##### Coaches:

- Ensure lower back remains straight (do not allow to over arch) and that hips do not twist
- Ensure athletes do not rush the exercise
- Only once proficient place arms across chest.



## CORE

### HAND AND FOOT TAP

#### Instructions

##### Starting Position:

- Starting on hands and feet, back straight in strong position.

##### Instruction:

- Lift your upper body, hips and knees until you form a straight line from head to toe
- Widen through the front of your chest.
- Maintain strong position and touch hand to opposite foot.

*2x12 L/R.*

#### Key Points

##### Players:

- Stay strong through trunk, do not let body roll, keep everything in a straight line.

##### Coaches:

- Ensure no arch or sway of back, ensure buttocks tucked under, and keep head in neutral position
- Attempts to encourage some dynamic abdominal control.

## GLUTEALS/HAMSTRINGS

### ARABESQUE

#### Instructions

##### Starting Position:

- Standing on one leg.

##### Instruction:

- Extend one leg behind and both arms forwards
- Bend forwards from hips keeping back straight and hips level
- Return to upright posture.

*2x8 reps each leg.*

#### Key Points

##### Players:

- Keep the movement controlled
- Maintain good alignment
- Keep hips level.

##### Coaches:

- Attempts to fire gluteals and hamstrings
- Ensure swing leg hip is dropped down to neutral
- Ensure back remains straight.

## NORDIC LOWER

### Instructions

#### Starting Position:

- Kneeling upright onto gym towel with hands crossed over your chest
- Partner keeps stable position by your fixing feet to floor.

#### Instruction:

- Slowly lean forwards keeping your body completely straight until you can no longer hold a stable position and dropping through your hands to the floor.

***2x8 reps each leg.***

### Key Points

#### Players:

- Try to hold as long as you can
- Keep body straight,
- Do not stick buttocks out.

#### Coaches:

- Ensure athlete is in a straight line from head to knees
- Ensure back is not arched and hips not bent
- Ensure partner firmly holds athletes feet to floor.

*Once proficient encourage the athlete to return to upright position rather than dropping to the ground.*

# BALANCE/LANDING

**Purpose:** To improve players ability to take off and land safely on single or double leg and capacity to absorb force in more challenging circumstances. Use of the ball during exercises further increases specificity of training, ensuring the overhead arm position required of most netball landings is focused on and attended to.

**Implementation:** Coaches should select 4 exercises in total each time the program is delivered. Coaches are encouraged to choose different activities for each session in order to provide variability for players.

## JUMP AND LAND TECHNIQUE

### DOUBLE LEG JUMP/LAND

#### Instructions

##### Starting Position:

- Standing on both feet in the good technique take off position.

##### Instruction:

- Jump upwards and land in the good technique landing position on two or one leg if proficient
- Hold two seconds.

*x10 reps.*

### SINGLE LEG JUMP/LAND

##### Starting Position:

- Standing on one foot in the good technique take off position.

##### Instruction:

- Hop upwards
- Land on the same leg in the good technique landing position
- Hold two seconds.

*x5 reps each legs.*

#### Key Points

##### Players:

- Sit backwards slightly prior to taking off
- Land quietly with knees wide.

##### Key Coaching Point:

- Ensure good technique take off position and safe landing technique
- Once proficient progress by  
(a) increasing the height of the jump and/or  
(b) reducing the hold time between jumps.

DO NOT LET KNEE TURN INWARDS ON LANDING.

DO NOT LET HIP DROP ON LANDING.

### DOUBLE LEG ACTIVITIES

#### SPEED CROSSES +/- BALL

##### Instructions

###### Starting Position:

- In the good technique take off position.

###### Instruction:

- Start in the middle
- Double leg jump and land diagonally to all four points of the cross
- Perform as quickly as possible
- Return to middle after each jump
- Keep arms overhead.

**x5 reps.**

##### Ball Alternative

- In pairs, catch and pass a ball on landing.

*Once proficient land on one leg or add a ball pass at the point of the cross.*

##### Key Points

###### Players:

- Sit backwards prior to taking off
- Land quietly with knees wide
- Focus on moving as quickly as possible while maintaining wide knees.

###### Coaches:

- Ensure good technique take off and good technique landing position
- Pay particular attention to knee position at the point of repeated landing/take off avoiding knees coming inwards.

## ROTATION 180 +/- BALL

### Instructions

#### Starting Position:

- In pairs
- Commence in the good technique take off position.

#### Instruction:

- Alternate which athlete calls the direction
- Caller will instruct two directions eg. 'Left, left' or 'right, left' On command of caller both athletes explode into air, rotate 180° in the direction specified
- Land
- Pause one second before taking off again in direction specified
- Stick final landing and hold
- Land in the good technique landing position with arms overhead.

**Repeat x5 calls each athlete.**

*Once proficient reduce contact time such that it is an instantaneous second jump or add a ball pass.*

### Ball Alternative

#### Instruction:

- Partner feeds a ball as the player is rotating back to centre
- Alternate between passing ball and jump rotating
- Catch in midair and land
- Gradually make pass slightly out of reach so athlete needs to adjust.

**Repeat x5 calls each athlete.**

### Key Points

#### Players:

- Sit backwards prior to taking off
- Land quietly with knees wide
- Only rotate as far as you can rehearse GOOD landing technique - avoids simply learning poor landing.

#### Coaches:

- Ensure good technique take off and good technique landing position
- Ensure athletes only rotate as far as they can maintain good technique.



### SINGLE LEG ACTIVITIES

#### DIAGONAL +/- BALL

##### Instructions

###### Starting Position:

- In pairs, facing partner.

###### Instruction:

- Start with fast feet
- Alternate who calls the direction
- Jump backwards before immediately jumping diagonally forwards to left or right landing on one leg
- Pause one second
- Push off single leg to return to start position.

*Repeat x5 calls each athlete.*

*As proficiency improves reduce contact time such that it is an instantaneous second jump.*

##### Key Points

###### Players:

- Sit backwards prior to taking off
- Land quietly and balanced.

###### Coaches:

- Ensure good technique take off and good technique landing position
- Facing partner encourages eyes up as players will look at their team mate rather than their feet while also allowing team mate to provide feedback on landings.

#### LAND AND PUSH

##### Instructions

###### Starting Position:

- In pairs, partner circles athlete
- Start in good technique take off position.

###### Instruction:

- Jump off both feet
- Land on either two or one leg (depending on proficiency) in the ideal good technique landing position
- Ensure hip does not drop down on landing leg
- While in air partner provides a firm push to off balance.

*Repeat x5 landings each leg in multiple directions.*

###### Ball Alternative

- Perform in threes and add a ball catch to the drill i.e. Jump, contact and catch ball.  
*Repeat x10 passes.*

##### Key Points

###### Players:

- Sit backwards prior to taking off
- Land quietly and balance.

###### Coaches:

- Ensure good technique take off and good technique landing position
- Ensure partner performs a firm destabilising force to trunk
- Facing partner encourages eyes up as players will look at their team mate rather than their feet while also allowing team mate to provide feedback on landings.

## REPEATED EFFORT

### REPEATED SPEED CROSSES +/- BALL

#### Instructions

##### Starting Position:

- In the good technique take off position.

##### Instruction:

- Start in the middle
- Diagonally jump to a point of the cross
- Instantly take off again in the same direction
- Returning to middle after two jumps in each direction
- Repeat to all points of the cross
- Perform as quickly as possible
- Keep arms overhead.

**Repeat x2 each way.**

*Once proficient land on one leg or add a ball.*

#### Ball Alternative

##### Starting Position

- In pairs, facing partner.

##### Instruction:

- Repeat exercise as described, catch and pass a ball on the second landing.

*Once proficient perform x1 without ball, x1 with ball each direction.*

#### Key Points

##### Players:

- Sit backwards slightly prior to taking off
- Land quietly with knees wide.

##### Coaches:

- Ensure good technique take off and good technique landing position
- Watch for knee alignment at the first landing/second take off
- Once proficient progress by increasing the height of the jump.

### TUCK JUMPS +/- SLALOM

#### Instructions

##### Starting Position:

- Start in the good technique take off position.

##### Instruction:

- Jump and land repeatedly on the spot
- Lifting knees to hip height.

*2x5 jumps.*

##### Starting Position Slalom:

- Start in the good technique take off position.

##### Instruction:

- Jump and land repeatedly lifting knees to hip height diagonally forwards x5 jumps
- Followed by diagonally backwards x5 jumps.

*2x5 jumps forwards/backwards.*

#### Key Points

##### Players:

- Stay upright and keep chest up
- Land softly and keep knees wide.

##### Coaches:

- Ensure knees do not move inwards particularly with repeated landing/take off
- If the exercise is too difficult pause between tuck jumps to ensure safe landing alignment.

## AGILITY

**Purpose:** To develop a solid movement foundation upon which skills are honed. The agility exercises aim to improve movement efficiency when changing direction, decelerating and then reaccelerating. The agility category targets how to absorb force in landing/decelerating but also how to generate force when reaccelerating.

Use of the ball during tasks increases specificity of training. The elite program extends these principles further to accommodate not only pre-planned change of direction but also the response to unpredictable stimulus.

**Implementation:** Similar to Balance/Landing coaches should select 4 exercises in total each time the program is delivered.

## PREDICTED CHANGE OF DIRECTION

### ZIG ZAG BOUND

#### Instructions

##### Starting Position:

- Spread out along the goal line.

##### Instruction:

- Start with a double leg squat backwards (or efficient squat position)
- Then commence zigzag running swinging legs high into exaggerated hip/knee bend
- Land on the balls of your feet
- Use your arms to drive the movement
- Drive opposite arm and leg
- Progressively increase distance and speed of bound
- Repeat to half way.

*2x ½ court.*

#### Key Points

##### Players:

- Stay tall
- Eyes up
- Use arms
- Try to stay in the air as long as possible
- Gradually increase the distance and speed of the bound.

##### Coaches:

- Ensure knee does not turn in on direction change and hips remain level
- Ensure landing through balls of feet.

## DEFENSIVE SHUFFLE

### Instructions

#### Starting Position:

- Spread out across court at half way.

#### Instruction:

- Sit backwards into semi squat position
- Perform x2 repeated diagonally backwards sidesteps in semi squat position
- Keep arms overhead
- Continue to goal line
- Combine with Zig Zag Bound.

*2x ½ court.*

### Key Points

#### Players:

- Stay compact throughout
- Keep knees wide
- Quiet feet.

#### Coaches:

- Ensure knees in line with feet
- Ensure hips/knees bent
- Ensure strong through torso.

## REACTIVE CHANGE OF DIRECTION

### ROTATION SURPRISES + BALL

### Instructions

#### Starting Position:

- In pairs, directly opposite partner, with a ball.

#### Instructions:

- Start with fast feet
- Partner rapidly passes ball repeatedly overhead in random surprises
- Partner dictates x10 change of direction left or right 90/180° rotation (as far as you can) with single leg land
- Keep arms overhead
- Repeat by partner.

*x10 reps.*

### Key Points

#### Players:

- Stay compact and strong when changing direction
- Move quickly but quietly
- Rapid ball skills with controlled rotational landing in good alignment.

#### Coaches:

- Ensures load is dispersed more evenly throughout both feet.



## REVERSE SIDESTEP +/- BALL

### Instructions

#### Starting Position:

- Team forming a circle
- One player elected the caller.

#### Instructions:

- Start with fast feet
- Caller instructs left or right
- On command of the caller sidestep rapidly diagonally backwards either left/right
- x2-3 steps with fast change of direction back to centre to fast feet position.

*x10 reps.*

#### Ball Progression

#### Starting Position:

- In pairs, directly opposite partner, with a ball.

### Instructions:

- Start with fast feet
- On command of partner sidestep rapidly diagonally backwards left/right
- x2-3 steps with fast change of direction back to centre to catch ball.

*x10 reps.*

### Key Points

#### Players:

- Stay compact and strong when changing direction
- Move quickly but quietly
- Try to stay centred over body
- Drive through inside leg to accelerate back.

#### Coaches:

- Stay low (hip/knee flexion)
- Balanced over feet (control trunk position)
- Use safe change of direction technique.

## DECELERATION TECHNIQUE

### STRAIGHT LINE DECELERATION

#### Instructions

##### Starting Position:

- Spread out along the goal line.

##### Instructions:

- Accelerate out hard to top of circle
- Then decelerate rapidly over five small steps
- Walk back to baseline
- Ensure you practice x2 take offs with alternate foot in front to ensure symmetry of push off drive.

*x2 reps each leg.*

#### Key Points

##### Players:

- When decelerating stay low and balanced over feet using multiple short steps to decelerate.

*x10 reps.*

##### Coaches:

- Use good technique deceleration.

### CHANGE OF DIRECTION

#### Instructions

##### Starting Position:

- Spread out along the goal line.

##### Instructions:

- Accelerate out hard to top of circle
- Decelerate and turn to accelerate back to base line before changing direction once more
- Always turn the same way
- As you turn reach down to touch the outer aspect of your inside leg
- Walk back to baseline.

*x1 rep each way.*

#### Key Points

##### Players:

- Stay compact and strong when changing direction
- Move quickly but quietly
- Try to stay centred over body
- Outside leg acts as the brake
- Inside leg acts as the accelerator.

*x10 reps.*

##### Coaches:

- Use safe deceleration and change of direction technique.

## NETBALL PLANE

### Y DRILL – DODGE AND DECELERATE

#### Instructions

##### Starting Position:

- In pairs, 5m from partner
- One athlete is the attacker
- One is defender.

##### Instructions:

- Start with fast feet
- On partners command accelerate out straight towards defender who is approaching with arms up
- Defender dictates direction to drive towards
- Dodge x1 then drive in direction dictated by partner
- Focus on the DODGE
- Drive 5m then decelerate.

*x2 reps each leg.*

#### Key Points

##### Players:

- Stay compact and strong when dodging
- Keep weight over body
- Move quickly but quietly
- When decelerating stay low and balanced over feet using multiple short steps to decelerate.

*x10 reps.*

##### Coaches:

- Stay low (hip/knee flexion) and balanced over feet (control trunk position) when dodging
- Ensure centre of mass over body
- Knees in line with feet
- Use arms and knees to drive when running.

### Y DRILL - DODGE AND CHANGE OF DIRECTION +/- BALL

#### Instructions

##### Starting Position:

- In pairs, 5m from partner
- One athlete is the attacker
- One is defender.

##### Instruction:

- Y drill as above, dodge then accelerate out 5m to top of 'Y' before changing direction back to base of 'Y'
- As you turn reach down to touch the outer aspect of your inside leg.

*x2 each direction.*

#### Ball Alternative

##### Starting Position:

- In pairs, 5m from partner
- One athlete is the attacker
- One is defender.

##### Instruction:

- Y drill as above, dodge then accelerate out 5m to top of 'Y' before catching ball passed from feeder before changing direction back to base of 'Y'.

*Once proficient perform x1 without ball, x1 with ball each direction.*

#### Key Points

##### Players:

- Stay compact and strong when changing direction
- Move quickly but quietly
- Outside leg acts as the brake, inside leg acts as the accelerator
- When planting the outside foot ensure it begins to turn in the direction you are heading.

##### Coaches:

- Ensure good technique change of direction.

## Y DRILL – PIVOT +/- BALL

### Instructions

#### Starting Position:

- Spread out along the goal line.

#### Instructions:

- Accelerate out hard to top of circle
- Then decelerate rapidly over five small steps
- Walk back to baseline
- Ensure you practice x2 take offs with alternate foot in front to ensure symmetry of push off drive.

*x2 reps each direction.*

### Ball Alternative

#### Starting Position

- As a team
- One player stands 10m from group to feed the ball
- Others assemble in a line.

*x1 rep each way.*

#### Instruction

- 1<sup>st</sup> player accelerates forwards to feeder
- On command athlete accelerates diagonally in the direction specified by feeder
- Catch and pass ball before pivoting outwardly to pass back to next player in line
- Next player accelerates forwards to catch ball/passes back to feeder and repeats process
- Once proficient add additional dodge
- Prior to directional change specified by feeder
- An additional ball can be added.

### Key Points

#### Players:

- Stay compact and strong when changing direction
- Move quickly but quietly
- Plant outside foot to decelerate and pivot
- When pivoting ensure foot begins to turn in the direction you are heading
- Transfer weight to inside leg to drive
- Accelerate down court.

#### Coaches:

- Ensure good technique change of direction transferring weight to inside leg to drive
- Accelerate down court.

## ONE ON ONE

### Instructions

#### Starting Position:

- In pairs, stand facing partner about 2 metres apart
- Spread out across court
- One athlete is the attacker
- One is defender.

#### Instruction:

- Attacker uses repeated sidestep dodging to beat opponent
- Swap roles
- Focus on technique.

*x2 reps each for attacker/defender.*

### Key Points

#### Players:

- Stay compact and strong when changing direction.

#### Coaches:

- Ensure good technique change of direction.

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# THE KNEE PROGRAM

## ELITE GUIDE

**KNEE:** knee injury prevention for Netballers to Enhance performance and Extend play

### KEY PRINCIPLES

Good Technique - Take Off  
Good Technique - Landing

Good Technique - Deceleration  
Good Technique - Change of Direction

### WARM UP Perform all

Partner Circling Jog	Full Court
'A' Skip	½ Court
High Knees	½ Court
Butt Flicks	½ Court
Calf Bounces	½ Court
Side Skip and Squat	½ Court
Lateral High Knees	½ Court
Forward and Backward, Lateral Shuffle	½ Court
Forward and Backward, Lateral Bound	½ Court
Walking Lunge and Rotation	½ Court
Walking Hamstrings/Gluteals	½ Court
Target Stretching	1-2 minutes

### BALANCE/LANDING Perform 4 exercises in total

#### JUMP AND LAND TECHNIQUE

Double Leg and Single Leg	x10 Reps
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#### DOUBLE LEG ACTIVITIES

Speed Crosses +/- Ball	x2 Reps
Rotation 180 +/- Ball	x5 Reps L/R

#### SINGLE LEG ACTIVITIES

Diagonal +/- Ball	x10 Reps
Land and Push	x5 Reps L/R

#### REPEATED EFFORT

Repeated Speed Crosses	x2 Reps L/R
Tuck Jumps +/- Slalom	2x5 Reps

### STRENGTH Perform 1 from each target muscle

#### QUADRICEPS

Reverse Lunge and Drive	2x12 Reps
Lunge with Partner Push	2x12 Reps

#### GLUTEALS/HAMSTRINGS

Arabesque	2x8 Reps L/R
Nordic Lowers	2x8 Reps

#### CORE

Hand and Foot tap	2x12 Reps
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### AGILITY Perform 4 exercises in total

#### PREDICTED CHANGE OF DIRECTION

Zig Zag Bound	2x ½ Court
Defensive Shuffle	2x ½ Court

#### REACTIVE CHANGE OF DIRECTION

Rotation Surprises + Ball	x10 Reps
Reverse Sidestep +/- Ball	x10 Reps

#### DECELERATION TECHNIQUE

Straight line Deceleration	X2 Reps L/R
Change of Direction	X1 Rep L/R

#### NETBALL PLANE

Y Drill - Dodge and Decelerate	X4 Reps
Y Drill - Dodge and Change of Direction +/- Ball	x2 no Ball, x2 + Ball
Y Drill and Pivot +/- Ball	x4 Reps

#### DEFENDER

One on One	X2 Reps
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L/R – Left/Right F/B – Front/Back