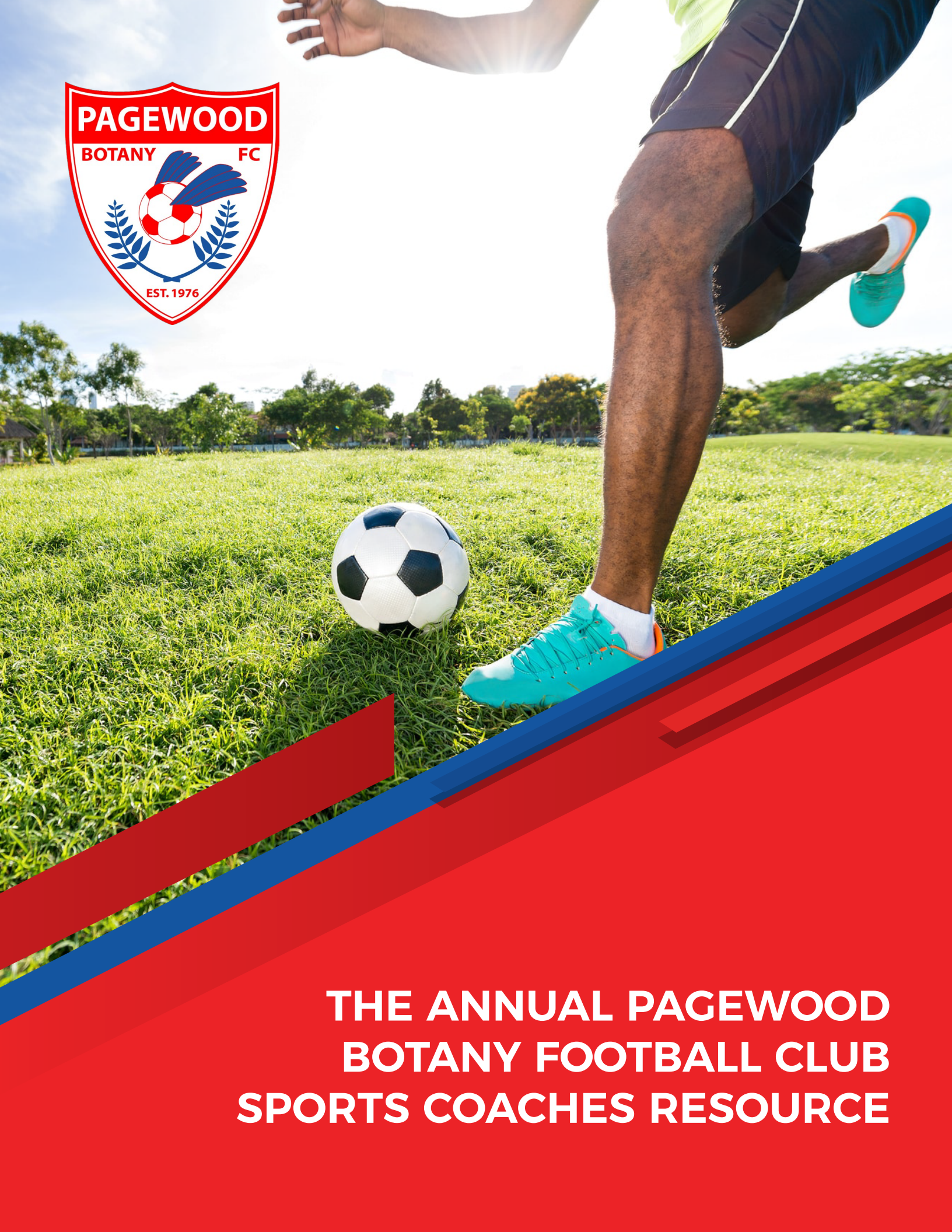

THE ANNUAL PAGEWOOD BOTANY FOOTBALL CLUB SPORTS COACHES RESOURCE

GARDENERS ROAD PHYSIOTHERAPY
AND SPORTS INJURY CENTRE
BENCHMARK PHYSIOTHERAPY GROUP OF PRACTICES

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WELCOME!

Welcome to **The Annual Pagewood Botany Football Club Sports Coaches Resource.** This booklet has been designed by a host of health professionals and fitness specialists to help guide you in the coming season.

It includes information relevant to those coaching teams, and presents the very latest methods used by professional sporting clubs around the world.

Our overriding aim is to provide your club and players with an athletic sports program that will significantly enhance the performance of all players. This initial program will provide a basis for overall enhancement to the performance and the culture within your Club.

This resource is made to be practical and is split into two components:

1. Athletic development and enhancement
2. Injury prevention and injury management

The programs primary aim is to reduce the injury incidence and enhance player welfare while at the same time taking athletic enhancement to a new level. It is our endeavour to prepare your juniors for their sporting years ahead. As the players continue to develop their athletic ability it will provide a significantly improved player; one with skill, power and speed.

Benchmark Physiotherapy will provide a series of seminars and workshops for the athletic development and player welfare of the junior players in your club. The seminars are ideal for the coaches, managers and interested parents.

The workshops and seminars available include:

1. Pre-game warm-up and post game warm down demonstrated to reduce injuries
2. Acceleration, Speed and Agility drills to enhance performance
3. Sports strapping education, injury prevention and acute injury management workshop

Please see your club captain for dates, locations and details specific to your club or sport.
Our objective is to provide, to the juniors in particular, the athletic skills required to play at a vastly improved level and to possess athletic attributes to assist them develop their skills, ready for the senior ranks. This skill development and athleticism will create a better foundation for the future of your club.

We look forward to being an integral part of the player development and sporting success of your club.

CONTENTS

Section A – Athletic Enhancement

Section B – Injury prevention and injury management

SECTION A – ATHLETIC ENHANCEMENT

PLANNING YOUR SEASON

Planning a season is part science part art. Within any plan there must be flexibility to meet the athlete where they need to be meet at any given session.

Previous training sessions, food, hydration, sleep and mental stress will all impact an athlete's performance.

Having an overall plan will make manipulating of volume and intensity for individual sessions much easier as well as increasing the overall outcome.

A great starting point is to break the year into three stages.

- **Pre-Season-** This will typically be a period when general physical preparation is the primary focus. Injury prevention is still the number one goal and performance number two. Always emphasise technique over outcome. There is no point in adding training load to dysfunctional patterns. Enjoy the journey and don't make the out come the primary goal. As a general rule this period will consist of lower intensity but higher volume work. At the start of Pre Season the work completed should be very general. As the season approaches exercise choices should become more specific to the demands of the sport. There will be an increase in skill, technique and team play focus as the season gets closer. The added mental stress involved in learning should be factored in when considering volume and intensity.

- **In Season-** Due to the increased demand on team play and skill acquisition the volume of conditioning work will decrease. Encourage feedback from your athletes and then manipulate volume and intensity to match. If in doubt keep volume low. The goal is to train the body not drain it. Conditioning work should be very specific to the demands of the sport and also be structured to help balance the athlete from any recurring patterns that the sport may demand. Mental emotional stress of competition should also be remembered, as this will affect an athlete's ability to go 100% all the time.

- **Post Season-** The priority is to get any injuries that have been managed throughout the season sorted as soon as practical. Athletes should be encouraged to stay active and participate in physical activities they enjoy. Workouts should be less structured. Be mindful around body composition, as we should never stray to far from being competition ready.

The length of these stages will differ depending on the individual needs and demands of each sport.

STRESS AND TRAINING LEVELS

Training is a stress on the body. Stimulate enough stress allow time to recover and we see improvement. Add to much stress without the necessary recovery and your athletes' will either get injured or sick.

As a coach your ability to understand where your athlete is on the stress continuum is critical.

There are three basic stress buckets.

1. Lifestyle- Sleep, nutrition, hydration
2. Physical- Training load, injuries, tightness, incidental movement
3. Mental/Emotional- Perceived stress (relationship, work, school etc)

The body recognises stress as stress. Therefore if one of your stress buckets is full you need to reduce stress in the other buckets.

The coach is ideally suited to manipulate training intensity and load to accommodate for any variables.

Asking your athletes a couple of quick questions before each session will allow you to manipulate there training load for maximum benefit.

Example questions

1. When did you last eat?
2. How many hours sleep did you get?
3. How did you feel when you woke up?
4. Have you got any tight muscles after last session?
5. Do you feel energised?
6. Are you looking forward to training?

If your athlete answers favorably to all the questions then it's a day when you can crank things up. Get your athletes to train at an intensity around a 8/10.

If they don't then it could be a day where you back off volume and intensity. Get your athletes to train around a 6/10.

Remember, often less is more. **We want to "Train the body not Drain the body".**

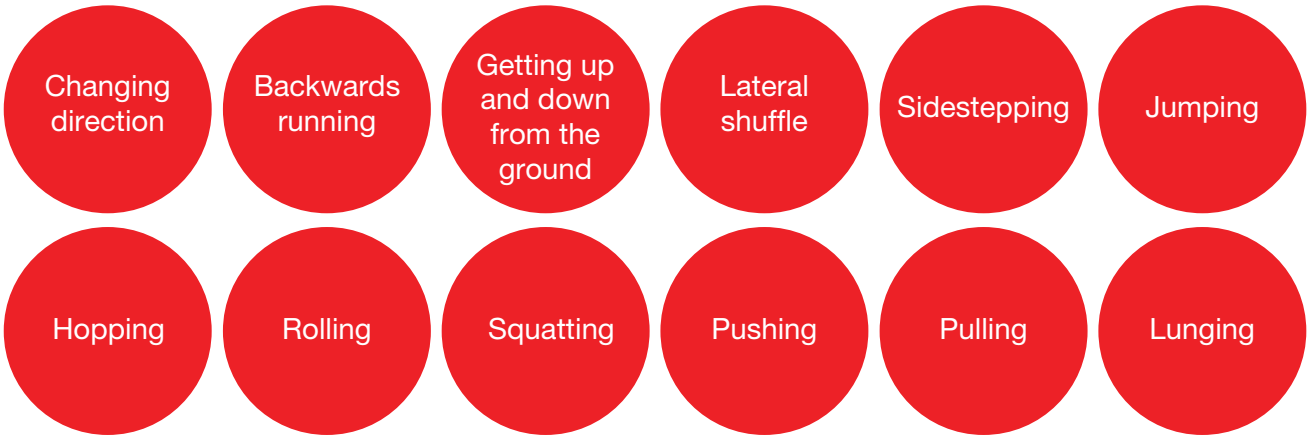
Aerobic Foundation

At the beginning of your pre season there is value in including some work to prepare the cardio vascular system.

This will add recovery and allow you to push to higher levels as you get more sports specific closer to the season.

The idea is to work for 20-40mins of continuous movement at an intensity of 6/10.

Think about the movements in your sports:



Include these movements during your 20-40mins to help prepare the bodies tissues as well as your cardio vascular system.

Intervals

As you get closer to the season you need up the intensity to prepare for the high demands of competition. Due to the higher intensity, the volume must come down.

Think of the movements involved in your sport. Then incorporate them into interval or circuit based training. Start with a work to rest ratio of 1: 3 then progress to 1: 2 then 1: 1

A sample work out might look like:

Work for 30s rest for 60s

- Shuttles
- Squats
- Push Ups
- Lateral Shuffle
- Lunges

Complete 3-6 rounds.

STRENGTH TRAINING INTRODUCTION

Strength training is an essential element of a well-balanced program.

There are numerous benefits to following a strength-training program:

- Increased strength
- Decrease risk of injury
- Increased potential to express power on field
- Increased muscle
- Decrease fat
- Improved hormonal profile
- Confidence

This section has been broken in three four-week blocks.

Technique is Always your first priority. Your first rep and last rep should look the same.

Each week contains two works out A and B. If you can only get into the gym once a week follow program A for pre season. If you can get in three times rotate. So week one will be A,B,A week 2 would be B,A,B etc.

Make sure to include a taper every four weeks. Decrease the volume to allow athletes to recover, develop and adapt. This will maximise performance physically and help the athlete freshen up mentally.

The programs have been constructed to cater for a wide range of lifting abilities. Only advance an athlete to a more complex lift once technique. Unloaded technique training can be occurring simultaneously as the simpler weighted version is continued in the program.

PRE SEASON STRENGTH PROGRAM WEEKS 1-12

MOBILITY

Week1-4	Week 5-8	Week 9-12
All fours hip rock	Plank alternate hip flexor	Plank alternate T spine
All fours spine roll	All fours T- spine	Plank alternate hip flexor and glut

PREHAB

Week1-4	Week 5-8	Week 9-12
Front plank	Front plank with leg lift	Front plank with rotation
Side plank	Side plank with leg lift	Side plank with reach
Bridge	Single leg balance reach OS	Single leg reach SS

MOVEMENT PREP

Week1-4	Week 5-8	Week 9-12
Toe touch squat	Squat	Overhead squat
Lunge Stationary	Lateral lunge	Transverse lunge
Crawl iso hold	Crawl forward	Crawl backwards

POWER

Week1-4	Week 5-8	Week 9-12
Bench drop	Tuck jump and hold	Tuck jump
Push up drop hold bottom	Push up drop hold top	Clap push ups

Strength Session A

Novice	Intermediate	Advanced
Leg Press x12	Goblet Squat x12	Barbell Back Squat x12
Push Up x12	Bench Press x12	DB Horizontal Press x12
Bodyweight Stationary Lunge x12	DB Anterior Lunge x12	DB Reverse Lunge x12
Seated Row x12	Single Knee Supported Row x12	DB Row x12

Strength Session B

Novice	Intermediate	Advanced
KB Deadlift	Barbell Deadlift	DB Snatch
Half Kneeling Single Arm vertical Press x12	Standing Vertical DB Press x12	Lunge Hold Vertical Press x12
Bodyweight Stationary Lunge x12	DB Anterior Lunge x12	DB Reverse Lunge x12
Lat Pull down x12	Inverted Row x12	Chinx6

Sets, Reps Weeks 1-12

Weeks 1-4	Weeks 5-8	Weeks 9-12
3x12	4x10	4x8
4x10	4x8	4x6
3x8	3x6	3x4
Deload 2x12	Deload 2x10	2x8

RESISTANCE TRAINING FOR CHILDREN AND ADOLESCENTS IN SPORT

Despite outdated concerns regarding the safety or effectiveness of youth resistance training, scientific evidence indicate that youth resistance training has the potential to offer observable health and fitness value to children and adolescents, provided that appropriate training guidelines are followed and qualified instruction is available.

A compelling body of scientific evidence indicates that children and adolescents can significantly increase their strength above and beyond those typically expected from age related growth and maturation— providing that the resistance-training program is of sufficient intensity, volume, and duration.

Regular youth participation in a resistance training programs have the potential to positively influence several measurable indices and can improve:

- cardiovascular fitness,
- facilitate weight control,
- strengthen bone,
- enhance psychosocial well-being,
- improve motor performance skills,
- increase a young athletes' resistance to sports-related injuries.

Although the total elimination of sports-related injuries is an unrealistic goal, appropriately designed and sensibly progressed fitness conditioning programs that include resistance training may help reduce the likelihood of sports- related injuries in young athletes.

Strength gains up to 74% (88) have been reported after 8 weeks of progressive resistance training, although gains of roughly 30% are typically observed after short-term (8–20 weeks) youth resistance training programs.

General youth resistance training guidelines.

- Provide qualified instruction and supervision
- Ensure the exercise environment is safe and free of hazards
- Start each training session with a 5- to 10-minute dynamic warm-up period
- Begin with relatively light loads and always focus on the correct exercise technique and learning fundamental training principles

- Perform 1–3 sets of 6–15 repetitions on a variety of upper and lower body strength exercises
- Perform 1–3 sets of 3–6 repetitions on a variety of upper and lower-body power exercises
- Include specific exercises that strengthen the abdominal and lower back region
- Focus on symmetrical muscular development and appropriate muscle balance around joints
- Sensibly progress the training program depending on needs, goals, and abilities
- Increase the resistance gradually (5–10%) as strength improves
- Cool-down with less intense calisthenics and static stretching
- Listen to individual needs and concerns throughout each session
- Begin resistance training 2–3 times per week on non-consecutive days
- Use individualized workout logs to monitor progress
- Keep the program fresh and challenging by systematically varying the training program
- Optimize performance and recovery with healthy nutrition, proper hydration, and adequate sleep
- Support and encouragement from instructors and parents will help maintain interest

This section contains reference to: "YOUTH RESISTANCE TRAINING: UPDATED POSITION STATEMENT PAPER FROM THE NATIONAL STRENGTH AND CONDITIONING ASSOCIATION"

Speed, Agility and Quickness (SAQ) Introduction

For any team sport speed is the differentiator between the good and great.

SAQ training is about first training quality movement patterns. It should be remembered that SAQ training is very demanding on the nervous system so plenty of rest between reps should be allowed. SAQ training is not fitness training. Once technique has been refined then we look increase speed, tempo and sharpness. When movement patterns become habitual then we build work capacity. So your athletes can maintain safe, high quality fast movement patterns throughout the game.

The 12-week block is broken into three blocks of four weeks. Start each block with lower volume. Over the course of the first three weeks build volume and intensity. Taper in the fourth week. Decrease volume to allow athletes to recover.
Each work out follows the same format.

Mobility

- Necessary to give athletes range of motion to minimise injury and maximise technique.
- Mobility drills should be performed in a slow controlled manner
- Only progress when current drill is mastered.

Pillar Strength

- Helps build a strong platform to minimise energy leaks
- Decrease risk of injury
- Increase performance
- Only progress when current drill is mastered.

Movement Prep

- Designed to prepare the nervous system for the work ahead
- Emphasise technique. Stay long through the spine, move from the hips and keep shoulders away from ears.
- On days when athletes are stiff or tired increase time spent on movement prep.

Power

- Will stimulate the nervous system at supra maximal levels.
- Long rest periods
- Quality over quantity
- Keep volume low

Speed Technique

- Aim is to teach movement mechanics
- Long rest periods
- Quality over quantity
- Listen to your athletes
- Emphasise that the athlete should rest if they are feeling tight in calves hamstrings etc

SAQ Yearly Plan

Development should consist of speed development in a linear pathways as well as speed, agility and quickness in multi-directional movements, similar to the movement demands of your sport.

Pre Season

This is the time the majority of your SAQ volume and development will occur. Start with low volume and low specificity. As the season approaches increase specificity and play with volume to match athletes experience and other workloads in other areas e.g. weights, skill development, team training.

In Season

Decrease the volume but maintain maximum effort. Include at the start of session when athletes are fresh. Even though volume is low. Improvements gained in the pre season will be maintained helping you hit finals in a great shape.

Post Season

Break from formal SAQ training but encourage athletes to stay active. Emphasise the need to get injuries sorted and maintain a healthy body composition.

1. SAQ Linear Development - Weeks 1-12

Mobility Linear

Weeks 1-4	Weeks 5-8	Weeks 9-12
All fours hip rock x30s	Plank with alternate hip flexor x30s	Plank with alternate T spine x30s
All fours spine roll x30s	All fours T spine rotation x30s	Plank with alternate hip flexor and glut mobliser x30s

Prehab Linear

Weeks 1-4	Weeks 5-8	Weeks 9-12
Single leg balance reach with two hands 2x5	Single leg balance reach opposite hand 2x5	Single leg balance reach with same hand 2x5
Plank with hip lift 2x15	Mountain climber 2x10ea	Plank opposite hand and foot touch 2x10
Hop and hold on spot 2x5	Hop and hold forward 2x5	Hop and hold with hand reach 2x5

Movement Prep Linear

Week 1- 4	Week 5 -8	Week 9 -12
Athletic stance warding level 2x5	Athletic stance warding level 2 2x10s	Athletic stance warding level 3 2x15s
Double foot jump forward and backwards 2x10s	Staggered stance forward and backwards 2x10s	Single leg forward and backwards 2x10s

Power Linear

Weeks 1 - 4	Weeks 5 - 8	Weeks 9 - 12
Tuck jump and hold 2x5	Tuck jump continuous 3x5	Tuck jump travelling forward 3x5
Plank with quick hands on spot 2x10s	Plank with staggered hands forward and backwards 3x10s	Plank with opposite arm and feet forwards and backwards 3x10s

SAQ Linear

Week 1 -4	Week 5 - 8	Week 9-12
Backwards running 2x20m	Backwards running 2x30m	Backwards running 2x40m
Build ups 2-3x30m	Build ups 2-3x40m	Build ups 2-3x50m
Partner resisted run 2-4x15m	Partner let goes 2-4x15m	Partner let goes with side step 2-6x15m
3 point stance and sprint 2-4x10m	Belly and sprint 2- 4x10m	Get down get up sprint 2-4x10m
Tag 2- 6x10m	Tag 2 - 6x10m	Tag 2 - 6x10m

2. SAQ Multi Directional Development - Weeks 1-12

Mobility Multi Directional

Weeks 1-4	Weeks 5-8	Weeks 9-12
All four hip rocks x30s	Plank alternate hip flexor x30s	Plank with alternate T spine x30s
All four spine rolls x30s	All fours T rotation x30s	Plank with alternate hip flexor and glut mobiliser x30s

Prehab Multi Directional

Weeks 1-4	Weeks 5-8	Weeks 9-12
Single leg balance reach with foot lateral same side 2x5	Single leg balance reach lateral with foot opposite side 2x5	Single leg balance reach lateral same side and opposite side 2x5
Plank with lateral alternate foot tap 2x10ea	Plank with alternate lateral hand tap 2x10ea	Plank with alternate hand and opposite foot tap 2x10
Hop and hold lateral same side 2x5	Hop and hold lateral opposite side 2x5	Hop and hold alternate same side opposite side 2x5ea

Movement Prep Multi Directional

Weeks 1-4	Weeks 5-8	Weeks 9-12
Athletic stance warding level 2x5	Athletic stance warding level 2 2x10s	Athletic stance warding level 3 2x15s
Double foot jumps sideways 2x10s	Split jump lateral 2x10s	Single leg jump sideways 2x10s

Power Multi Directional

Weeks 1-4	Weeks 5-8	Weeks 9-12
Lateral tuck jump and hold 2x5	Continuous lateral tuck jumps 3x5	90 degree spin tuck jump 3x5
Plank with quick feet lateral 2x10s	Plank with quick hands lateral 3x10s	Plank with quick hands and feet lateral 3x10s

SAQ Multi Directional

Weeks 1-4	Weeks 5-8	Weeks 9-12
Backwards running 2-3x20m	Backwards running 2-3x30m	Backwards running 2-3x40m
Lateral shuffle and hold 2-4x2m	Lateral shuffle and return to athle c stance 2-4x2m	Quick feet bounce into lateral shuffle and return 2-4x2m
Home A or B 2-4reps	Home A or B Home 2-4reps	Lateral mirror drill 2-4reps
Cut and sprint 2-4x10m	180 degree spin and sprint 2-4x15m	Lateral tuck jump and sprint 2-4x15m
Tag 2-6x10m	Tag 2-6x10m	Tag 2-6x10m

Technique Section

MOBILITY

All fours hip rock
• Benefit: Hip mobility
• Start Position: All fours on ground.
• Motion: Hips reach backwards towards heels
• Common Faults: Tempo to fast. Excessive spinal flexion
• Coaching Cues: Slow tempo. Stay long through spine

All fours spine roll
• Benefit: Spine and hip mobility
• Start Position: All fours on ground
• Motion: Moving hips and spine. Arch back then round back
• Common Faults: Tempo to fast
• Coaching Cues: Slow tempo. Rhythmical motion

Plank alternate hip flexor
• Benefit: Hip mobility
• Start Position: Straight arm plank
• Motion: Left foot steps towards left hand. Sink through right hip. Repeat opposite side
• Common Faults: Tempo to fast
• Coaching Cues: Long spine. Move from hips. Rhythm and flow

All fours T-spine rotation
• Benefit: T spine mobility
• Start Position: All fours on the ground. Left hand behind left ear.
• Motion: Left elbow to right elbow. Then open chest left. Repeat opposite side
• Common Faults: Tempo to fast
• Coaching Cues. Rhythm. Long spine

Plank alternate T spine rotation
• Benefit: Hip and T spine mobility
• Start Position: Straight arm plank
• Motion: Step left leg towards left hand. Then lift left hand towards sky. Repeat opposite side
• Common Faults: Tempo to fast
• Coaching Cues: Slow rhythmical tempo. Stay long through spine. Move from hips

Plank alternate hip flexor and glut mobiliser
• Benefit: T spine and hip mobility
• Start Position: Straight arm plank position
• Motion: Step left leg towards left hand. Sink into right anterior hip. Then left foot reaches across body to right. Sink into left lateral hip. Repeat opposite side.
• Common Faults: Tempo to fast
Coaching Cues: Rhythm and flow. Long spine. Move from hips.

PREHAB

Front plank

- Benefit: Anterior core control
- Start Position: Lying facing the floor. Elbows under shoulders. Legs extended.
- Motion: Hips lift until parallel with floor
- Common Faults: Excessive arch through back. Hips to high
- Coaching Cues: Stay long through back. Parallel to floor

Side plank

- Benefit: Lateral core control
- Start Position: Side lying. Elbow under shoulder. Legs extended.
- Motion: Lift hips until spine is straight
- Common Faults: Hips to high or low
- Coaching Cues: Straight line from the ankle to the ear

Bridge

- Benefit: Posterior core control
- Start Position: Lying on back. Knees bent. Toes up. Heels on ground.
- Motion: Lift hips until straight line from shoulders to knees.
- Common Faults: Excessive arch in lower back
- Coaching Cues: Tuck hips under and lift.

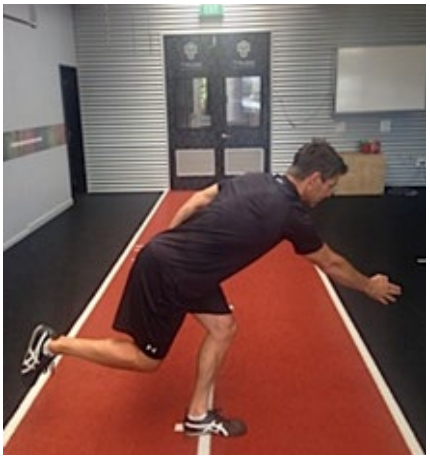
Front plank with leg lift

- Benefit: Anterior and posterior core control
- Start Position: Front plank
- Motion: Lift left leg 5cm. Hips stay level. Repeat opposite side
- Common Faults: Excessive hip roll
- Coaching Cues: Long spine. Hips and shoulders stay stationary.

Side plank with leg lift

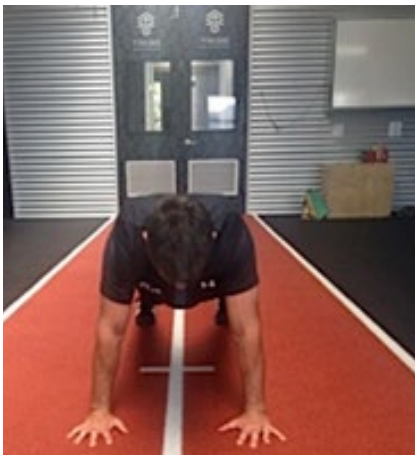
- Benefit: Lateral core and hip control
- Start Position: Side plank
- Motion: Lift top leg 5cm
- Common Faults: Hips flex as top leg is raised
- Coaching Cues: Hips open. Extend long

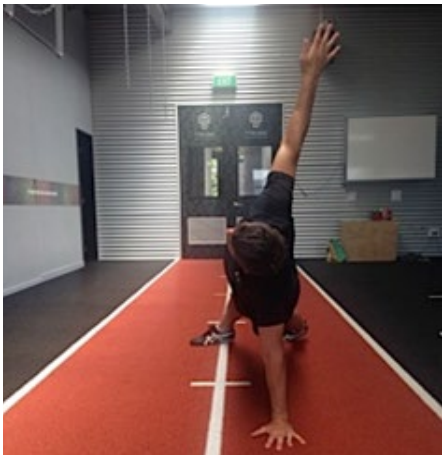
Single leg balance reach opposite side



- Benefit: Single leg control
- Start Position: Balancing on left leg
- Motion: Reach with right hand forward and to the left at hip height. Repeat opposite leg
- Common Faults: Reaching to far causing loss of control
- Coaching Cues: Move from the hips. Rhythm. Short range at start

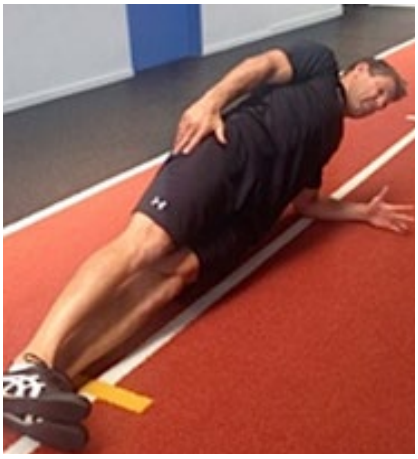
Front plank with T rotation





- Benefit: Anterior core control
- Start Position: Front plank
- Motion: Open chest. Right elbow rotates right towards sky. Ribcage and hips travel at same speed.
- Common Faults: Ribcage moves before hips
- Coaching Cues: Move from hips. stay long through spine

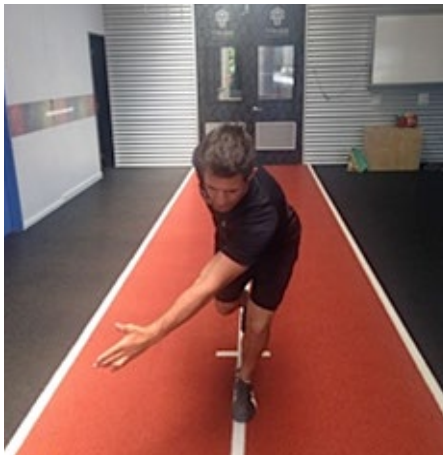
Side plank with reach



- Benefit: Lateral core control. Shoulder stability
- Start Position: Side plank with staggered feet. Bottom foot in front
- Motion: Reach forward with top hand towards floor. Allow hips to move.
- Common Faults: Poor shoulder position of supporting arm
- Coaching Cues: Shoulder away from ear. Long spine. Move from hips.

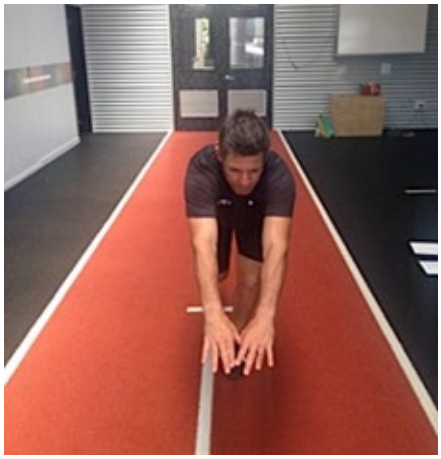
Single leg balance reach same side

• Benefit: Single leg control
• Start Position: Balancing on left leg
• Motion: Reach with left hand forward and to the right at hip height. Repeat opposite leg
• Common Faults: Reaching to far. Causing loss of control
• Coaching Cues: Move from the hips. Rhythm. Short range at start

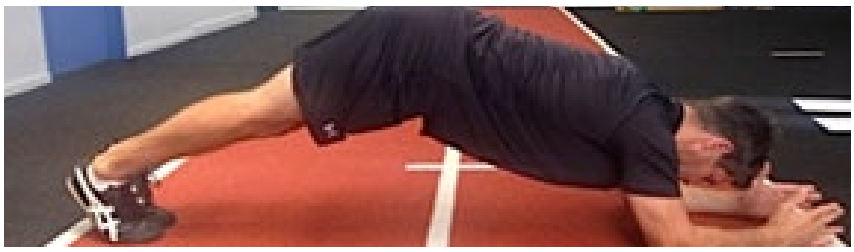
Single leg balance reach with two hand reach

• Benefit: Single leg control
• Start Position: Balancing on left leg
• Motion: Reach with both hands forward at hip height
• Common Faults: Rounded lower back.
• Coaching Cues: Decrease range. Tall spine

Plank with hip lift

• Benefit: Anterior core
• Start Position: Plank on elbow
• Motion: Hip lift upwards then return to start position
• Common Faults: Excessive arch when returning to start position
• Coaching Cues: Tension in mid section. Finish with upper body parallel to ground.

Mountain climber

• Benefit: Anterior core
• Start Position: Plank with straight arms
• Motion: Knee drive forward. Hip to 90 degrees. Hips stay level. Repeat opposite side
• Common Faults: Knee drive to high. Rounding of lower back
• Coaching Cues: Chest out. Hips stay level


Plank opposite hand and knee reach

• Benefit: Anterior core
• Start Position: Straight arm plank
• Motion: Perform a mountain climber. Left hand touches right knee. Repeat opposite side.
• Common Faults: Loss of rhythm and timing
• Coaching Cues: Rhythm. Flow.


Hop and hold on spot

• Benefit: Single leg control
• Start Position: Balancing on left leg
• Motion: Jump straight up. Soft landing on left leg
• Common Faults: Loss of balance. Heavy landing
• Coaching Cues: Decrease height of jump. Soft landing

Hop and hold forward

• Benefit: Single leg control
• Start Position: Balancing left leg
• Motion: Jump forward. Land and hold
• Common Faults: Loss of balance. Heavy landing
• Coaching Cues: Decrease distance of jump. Soft landing

Hop and hold with hand reach

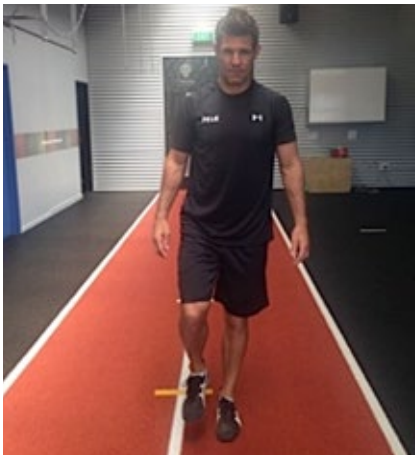
- Benefit: Single leg control
- Start Position: Balancing on left leg
- Motion: Jump forward with forward hand reach on landing
- Common Faults: Loss of balance. Rounding of lower back on landing
- Coaching Cues: Long spine.

Single leg balance with foot lateral reach same side

Benefit: Single leg control

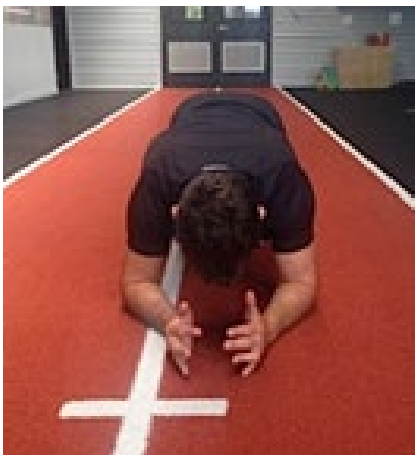
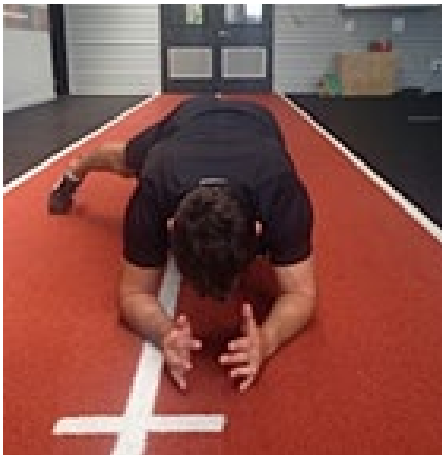
- Start Position: Balancing on left leg.
- Motion: Right leg reaches to the right. Without touching the ground return to start position
- Common Faults: Excessive left knee collapse
- Coaching Cues: Decrease range. Rhythm and flow

Single leg balance reach with foot lateral reach opposite side



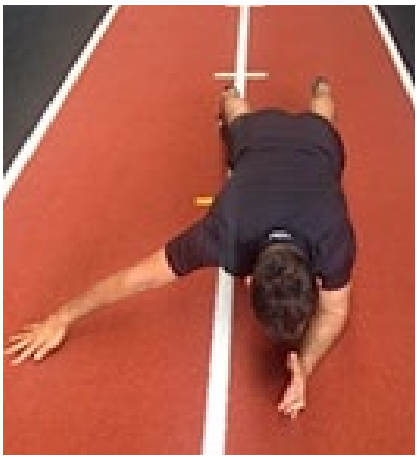
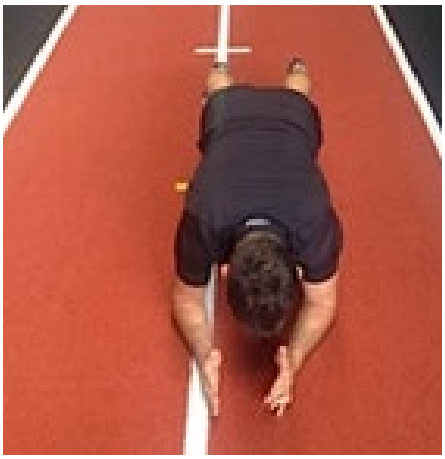

- Benefit: Single leg control
- Start Position: Balancing on left leg
- Motion: Reach with right behind left leg to the left
- Common Faults: Loss of balance
- Coaching Cues: Decrease range of motion

Plank with lateral foot tap

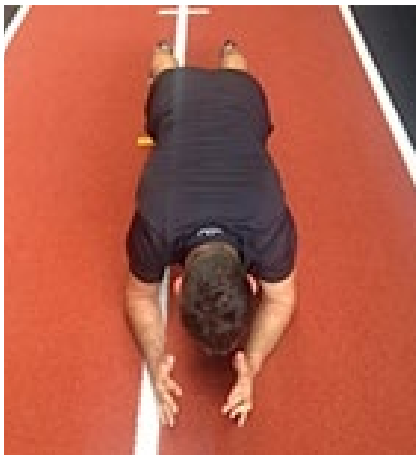
- Benefit: Anterior and lateral core
- Start Position: Plank position
- Motion: Right foot reaches to the right. Touch the ground. Then returns to start position. Repeat opposite side.
- Common Faults: Excessive arch in lower back
- Coaching Cues: Tension in mid section. Decrease range

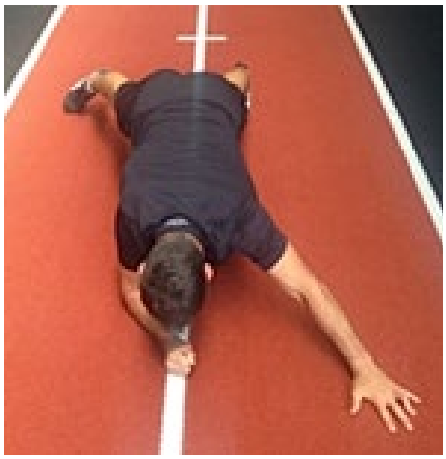
Plank with alternate lateral hand reach

- Benefit: Anterior and lateral core
- Start Position: Plank position
- Motion: Right hand reaches right. Touch the ground. Then return to start position. Repeat opposite side.
- Common Faults: Excessive lower back arch
- Coaching Cues: Tension in the med section. Decrease range

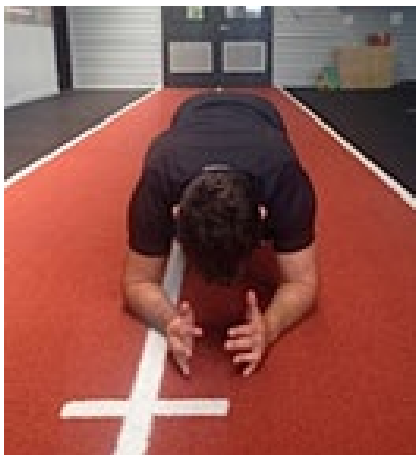
Plank with alternate lateral hand and foot reach

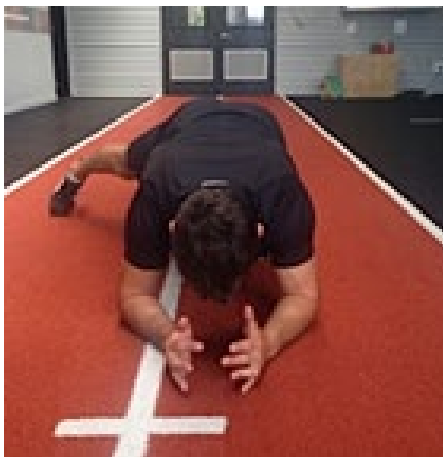




- Benefit: Anterior and lateral core
- Start Position: Plank position
- Motion: Right foot reaches right. Left hand reaches left. Repeat opposite side
- Common Faults: Excessive lower back arch
- Coaching Cues: Tension in mid section. Decrease range

Plank with lateral foot tap





- Benefit: Anterior and lateral core
- Start Position: Plank position
- Motion: Right foot reaches to the right. Touch the ground. Then returns to start position. Repeat opposite side.
- Common Faults: Excessive arch in lower back
- Coaching Cues: Tension in mid section. Decrease range

Lateral hop and hold opposite side

- Benefit: Single leg control
- Start Position: Balancing on left leg
- Motion: Jump right and hold
- Common Faults: Loss of balance. Heavy landing
- Coaching Cues: Decrease range. Soft landing
- Lateral alternate hop and hold
- Benefit: Single leg control
- Start Position: Balancing on left leg
- Motion: Jump left and hold. Jump right and hold. Repeat opposite side
- Common Faults: Loss of balance
- Coaching Cues: Decrease range

Lateral hop and hold same side

- Benefit: Single leg control
- Start Position: Balancing on left leg
- Motion: Jump left and hold
- Common Faults: Heavy landing. Loss of balance
- Coaching Cues: Decrease range. Soft landing.

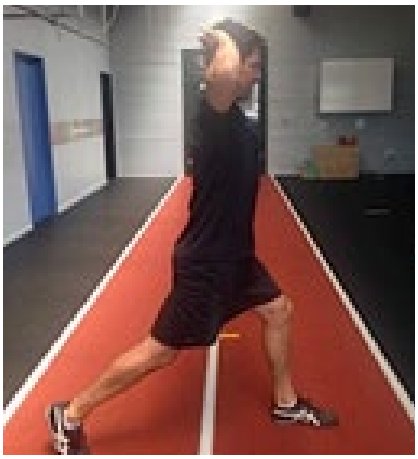
Movement Prep

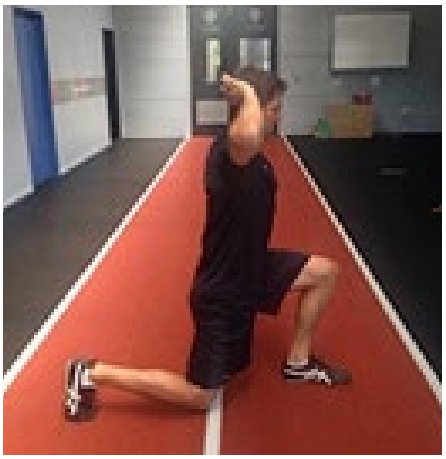
Toe touch squat

• Benefit: Hip mobility. Squat pattern
• Start Position: Standing tall. Feet shoulder width
• Motion: Reach down touch toes. Then drop hips as low as possible into squat position. Release hands then stand. Repeat.
• Common Faults: Knees collapse inwards. Excessive spinal flexion
• Coaching Cues: Knees out over toes. Stay long through spine. Move from hips

Bodyweight stationary lunge

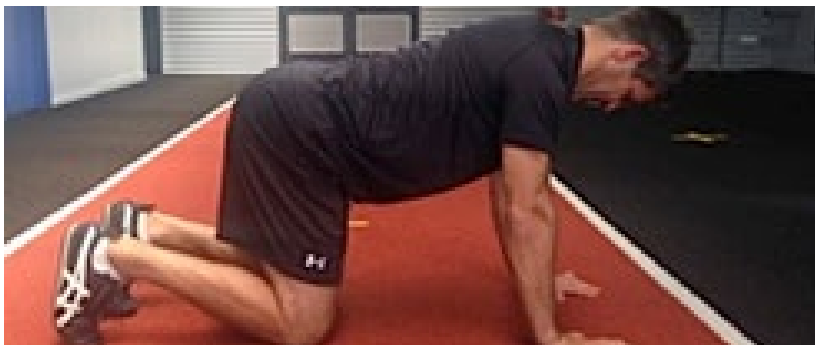
• Benefit: Total body integration
• Start Position: Split stance. Mid range. Up on back toe. Legs straight
• Motion: Simultaneously bend both legs. Back knee travels towards ground.
• Common Faults: Opposite hip to lead leg drops. Collapse in spine
• Coaching Cues: Stay tall. Hips parallel to ground

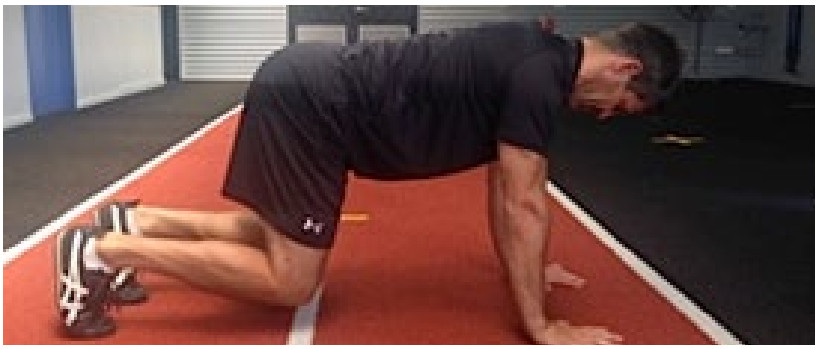




Crawl isometric hold

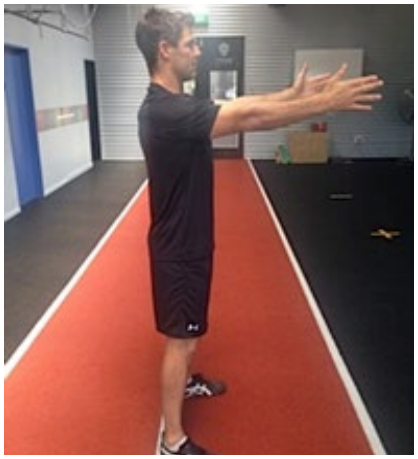
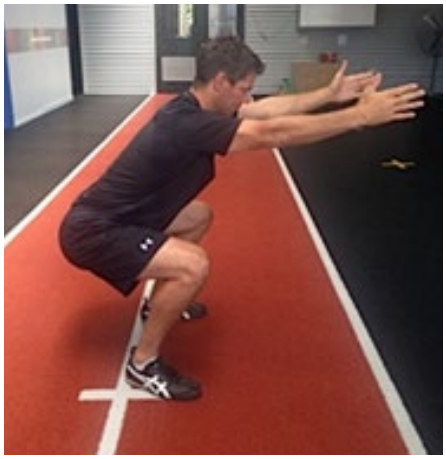
• Benefit: Anterior core and shoulder control
• Start Position: All fours. Hands under shoulders. Knees under hips. Up on toes.
• Motion: Lift knees off ground 5cm and hold
• Common Faults: Rounded back
• Coaching Cues: Long spine





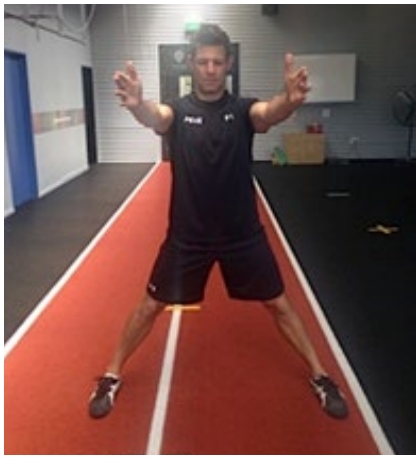
Bodyweight squat

• Benefit: Total body integration
• Start Position: Standing tall. Feet shoulder width
• Motion: Reach down and back with hips. Stay long through spine. Knees stay out over toes.
• Common Faults: Hips tuck under early. Collapse in spine
• Coaching Cues: Tall spine. Move from hips. Knees out.

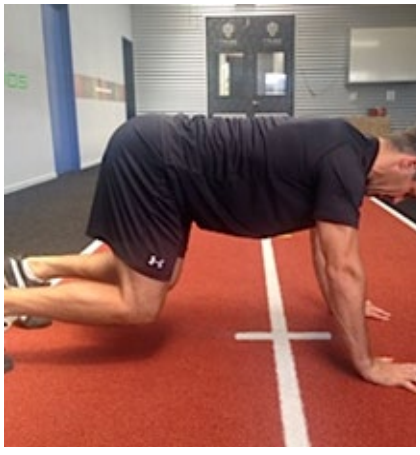
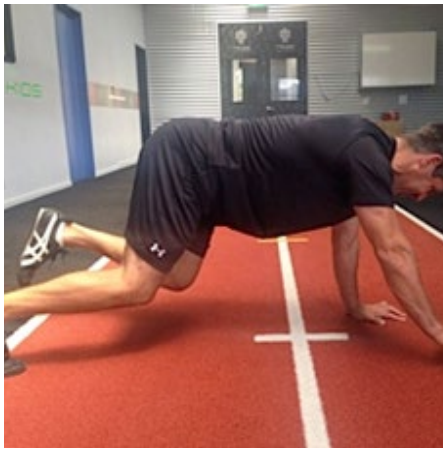
Lateral lunge

• Benefit: Lateral core and hip control
• Start Position: Standing tall. Feet wide.
• Motion: Hips reach backwards to the right. Right knee bends. Left leg stays straight. Repeat opposite side.
• Common Faults: Hips don't travel back. Rounding through spine.
• Coaching Cues: Move from the hips. Tall spine

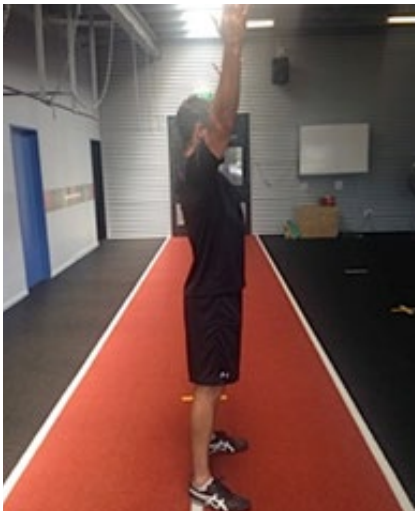



Forward crawl

• Benefit: Anterior core and shoulder control. Co ordination.
• Start Position: All fours. Knees off ground.
• Motion: Simultaneously move right hand and left foot. Short step forwards. Repeat opposite side
• Common Faults: Step is to long. Rounding in spine.
• Coaching Cues: Rhythm and flow. Short steps. Long spine

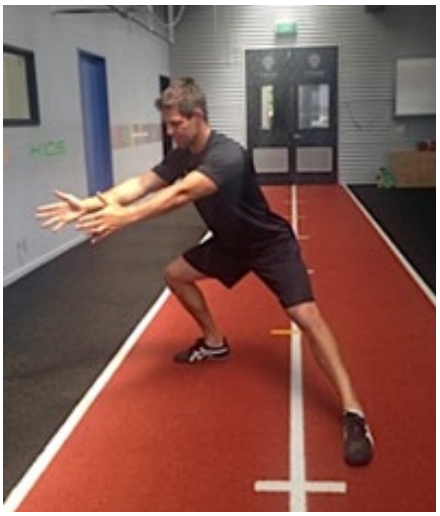



Bodyweight overhead squat



• Benefit: Total body integration
• Start Position: Standing tall. Feet shoulder width. Arms straight overhead
• Motion: Reach down and back with hips. Keep arms high.
• Common Faults: Upper body falls forward. Knees collapse in.
• Coaching Cues: Knees out. Chest high.

Transverse lunge



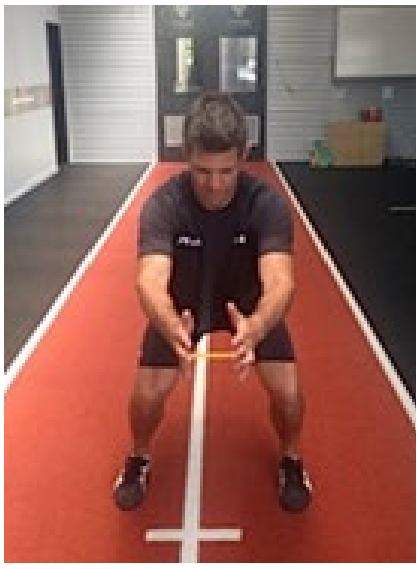
• Benefit: Hip mobility and control
• Start Position: Standing tall. Left foot on 12 o'clock. Right foot at 3 o'clock. Mid range.
• Motion: Move hips down and back. Left leg stays straight. Right knee bends. Chest stays facing forward.
• Common Faults: Loss of control and balance
• Coaching Cues: Decrease range of motion

Backwards crawl

• Benefit: Anterior core and shoulder control. Co ordination
• Start Position: All fours. Knees off ground.
• Motion: Simultaneously step right hand and left foot backwards. Repeat opposite side.
• Common Faults: Step to long. Rounded back.
• Coaching Cues: Rhythm and flow. Stay long through the spine. Short steps.

Athletic stance warding level 1

• Benefit: Total body integration
• Start Position: 3/4 squat position on balls of feet. Hands together in front. Partner one arm length away facing in.
• Motion: Athlete places hands on partner at shoulder height. Then pushes for 3s count. Repeat opposite side
• Common Faults: Change in athletic stance
• Coaching Cues: Tall spine. Breath



Athletic stance warding level 2

• Benefit: Total body integration
• Start Position: 3/4 squat position on balls of feet. Hands together in front.
• Motion: Partner pushes against athlete's hands for 3s count. Repeat opposite side
• Common Faults: To much pressure from partner
• Coaching Cues: Breath

Athletic stance warding level 3

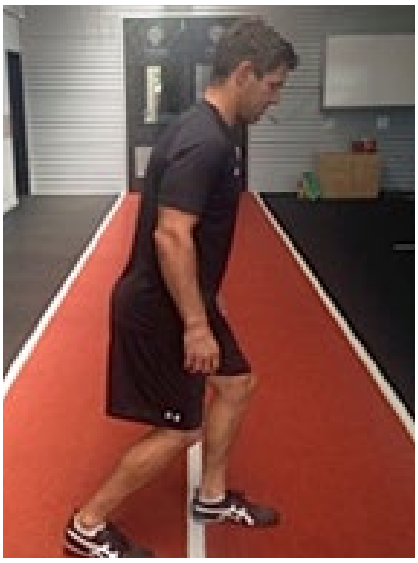
• Benefit: Total body integration
• Start Position: 3/4 squat position on balls of feet.
• Motion: Partner moves around athlete. Random pushing and pulling. Athlete holds strong.
• Common Faults: Change in athletic stance
• Coaching Cues: Tall spine. Breath

Double foot jump forwards and backwards

• Benefit: Foot and hip control
• Start Position: Standing tall
• Motion: Short jump forward. Then return to start position
• Common Faults: Heavy landing.
• Coaching Cues: Soft landing. Light feet

Staggered stance jump forward and backwards

• Benefit: Foot and hip control
• Start Position: Tall standing with staggered stance
• Motion: Jump and switch feet. Continue
• Common Faults: Heavy landing
• Coaching Cues: Light feet



Single leg jump forward and backwards

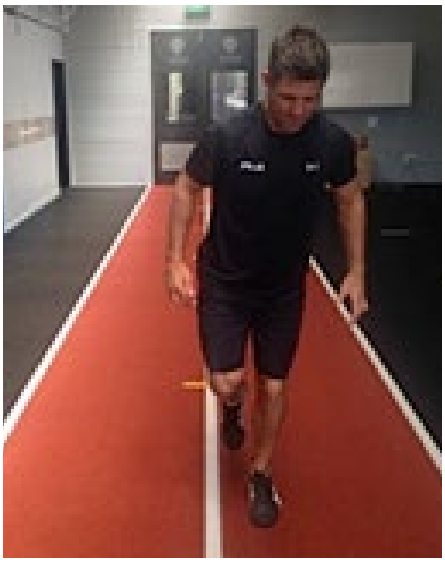
• Benefit: Foot and hip control
• Start Position: Balancing on left leg
• Motion: Jump forward then return to start position.
• Common Faults: Heavy landing. Excessive knee collapse inwards
• Coaching Cues: Light feet. Decrease range

Double foot jumps sideways

• Benefit: Foot and hip control
• Start Position: Standing tall
• Motion: Small jumps moving right. Repeat opposite side
• Common Faults: Heavy landing. Jumping to far.
• Coaching Cues: Light feet. Decrease range

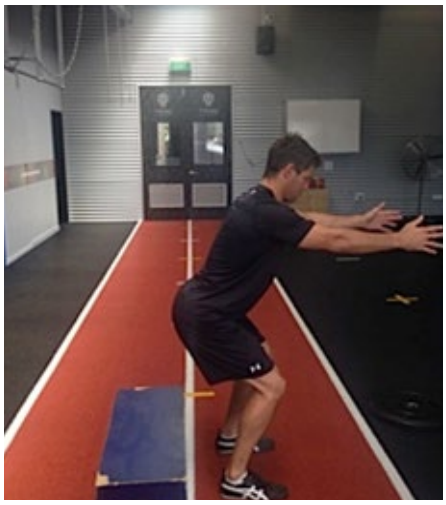
Single leg sideways jumps

• Benefit: Foot and hip control
• Start Position: Balancing on left leg
• Motion: Jump left then right staying on left leg. Repeat opposite side



POWER

Bench drop and hold



• Benefit: Total body integration. Dynamic control. Lower body power
• Start Position: Standing on weight bench
• Motion: Step off. Soft landing. Hold in 3/4 squat position
• Common Faults: Knees collapse in on landing. Rounding of back on landing. Heavy landing
• Coaching Cues: Soft landing. Knees out. Tall spine.

Push up drop hold bottom position

• Benefit: Total body integration. Anterior core. Dynamic shoulder control. Upper body power
• Start Position: Straight-arm plank. Hands raised on 20kg plate.
• Motion: Both hand simultaneously jump off plate. Land in bottom position of push up and hold. Step back onto plate.
• Common Faults: Shoulders travel towards ears on landing. Collapse through mid section.
• Coaching Cues: Chest open. Tension on belly for landing.

Tuck jump and hold

• Benefit: Total body integration. Dynamic control. Lower body power
• Start Position: Standing tall
• Motion: Jump straight up. Knees travel towards chest. Land in a 3/4 squat position and hold.
• Common Faults: Rounding of the back on landing. Knees collapsing in on landing.
• Coaching: Soft landing. Knees out on landing. Tall spine.

Push up drop and hold top position

• Benefit: Total body integration. Dynamic shoulder control. Upper body power
• Start Position: Straight-arm plank. Hands raised on 20kg plate.
• Motion: Both hands simultaneously drop from plate. Push up. Then jump both hands back to plate. Hold top position. Regain control repeat.
• Common Faults: Collapse in mid section. Hands on ground to long.
• Coaching Cues: Quick hands. Tension in the belly.

Tuck jumps

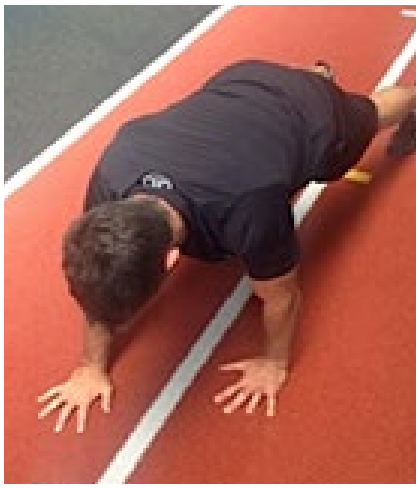
• Benefit: Total body integration. Lower body power.
• Start Position: Standing tall
• Motion: Jump straight up. Knees lifting towards chest. Quick contact on ground. Repeat
• Common Faults: To long on ground.
• Coaching Cues: Quick feet

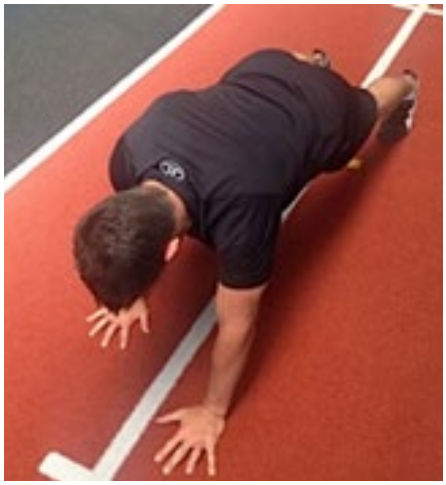
Clap push-ups

- Benefit: Total body integration. Upper body power
- Start Position: Straight arm plank
- Motion: Push up with clap at top. Repeat
- Common Faults: To long on ground
- Coaching Cues: Quick hands

Plank with staggered hands forward and backwards

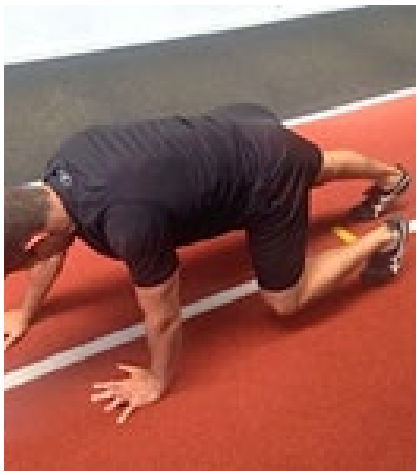
- Benefit: Anterior core. Upper body power
- Start Position: Straight-arm plank. Hands staggered
- Motion: Switch hands with minimal arm bend and contact time. Repeat
- Common Faults: Excessive lower back arch
- Coaching Cues: Tension in mid section. Quick hands

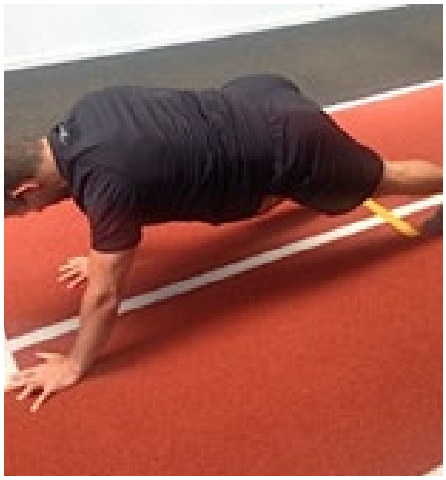




Plank with opposite arm and feet forward and backwards

- Benefit: Anterior core. Total body power
- Start Position: Straight-arm plank. Right hand in front. Left foot in front
- Motion: Quick switch. Repeat opposite side.
- Common Faults: Ground contact to long
- Coaching Cues: Light contact





Plank with lateral quick feet

• Benefit: Anterior and lateral core. Total body power
• Start Position: Straight arm plank
• Motion: Jump into a wide stance with feet. Return to start position
• Common Faults: Ground contact to long
• Coaching Cues: Light feet

Tuck jumps continuous

• Benefit: Total body integration. Lower body power
• Start Position: Standing tall
• Motion: Vertical jump. Knees towards chest. Repeat. Minimal contact time on ground
• Common Faults: Knees collapsing inwards on landing. To long on ground
• Coaching Cues: Light feet

Lateral tuck jump and hold

• Benefit: Lower body power
•Start Position: Standing tall
• Mot ion: Tuck jump moving sideways. Land and hold
• Common Faults: Heavy landing
• Coaching Cues: Soft landing

90 Degree spin tuck jump

• Benefit: Lower body power
• Start Position: Standing tall
• Motion: Tuck jump spin to left 90 degrees. On landing spin right back to start position
• Common Faults: Heavy landing. Loss of control
• Coaching Cues: Decrease range of tuck jump

SAQ Technique

Backwards Running
Running backwards. Upper body stays leaning forward. High knee turn over. With long reach each stride. Complete required distance

Build Ups
Start with small quick steps. Knee drive and stride length gradually increases as speed increases. Focus on staying relaxed. Complete required distance.

Partner Resisted Run
Working in pairs. With good form partner A sprints required distance. Partner B is behind partner A with hands on partner A's hips. Partner B gives light resistance.

Partner Let Go with sprint
Same sit up as resisted run. Once partner A sprints with resistance for 5m. Partner B releases partner A to sprint required distance.

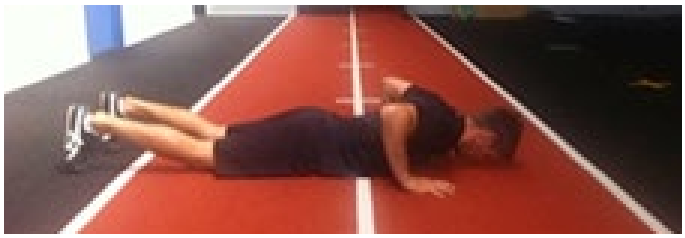
Partner Let Go with side step
Partner A completes one or two sidesteps during sprint. Post resistance.

3 Point Stance and Sprint
Sprinters crouch. Left leg in front. Right hand on ground. Left hand ready to drive. Complete required distance.



Belly and Sprint

Starting on belly. Coach says go. Sprint required distance



Get Down Get Up and Sprint

Standing tall. On coaches call. Drop to belly then spring back up to the 3-point stance position and sprint required distance.

Tag

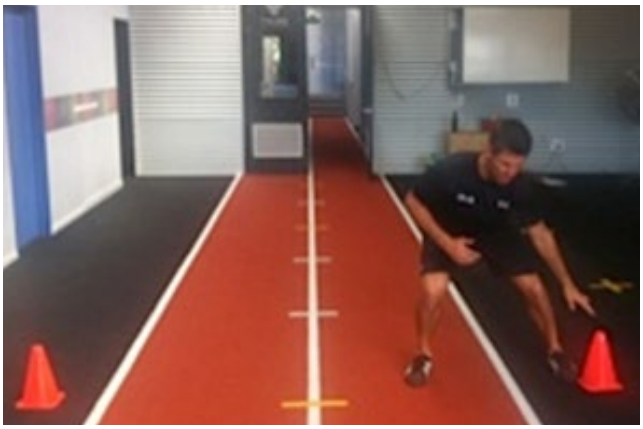
Pair up. Partner A in front. Partner B behind. Change distance as required. Start in various positions. Belly, kneeling, on back, plank, facing each other, 3-point stance etc. On coaches call race the distance set by coach with A attempting to catch and tag B. Repeat partner B leads.

Lateral Shuffle and Hold

Lateral shuffle required distance. On cone hold athletic stance. Check outside foot is perpendicular to lower limb. Knee is inside foot. Shoulder is inside knee.

Lateral Shuffle and Return to Athletic Stance

Lateral shuffle to cone. Quick change of direction back to start position.



Variations and progressions of the above:

Quick feet bounce into lateral shuffle and return
Bouncing on spot. Coach call's go. Lateral shuffle to cone. Then return to start position.

Home, A or B and hold
Starting in athletic stance. One cone 2m to left. One cone 2m to right. Coach calls left or right. Quick lateral shuffle. Holding on cone.

Home A or B Home
Starting in athletic stance. One cone 2m to left. One cone 2m to right. Coach calls left or right. Quick lateral shuffle to cone and back to start position.

Lateral Mirror Drill
Cones set 2-3m apart. In pairs facing each other. One-person leads one person follows. The leader can lateral shuffle anywhere between the cones. Encourage plenty of changes of direction. Partner B mirrors to best of there ability.

Cut and Sprint
Standing perpendicular to finish line. Coach calls go. Cut and sprint required distance.

180-Degree Spin and Sprint
Facing opposite direction to finish line. Coach calls go. Spin and sprint required distance.

Lateral Tuck Jump and Sprint
Perform one lateral travelling tuck jump. On landing cut and sprint required distance.

SECTION B – Injury prevention and injury management

PREPARATION AND WARM UP

Teams that performed the warm-up program at least twice a week had up to 50% less injured players. (Norway, 2008)

The warm-up program prepares the body for activity, helps prevent injury as well as enhancing the development of speed, agility and power required for athletic performance.

A warm up session should be split into 3 sections:

- Pre-Game warm-up / post-game warm down
- Speed and Acceleration running Drills
- Agility and Multi-directional Drills

All Australian football codes are fast, multidirectional sports, often with heavy contact that requires unique athletic qualities and skills. Therefore the focus of the warm up is to “Prepare like you perform”

The warm-up prepares the body for activity, as well as helping to prevent injury to muscles, which can be more susceptible to injury when cold. The cool down assists the body to clear lactic acid that builds up during exercise. Reducing the level of lactic acid means less soreness and stiffness the next day! General Tips:

- Should involve the muscle groups and movements that are required during training or competition.
- Begin at a low level, gradually building to the level of intensity required during training or competition.
- For most athletes, 10 - 15 minutes is enough. However in cold weather the duration of the warm-up should be increased.
- Aim to prepare the body and mind
- Aim to increase the body’s core temperature
- Aims to increase heart rate and increase your breathing rate

The FIFA 11+ Injury Prevention and Warm-up Program

The FIFA 11+ injury prevention program has been developed after extensive research by FIFA, the international governing body of football and is appropriate for the majority of sports codes that comprise of multi-directional running, stop start and explosive speed components as well as jumping activities.

The full program and videos are found on the FIFA 11+ website: http://f-marc.com/11plus/home/

The “FIFA 11+ ” is a complete warm-up programme to reduce injuries among male and female football players aged 14 years and older. The programme was developed by an international group of experts, and its effectiveness has been proven in a scientific study. Teams that performed the “FIFA 11+ ” at least twice a week had 30-50% fewer injured players. The programme should be performed, as a standard warm-up, at the start of each training session at least twice a week, and it takes around 20 minutes to complete. Prior to matches, only the running exercises (parts 1 and 3) should be performed.

For all exercises, correct performance is of great importance. Therefore, the coach should supervise the programme and correct the players if necessary.

Structure of the 11+

The “11+” has three parts with a total of 15 exercises, which should be performed in the specified sequence at the start of each training session. A key point in the programme is to use the proper technique during all of the exercises. Pay full attention to correct posture and good body control, including straight leg alignment, knee-over-toe position and soft landings.

Part 1: running exercises at a slow speed combined with active stretching and controlled partner contacts;
Part 2: six set of exercises, focusing on core and legs strength, balance, and plyometrics/ agility, each with three levels of increasing difficulty;
Part 3: running exercises at moderate/high speed combined with planting/cutting movements.

For further detail please download the particulars from the following websites:
A full selection of various downloads including videos can be downloaded to your smart phone and hard copy resources are available on http://f-marc.com/11plus/downloads/

The full manual can be downloaded at http://f-marc.com/11plus/manual/ This is comprehensive and shows the correct technique and key points to coach for correct execution.

A poster, which gives a very good summary of the program, is available to download on: http://www.f-marc. com/downloads/posters_generic/english.pdf

Regeneration and Recovery

Work + Rest = The Science Of Recovery

There must be an adequate amount of 'positive' stress to promote physical and psychological change (Eustress).

If there is too much stress resulting in negative physical or psychological changes this will cause distress. There are four components to recovery

1. **Recovery:** the actual process of the athlete overcoming the stresses of training
2. **Regeneration**: activities designed to facilitate the recovery process
3. **Active rest:** time off from regular training, supplemented by non- related activity
4. **Rest:** time off with no training at all

Regeneration strategies:

Sleep - minimum 8 hours, no later than 10pm Regeneration day: Perfect strategy for up to 60 minutes Hydrotherapy - ice cold plunge 3- 5 minutes, or hot cold contrast - 3 minutes hot 3 minutes cold repeat 3 x 5

Massage – Self-massage, foam rollers and trigger point balls

Stretching – Dynamic stretching (Movement prep), active isolated stretching and static stretching

Active rest – Clinical Pilates, Aqua-running and Hydrotherapy or other activities not related to training and aerobic activities. 10 – 25 minutes at pre/post session, or between training sessions and should be on regeneration days.

Psychological unload – Relieve stress through muscle relaxation techniques and visualisation.

Warm down period

Too many athletes and coaches neglect the cool down at the end of a session. It is just as important, especially after vigorous exercise, as the body needs time to slow down and it is an important step in aiding recovery. The cool down should occur immediately after training activities and should last 5 to10 minutes.

The cool down can be similar to the warm-up but with low intensity body movement such as jogging or walking substituted for running. Stretching after activity helps to ensure maximum flexibility, relaxes the muscles and returns them to their resting length.

Self massage using a roller

Using a foam roller smoothes and lengthens your muscles, and breaks up adhesions and scar tissue. This is achieved by using your own bodyweight on the semi-hard rounded surface of the roller.

It can be used for post exercise recovery, daily input or primarily tight / sore muscles. Mainly used for massage and stretching postures. Some benefits of foam rolling include; increased blood flow to the area and lengthening of shortened muscles. It can also be used actively, as an unstable surface for press ups, core work and shoulder range of motion exercises. Areas that can be worked with the foam roller include; calves, thigh, glutes, back and neck muscles. Upper limbs can also be targeted.

Once roller session is completed, it can also be used to improve posture and aid with stretching.

If currently seeing a therapist, a foam roller self massage can be a good adjunct to therapy.

An example of warm up and cool down procedures are listed below. This is designed to treat the lower limbs, with specific upper limb exercises to be added depending on your sport. Shortened versions of the roller are also available for athletes that travel a lot.

Total time approx 10-15 mins.

Generally 5 – 10 times (rolls) each section, on each leg.

During roller session contact abdominals and maintain straight plank position in order to work core muscles.

ITB:

- Start side lying with hip on roller. In side planked position. Tighten core.
- Active warm up, roll at a comfortable pace until at the knee joint.
- Repeat 5 – 10 times.

LATERAL QUADS:

• Roll around towards your middle, approximately 45 degrees, hold planked position.
• Start as previous.
• Roll at a comfortable pace until at the knee joint.
• Repeat 5 – 10 times.

QUADS:

•Roll so body is facing the floor. Still in planked position.
• Get as much weight as comfortable on a single leg, roll up towards the hip
• Note – one leg on the roller, with the other slightly elevated, off roller.
• Roll at a comfortable pace, until at the knee joint.
• Repeat 5 – 10 times.

VMO& ADDUCTORS:

• Come off the end of the roller, hip in external rotation.
• Roll up to the hip joint, pressure on inner thigh area.
• Roll at a comfortable pace until at the knee joint.
• Repeat 5 – 10 times.

CALVES:

• Cross heels over, straighten legs to achieve a full stretch at the back of calve and thigh.
• Lift body up off ground.
• Roll all the way up to behind the knee.
• Start with back part of calve muscle first (toes pointing towards sky).
• Roll at a comfortable pace up behind the knee joint.
• Repeat 5 – 10 times.
• Can then turn toes inwards, to get medial aspect (5 – 10 times) and turn toes outwards, to get lateral aspect (5 – 10 times)
• Look for tight trigger points to release off.

HAMSTRINGS:

• Start in similar position to calves but with roller at the knee joint.
• Roll at a comfortable pace up towards hips / glutes.
• Repeat 5 – 10 times.
• Can slightly turn leg either way, to get different parts of hamstrings.
• Look for tight trigger points to release off.

GLUTES:

- ‘Figure 4’ position.
- Roll at a comfortable pace up and down.
- Repeat 5 – 10 times.
- Can slightly lean, to get different parts of glutes.
- Look for tight trigger points to release off.

Now Repeat Above Procedure On Other Leg

When used as a warm up and cool down:

Benefits:

1. Soft tissue massage.
2. Release of adhesions.
3. Hitting all aspects of the lower limb.
4. Can assist to reduce injury, improve flexibility and ultimately perform at a higher level.

Acute Injury Management

This section should be used as a guide only. You should always consult a qualified health professional for appropriate advice following injury.

Sports injuries are usually soft tissue injuries. A soft tissue injury is an injury to muscles, tendons, ligaments or joints (e.g. sprained ankle, torn hamstring, bruise). Other sports injuries are hard tissue injuries. A hard tissue injury is an injury to a bone (e.g. a broken finger).

Sports injuries develop in two main ways:

- Acute - which occurs suddenly and is very painful, such as a sprained ankle.
- Chronic - which happens over time from overuse or over-exertion, (e.g. tennis elbow, Achilles tendonitis) or from a re-injury of a previous acute injury (e.g. Recurrent ankle sprain).

The table below shows you how to best manage common minor injuries. In many of these situations, the injuries may have minor symptoms, but may have serious long-term effects. Therefore in all cases it is highly advisable to consult a qualified health professional for advice such as a Physiotherapist, Doctor or Podiatrist (for foot related issues).

INJURY	SYMPTOM	HOW TO MANAGE
Muscle soreness	Pain during or after movement	RICER, (see next page for RICER outline) then physiotherapy
Minor bruises	Tender upon touch. Discolouration.	RICER.
Blisters	Swelling with fluid under the skin. Pain and tenderness.	Place dressing pad around area to reduce pressure. Keep clean.
Cramps and stitches	Muscle spasms (contracting).	Drink fluids and stretch. Adjust fitness program.
Nose bleed	Bleeding nose.	Sit forward and pinch the nose. Seek medical help if still bleeding after 20 minutes.
Sore shins	Painful swollen shins. Pain worsens with running and jumping.	RICER. See a physiotherapist.
Sore knees	Activity increases pain and tenderness.	RICER. Reduce activity. See a physiotherapist.

Acute Injury Management

An acute injury
Acute soft tissue injuries are the most common injury to occur during sporting activities and often occur with rapid onset due to a single traumatic event.

Soft tissue injury usually involves one or more of the following structures:
• Muscle – muscles are made up of fibres that shorten and lengthen to produce movement of a joint.
• Tendon – tendons are comprised of tough and slightly elastic connective tissue and connect muscle to bone.
• Ligament – ligaments are strong bands of inelastic connective tissue that connect bone to bone and support joints.

Injury to the soft tissues described above can occur via sprain (ligament), strain (muscle and tendon) or direct blows (muscle, tendon or ligament):

RICER

The immediate treatment of any soft tissue injury should involve the RICER protocol:

RICER regime:

• R – Rest. This means relative rest i.e rest the injured part of the body by taking your weight off the limb and avoiding excess activity in the injured body part.
• I – Ice. Apply an ice pack over the injured body part, 20 minutes out of every two hours for the first 48 to 72 hours after the injury.
• C – Compression. Apply a light compressive bandage to the injured area.
• E – Elevation. Elevate the injured area above the level of the heart.
• R – Referthe injured person to a qualified professional such as a doctor or physiotherapist for precise diagnosis, advice regarding ongoing care and treatment.

The RICER protocol should be followed for approximately 48–72 hours.

The aim of the RICER protocol is to reduce bleeding/swelling and facilitate/accelerate pain reduction, repair and regeneration.

No HARM

The No HARM Protocol should also be applied in the 48-72 hours following an acute soft tissue injury:

No Heat,

No Alcohol,

No Running/Activity,

No Massage.

Again the aim of the No HARM protocol is to reduce bleeding/swelling and facilitate/accelerate pain reduction, repair and regeneration

Referral to a Doctor or Physiotherapist is recommended for all injuries which occur during sport or physical activity, other than those that are perceived to be minor (minimal pain, no loss of movement/ function).

ON FIELD MANAGEMENT

TOTAPS is an acronym used by medical trainers to assess an injured player on the field. It is a quick assessment that provides information about the extent of an injury, and whether an athlete can should continue with their activity or seek medical attention. Whilst using TOTAPS it is important to remember that when one level cannot be completed by the athlete, then you stop the assessment and treat the injury or remove the player from the field.

The TOTAPS procedure involves:
T – TALK
O – OBSERVE
T – TOUCH
A – ACTIVE movement
P – PASSIVE movement
S – SKILLS test

TALK	• Ask the player what was injured? • Where do you feel pain? • How it happened? • What kind of pain are you feeling? • Did you hear any sounds/snaps/cracks?
OBSERVE	• Look at the affected area for deformity • Look above and below for swelling and/or discolouration • Compare the good side to the bad side
TOUCH	• Feel for tenderness mild/moderate/severe and pain levels • Feel if it is soft tissue or bony
ACTIVE movements	• Ask the athlete to move the injured part on their own • Assess how much movement they have and is it full range? Or how far can they move the injured part until it gets painful • Where is it painful
PASSIVE movements	• If the player can move the injured part, carefully try to move it yourself through its full range of motion • Compare the good side to the bad side
SKILLS	• Did the active and passive movement produce pain? If not, can the athlete stand and demonstrate skills involved in their sport? E.g. hop/jump/step • If an injury is identified remove athlete from field and seek medical attention

A key component of immediate injury care is to refer the injured person to a qualified professional such as a doctor or physiotherapist for precise diagnosis, advice regarding ongoing care and treatment. Don't second guess!

Strapping

Thumb Strapping

The following thumb taping technique is designed to support the thumb and reduce stress on the thumb during activity. It can be used for both the treatment and prevention of thumb injuries.

The taping should always feel comfortable, causing no discolouration of the skin, numbness, swelling or pins and needles.

You should discuss your injury with your physiotherapist, prior to strapping, to ensure the technique is suitable.

What Tape Is Suitable For Strapping A Thumb?

Adhesive Rigid Sports Tape is the most suitable tape to use. For Thumb Strapping the tape should be approximately 2.5cm in width, used with hypoallergenic tape, such as Fixomull underneath.

The Benefits of Thumb Taping

When used correctly, thumb-taping techniques can:

- Aid healing of certain thumb injuries.
- Reduce the likelihood of injury aggravation.
- Prevent thumb injuries during high risk activities or sports.

When Should I Avoid Thumb Taping?

- If you have certain thumb injuries, such as some fractures.
- If you have a skin allergy to sports tape.
- If the taping technique results in an increase in pain, itchiness, discolouration, pins and needles, swelling etc of the wrist, hand, fingers or thumb.
- If you have sensory or circulatory problems.

Weaning off thumb tape in general day to day activity is advised, as range of movement and function improves and your symptoms reduce. After an injury, taping during high-risk activity (when participating in some sports) is usually recommended.

Thumb Taping Technique

The following taping technique may be used to provide support for the thumb and is particularly beneficial following a sprained thumb, or, to prevent a sprained thumb.

The skin should be clean and dry before a hypoallergenic tape such as Fixomull is applied as an under-wrap, followed by the use of an adhesive rigid sports tape.

Figure 1 – Anchor
Apply a hypoallergenic tape (such as Fixomull). Place a strip of sports tape around the forearm, just below the wrist (figure 1). This should be applied gently to prevent circulatory problems and is used as a fixation point for the other taping techniques.

Figure 2 – Side Loop
Keeping the wrist and thumb in a neutral position (wrist should be bent backwards slightly – about 30 degrees), start the tape at the level of the anchor on the front of the wrist by following the black arrows (figure 2). Conclude this taping technique at the level of the anchor by firmly following the white arrows (figure 2). Do 1 - 3 side loops slightly forward or backward of each other depending on the amount of support required.

2. Side Loop Applied

Keeping the wrist and thumb in a neutral position (wrist should be bent backwards slightly – about 30 degrees), start the tape at the level of the anchor on the front of the wrist by following the black arrows (figure

3). Conclude this taping technique at the level of the anchor by firmly following the white arrows (figure 3). Do 1 - 3 front loops slightly forward or backward of each other depending on the amount of support required. Turn hand over and repeat this technique on the back of the hand (back loop applied).

Figure 3 - Front Loop

Ankle Strapping

The following ankle taping technique is designed to support the ankle and reduce stress on the ankle during activity. It can be used for both the treatment and prevention of ankle injuries.

The taping should always feel comfortable, causing no increase in pain, discolouration, pins and needles, numbness or excessive redness.

You should discuss your injury with your physiotherapist, prior to strapping, to ensure the technique is suitable for the injury.

What Tape Is Suitable For Strapping An Ankle?

Adhesive Rigid Sports Tape is the most suitable tape to use. For Ankle Strapping the tape should be approximately 3.8cm in width, used with hypoallergenic tape, such as Fixiomull underneath.

The Benefits of Ankle Taping

When used correctly, ankle taping techniques can:

- Aid healing of ankle injuries.
- Allow an earlier return to sport or activity following injury.
- Reduce the likelihood of injury aggravation.
- Prevent ankle injuries (such as sprained ankles) during high risk activities or sports.

Indications for Ankle Taping

It is generally beneficial to tape an ankle in the following instances:

• Following certain ankle injuries - Ankle taping may be beneficial following certain ankle injuries (such as sprains), during activities that aggravate, or are likely to aggravate the existing condition.
• To prevent injury - Ankle taping may be beneficial during sports or activities that place the ankle at risk of injury (such as netball and soccer).

When Should I Avoid Ankle Taping?

Ankle taping should be avoided in the following instances:

• If you have certain injuries, such as some fractures (discuss with your physiotherapist).
• If you have a skin allergy to sports tape.
• If the taping technique results in an increase in symptoms such as pain, ache, discolouration, pins and needles, numbness, swelling or excessive redness of the foot or ankle.
• If you have sensory or circulatory problems.

Weaning off ankle tape in general day to day activity is advised, as range of movement and balance improves and symptoms reduce. After an injury, taping during high-risk activities (when participating in some sports) is usually recommended.

Ankle Taping Technique

The following taping technique can be used to provide support for the ankle and is particularly beneficial following a lateral ligament sprain of the ankle, or, to prevent an ankle sprain. The skin should be clean and dry before a hypoallergenic tape, such as Fixomull is applied as an under-wrap, followed by the use of an adhesive rigid sports tape.

1. Anchor Applied

Place a strip of tape around the lower 1/3 of the shin (figure 1). This should be applied gently to prevent circulatory problems and is used as a fixation point for the other ankle taping techniques

Figure 1 – Anchor

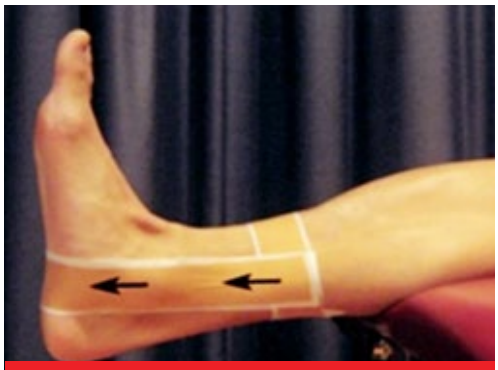


Figure 2 – Beginning of Stirrup (Inner Ankle)

2. Figure Of 6'S Applied

Keeping the foot and ankle in a neutral position (foot and toes pointing vertically upwards), start the tape at the level of the anchor on the inner aspect of the ankle and lower leg. Begin this taping technique by following the black arrows (figure 2) and conclude this taping technique at the level of the anchor at the outer aspect of the ankle and lower leg by firmly following the white arrows (figure 3). Do 2-3 stirrups just slightly forwards and backwards of each other depending on the amount of support required.

Figure 3 – End of Stirrup (Outer Ankle)

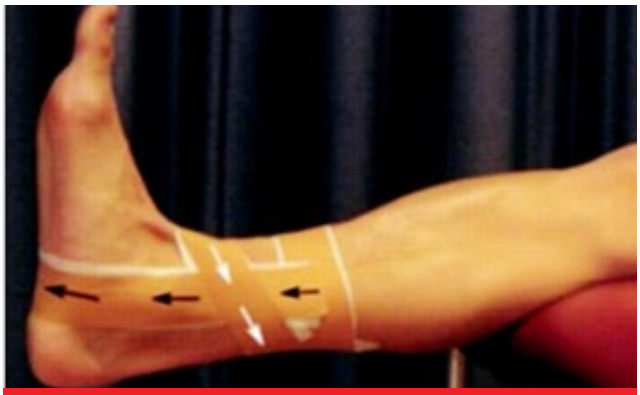


Figure 4 – Figure-of-6 (Inner Ankle View)

Figure 5 – Figure-of-6 (outer ankle view)

Keeping the foot and ankle in a neutral position (foot and toes pointing vertically upwards), start the tape at the level of the anchor on the inner aspect of the ankle and lower leg.

Begin this taping technique by following the black arrows (figure 2) and conclude this taping technique at the level of the anchor at the outer aspect of the ankle and lower leg by firmly following the white arrows (figure 3). Do 2-3 stirrups just slightly forwards and backwards of each other depending on the amount of support required.

Knee Strapping

The following knee taping technique is suitable for a MCL or LCL sprain or to prevent that particular sprain. It is designed to support the knee and reduce stress on the knee during activity. They can be used for both the treatment and prevention of knee injuries.

The taping should always feel comfortable, causing no discolouration of the skin, numbness, swelling or pins and needles to the knee, leg, ankle, foot or toes.

You should always discuss your injury with your physiotherapist, prior to strapping, to ensure the technique is suitable.

What Sort of Tape Is Suitable For Strapping A Knee?

Adhesive Rigid Sports Tape is the most suitable Tape to use. For Knee Strapping the tape should be approximately 3.8cm in width, used with hypoallergenic tape, such as Fixomull underneath.

The Benefits of Knee Taping

When used correctly, knee taping techniques can:

- Aid healing of certain knee injuries.
- Allow an earlier return to sport or activity following injury.
- Reduce the likelihood of injury aggravation.
- Prevent knee injuries (e.g.:MCL or LCL sprain) during high risk activities or sports.

When Should I Avoid Knee Taping?

- If you have certain injuries such as some fractures.
- If you have a skin allergy to sports tape.
- If the taping technique results in an increase in symptoms such as pain, ache, itchiness, discolouration, pins and needles, swelling, numbness or excessive redness of the knee, lower leg, ankle, foot or toes.
- If you have sensory or circulatory problems.

Weaning off knee tape in general day to day activity is advised, as range of movement and function improves and your symptoms reduce. After an injury, taping during high-risk activity (when participating in some sports) is usually recommended.

Knee Taping Technique

The following taping technique may be used to provide support for the knee and is particularly beneficial following an MCL or LCL sprain, or, to prevent a sprained knee. The skin should be clean and dry before a hypoallergenic tape such as Fixolmull is applied as an under-wrap, followed by the used of an adhesive rigid sports tape

Figure 1 – Anchor

Anchors Are Applied

Apply a hypoallergenic tape (such as Fixomull). Place a strip of tape around the top of the lower leg and bottom of the thigh as demonstrated (figure 1), with the knee in a slight bend (approximately 30 degrees) and the thigh muscles contracted (figure 1). This should be applied gently to prevent circulatory problems and is used as a fixation point for the other taping techniques.

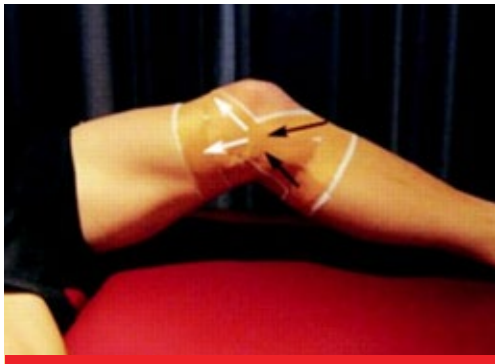


Figure 2 – Medial Crosses

Medial Crosses

Keeping the knee in a slight bend (approximately 30 degrees), start the tape at the level of the lower leg anchor on the inner aspect of the knee by following the black arrows (figure 2). Finish this taping technique at the level of the thigh anchor by firmly following the white arrows (figure 2). 2 pieces of tape should be used forming a cross (figure 2). Do 1 - 2 medial crosses depending on the amount of support required.

First Aid Kit

What it should include

1 x Shears/scissors
1 x medium wound dressing
1 x large wound dressing
1 x triangular bandage
1 x eye pad
1 x 50mm crepe bandage
1 x 75mm crepe bandage
1 x 50mm gauze bandage
2 x 75mm gauze bandage
1 x 25mm paper tape
6 x instant ice pack
1 x CPR mask with valve
6 x 20ml eye wash amp
6 x 38mm rigid tape rolls
1 x 25mm rigid tape rolls
2 x 12.5mm rigid tape rolls
2 x emergency blankets
10 x antiseptic wipes
20 x waterproof plasters
10 x 50 x 50mm sterile gauze
1 x 50 x 76mm non adherent pad
2 x 75 x 75mm sterile gauze
10 x tissues
3 x vomit bags
2 x 1m tubular bandage
2 x medium gloves
2 x 100mm qauze bandage
2 x 25mm hand tearable tape
2 x 50mm hand tearable tape
2 x 75mm hand tearable tape

For any taping or medical supplies please contact .....

The Role of the Sports Medic

The Sports Medic is an integral part of the sports health team. Your primary aim is to apply your knowledge and skills to prevent and manage injuries to the players, ultimately improving the safety of the game. This is achieved through various injury prevention strategies and effective injury management in the initial stages.

It is usually the role of the Sports Medic to maintain and restock the first aid kit. The medical supplies may include:

- Instruments: scissors, tweezers, razors
- Dressings: gauze, bandages, slings, dressing strips
- Tape: rigid tape, k-tape, elastic adhesive bandages, underwrap, electrical tape
- Medications
- Massage cream/oil
- Disposable gloves, towels, waste containers
- Ice packs, water
- Pen and paper

The Sports Medic has a variety of roles throughout game day, and duties often extend to attending team training and other gatherings.

Pre-Game:

The Venue

- It is useful to become acquainted with the venue. Ideally a specific treatment area may be available which would include a treatment table, a hand basin with running water, soap and towels, and adequate lighting
- The Sports Medic should be aware of the location of a telephone or have a mobile device to ring emergency services if required
- Introduce yourself to other medical personnel at the grounds, who are usually readily identifiable
- The Sports Medic should also make themself known to the opposing team and be prepared to assist them when required if they don't have a Sports Medic

The Players

- It is important to meet with your team before the game, especially if you don't know all the players. Having an overview of any health conditions (e.g. asthma, diabetes) that may affect the player during the game will help you recognize if further medical attention is required

- You will be required to assist with pre-game interventions to help avoid injury. This usually consists of strapping, massage, ensuring use of protective equipment, and warm-up/stretching exercises

During the game:

• The Sports Medic provides on-field/court care of players
• You will need to liaise with game officials and be aware of any hand signals being used to indicate your assistance is required on the field or court, and any time restrictions or rules once you enter the field of play
• You will be required to assess any injuries to determine if the player can continue or must retire from play
• Administer immediate first aid treatment and liaise with other medical professionals when necessary
• The Sports Medic needs to communicate with the coach and/or other management staff once it has been determined if the player can return to the field or court

Post-Game:

• You will be part of the cool down routine post-game
• Provide any further immediate injury management advice to the player such as RICE and HARM
• The Sports Medic should refer any injured players to the team doctor or physiotherapist for further assessment and treatment

Note: Do not attempt procedures outside the scope of your training.

The Role of the Team Physiotherapist

– the "Sports Physio"

The team physiotherapist is an integral part of the sports team and their primary role is to apply their knowledge and skills to prevent and manage injuries to players and ultimately improve player welfare. The main roles may include:

* Physical assessment and screening procedures,
* Injury prevention strategies
* Effective injury management.

The team physiotherapist has a variety of roles throughout training sessions and on game day –

Training sessions:

• Review and re-assess all injured players from the competition game day – this often includes injuries that have worsened over the 24 – 48 hours since competition that may not have been reported at the end of the game day
• Plan rehabilitation sessions for the injured players – this will be highly varied depending upon the extent of the injury for the player
• Discuss with the coach the injured players and the planned rehabilitation sessions for each player and the expected goals for each player.

• Re-assess injured players at the end of their rehabilitation session.
• Manage any new injuries that arise in the training session

Pre-Game:

The Venue

• Ideally a specific treatment area may be available which would include a treatment table, a hand basin with running water, soap and towels, and adequate lighting
• The team physiotherapist should have a mobile phone to ring emergency services if required. The physiotherapist should also be aware of the nearest hospital and/or medical centre should a player be required to be assessed by a doctor or surgeon
• Introduce yourself to other physiotherapy / medical personnel at the grounds. Make yourself known to the opposing team coach and/or medical personnel and be prepared to assist them when required.
• Prepare your first aid kit / medical bag and ensure that is stocked with immediate use items for the game ahead.

The Players

• If the team physiotherapist doesn't know all the players, it is important to meet with the players before the game, to obtain an overview of any significant health conditions (e.g. asthma, diabetes) that may affect the player during the game that will help in recognising if further medical attention is required
• The Physiotherapist will be required to assist with pre-game interventions to help avoid injury, this usually consists of applying strapping tape to injured joints for greater protection, performing 'mini' treatments, massage and release tight muscles, ensuring correct use of protective equipment, and assist the team in its pre-game warm-up and stretching exercises.

During the game:

• The team physiotherapist provides on-field/court care of injured players.
• The physiotherapist may need to liaise with game officials and be aware of any signals being used to indicate our assistance is required on the field or court, and any time restrictions or rules once you enter the field of play. They will usually wear and identifying coloured bib over their clothes.
• Assess any on field injuries to determine if the player can continue or must retire temporarily or permanently from play
• Administer immediate first aid treatment and liaise with other medical professionals when necessary
• Communicate with the coach and/or other management staff once it has been determined if the player is to be removed from the field of play / court as well as if an injured player can return to the field.

Post-Game:

• The team physiotherapist may be required to assist in the 'cool down' routine post-game. This is one of the most important aspects for injury prevention.
• Provide any further assessment of injuries, provide injury management advice to the player such as RICE and HARM

• The team Physiotherapist should refer any injured players to the team doctor / surgeon for further assessment.
• Liaise with the team coach of any significant injuries sustained and the plan of action for those players in the next 24 – 48 hours.

Other Roles for the team physiotherapist:

One critical role is to maintain the first aid kit.

Depending upon the sport, the team physiotherapist may also be required to maintain an orthopedic medical kit.

1. Physiotherapists First Aid Kit supplies may include:

Instruments: scissors, tweezers, razors

Dressings: gauze swabs, bandages, arm slings, band aid-dressing strips

Sports Tape: rigid tape (various sizes), K-tape, elastic adhesive bandages, under wrap, electrical tape
Medications – paracetamol, Non steroidal anti-inflammatory medication (NSAIDs)

Massage oil

Disposable gloves, towels, waste containers
Ice packs, water bottles

Pen and paper

2. Orthopaedic Kit

Ankle fracture Boots – short and long

Knee brace / Wrist brace

Crutches

Fracture splinting material

Slings – elbow / shoulder support

One other aspect of the role of the Team

Physiotherapist is to have a Rehabilitation Exercise kit which would be used at training sessions for injured players and players returning to play, with the kit containing:

3. Rehabilitation exercise kit

Theradisc / Wobble board
Body Blades
Theratube / Theraband / mini bands
Running – bungy cords / parachutes
Agility reaction belts
Agility reaction poles
Sports cones

FMS - Performance Enhancement and Injury

Have you ever wondered how do elite athletes

- Perform at such a high level
- Stay injury free and
- Recover so quickly?

This is achieved through specific pre season movement and posture screening (Functional Movement Screening or FMS) that will:

- Identify faulty movements and imbalances that inhibit ideal movement
- Correct them with a program of specific exercise
- Improve your outcomes and athletic performance as well as reduce injury rates

Here's what we know about injuries:

Research shows that your greatest risk to recurring injury is:

- Faulty / abnormal movement patterns
- Imbalances between left and right side

Continuing to move and load muscles using poor movement patterns results in decreased performance and increased injury risk over the longer term.

The FMS is comprised of 7 fundamental movement patterns that require a balance of mobility, stability and place the individual in positions where weaknesses and imbalances are noticeable.

An FMS score below 14 indicates a high risk of injury, at four times greater than a person who scores above 14.

The Y-balance test consists of 2 tests to determine symmetry and identify those at greater risk of injury. It tests dynamic balance while standing on one leg or balancing on one hand. Research has shown that those who do not perform well on this test are more likely to get injured.

This was once the exclusive domain of professional sports teams and is now available in your sports club via Benchmark Physiotherapy. North American professional sports teams in the NHL, NFL, NBA as well as Australian sports teams such as the Brisbane Broncos and Hawthorn AFL club utilise the functional movement screen (FMS) as standard procedure to evaluate and reduce injury risk and improve performance. The inclusion of the Y-Balance test further enhances identification of potential weakness and allows corrective exercise to enhance performance.

What you can do about it!

Book your Functional Movement Screen pre-season with the Sports Physiotherapist at Benchmark Physiotherapy to identify faulty movement patterns that contribute to increased injury risk and poor performance.

Based on the findings of this screen you will be prescribed a series of corrective exercises that will help you improve your performance and reduce injury risk for the season ahead. Call us today to book your screening and get started.

The Role of the Sports Doctor

Sports Medicine Specialists are known in Australia as Sports Physicians. This is a specialist postgraduate qualification achieved by 5 years specialised study after the years of study to become a doctor.

They are more interested in health and fitness while understanding the effects of injury and disease on peoples' ability to exercise.

Sports physicians are trained to diagnose all sporting injuries and their causes.

Injuries that should be seen by a Sports Doctor:

- Neck and spine injuries
- Injuries to the arm or leg where the player loses significant movement or there is significant swelling
- Head injuries where there is loss of consciousness or any degree of drowsiness, confusion or memory loss

• Chest injury where chest pain or shortness of breath does not rapidly settle
• Eye injuries with change in vision
• Ear injuries with loss of hearing or blood or other fluid coming from the ear
• Abdominal injuries where pain continues more than 5 minutes or the player is pale or lightheaded
• Traumatic injuries to the testicles or genitals
• Any injury where the player appears to be disoriented, unconscious, in shock or where pain is not settling
• Dislocations of joints or deformed limbs suggesting fracture
• X-rays can miss serious injuries especially in children. Further specialised tests will be ordered as necessary by the Sports Medicine specialist.
• Always remember: If in doubt just ring and ask for advice

Nutrition - Maximising performance and recovery

By Kate Callaghan

Food plays a very important role for athletes. Not only do you need to fuel your training, games and recovery to maximise performance and prevent injury, but you also need to keep in mind that you require extra energy, protein, vitamins and minerals for your brain, muscles and organs.

Getting your food right will help lay the foundations for being the best athlete now, and in the future.

Due to the amount of exercise you will be doing and given that you require extra fuel for growth and development, it is important that you eat plenty of nutritious food. This is especially important during season, when exercise levels will be high.

Tips:

• Eat regularly. This may mean eating 5-6 meals per day, depending on your schedule
• Focus on whole, fresh foods, which are full of vitamins and minerals important for health and performance
• Minimise packaged and processed foods, which can have a negative impact on health and fitness

Protein: is necessary to keep the body working at its best, as well as helping to build and maintain muscle mass.

Tips:

• Include a source protein at each meal
• The best sources of protein are from whole, fresh foods, rather than protein bars. Great options include meat, seafood, chicken, eggs, nuts and seeds

Carbohydrates: provide energy to fuel exercise, help with recovery and prevent muscle breakdown.

Tips:

• Include carbohydrate-rich foods at most, if not all, meals
• The best sources include starchy vegetables (sweet potato, potato, beetroot, parsnip, taro, swede) as well as rice, quinoa, amaranth, buckwheat and fruit. Not only do these foods provide carbohydrates, but they are rich in vitamins, minerals and fibre
• Have plenty of colourful vegetables at each meal to keep your body working at its best and to prevent illness
• Avoid sugar

Fat: also provides energy, helps the body use important vitamins, and supports the production of hormones, such as testosterone.

Tips:

• Include small amounts of fat with most meals
• The best sources include avocado, nuts, olive oil, coconut oil and butter. Stay clear of processed fats, such as vegetable oils and margarine

Water: Your body is 70% water. It is essential for health and performance. Not drinking enough water can lead to dehydration, poor performance, fatigue, slow recovery and injury.

Tips:

• Aim for at least 2 litres of water each day, more on days when you are training or playing
• Don't wait until you feel thirsty as this is a sign of dehydration
• Arrive fully hydrated for training and games and have drink breaks every 15-20minutes
• Add a pinch of sea salt to your water to help with hydration and minimise post-exercise cramps

Pre-game / training

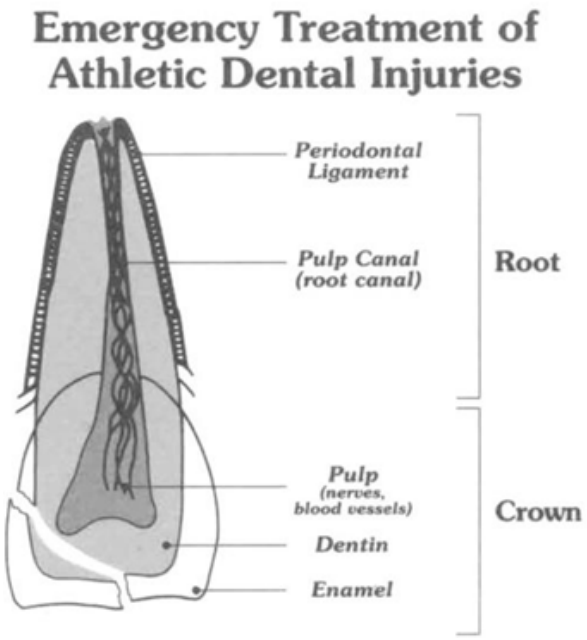
At least 2 hours before a game, eat a meal rich in carbohydrates and protein, but low in fat (as fat slows down digestion of food). An example of a good meal would be a piece of grilled chicken breast with some mashed sweet potato.

Post-game / training

To help your body replenish its fuel stores and help with recovery, within 30 minutes have a small meal containing easily digestible carbohydrates and protein. You might like to try a choc- banana shake made with a good, clean chocolate protein powder (such as Professional Whey) with coconut water and banana, or a small bowl of boiled white rice with a scoop of protein powder and water mixed in. Within the next 2-3 hours have a larger, more balanced meal with carbohydrates, protein and fat, such as steak, potato, and garden salad with avocado.

Dental Sporting Injuries

Dr.Brett Dorney BDS, FRACDS, FASD, FICD.



Dental sporting injuries are a devastating injury for the athlete. They are complex injuries and require a skilled clinician to assess which tissues have been injured. Unfortunately Dental injuries almost always involve the upper front teeth with an increasing incidence for boys starting at age 8 and peaking during the mid-teen years. If the injury can be reduced by wearing a mouth guard there is a much better chance of a long-term satisfactory outcome.

The provision of Dentist made custom-built mouth guards to prevent traumatic Dental injuries is strongly supported by the Australian and American Dental Associations. Significant research in Australia and Japan has resulted in new mouth guard designs that dramatically improve the Dental protection for athletes.

For many years it was thought all Dental injuries should be treated on an emergency basis. However new research allows the clinician to classify these injuries as acute, requiring emergency treatment, subacute, within 24 hours and delayed, treatment after 24 hours.

The treatment of traumatic Dental injuries requires knowledge, experience and decisive implementation of current research. Inappropriate treatment will increase the chances of long-term complications and result in unnecessary pain, distress and cost.

www.dentistsatpymble.com.au www.dentaltraumguide.org

AVULSION (Entire Tooth Knocked Out Including Root)

1. Avoid additional trauma to tooth while handling. Do Not handle tooth by the root. Do Not brush or scrub tooth. Do Not sterilize tooth.
2. If debris is on tooth, gently rinse with water.
3. If possible, reimplant tooth and stabilize by biting down gently on a towel or handkerchief. Do only if athlete is alert and conscious.
4. If unable to reimplant:

Best - Place tooth in a physiologic transport medium (e.g. Hank's Balanced Saline Solution). 2nd best - Place tooth in cold milk.

3rd best - Wrap tooth in saline-soaked gauze.

4th best - Place tooth under athlete's tongue. Do this ONLY if athlete is consciousand alert. 5th best - Place tooth in cup of water.

5. Time is very important. Reimplantation within 30 minutes has the highest degree of success rate.

TRANSPORT IMMEDIATELY TO DENTIST.

LUXATION (Tooth in socket, but wrong position)

THREE POSITIONS

EXTRUDED TOOTH - Upper tooth hangs down and/or lower tooth raised up.

1. Reposition tooth in socket using firm finger pressure.
2. Stabilize tooth by gently biting on towel or handkerchief.
3. TRANSPORT IMMEDIATELY TO DENTIST.

LATERAL DISPLACEMENT - Tooth pushed back or pulled forward.

1. Try to reposition tooth using finger pressure.
2. Athlete may require local anesthetic to reposition tooth: if so, stabilize tooth by gently biting on towel or handkerchief.
3. TRANSPORT IMMEDIATELY TO DENTIST.

INTRUDED TOOTH - Tooth pushed into gum - looks short.

1. Do nothing - avoid any repositioning of tooth.
2. TRANSPORT IMMEDIATELY TO DENTIST.

FRACTURE (Broken Tooth)

1. If tooth is totally broken in half, save the broken portion and bring to the dental office as described under Avulsion. Item 4. Stabilize portion of tooth left in mouth by gently biting on towel or handkerchief to control bleeding.
2. Should extreme pain occur, limit contact with other teeth, air or tongue. Pulp nerve may be exposed, which is extremely painful to athlete.
3. IMMEDIATELY TRANSPORT PATIENT AND TOOTH FRAGMENTS TO DENTIST.

Aquatic running and training

The use of swimming pools for rehabilitation is well known, and its role in improving performance has recently been highlighted within the athletic society and used extensively in professional teams.

A sudden increase in intensity of training, especially during pre-season conditioning, is known to cause injuries. Athletes are often put through grueling running and sprinting sessions to enhance their conditioning. The impact of ground reaction forces during running is 2-3 times greater than the runner's weight, which commonly causes lower limb injuries such as stress fractures, tendinitis and strained muscles. Therefore, on-land running places huge stressors on the athlete's body and its ability to function.

The physical properties of water, buoyancy can create a unique environment with less musculoskeletal compression forces than that experienced on land. The reduced impact forces on the joints allows athletes to train when injured or fatigued, while the different properties of the water still provide resistance during exercise.

Aquatic training, such as deep water running, has proven to be an effective tool in maintaining and enhancing aerobic fitness without the stress of running. The goal of deep water running is to simulate the on-land running biomechanics under water. Like all modes of training, it is very important to maintain the correct posture during exercise, as well as to train at the right intensity.

Studies have shown favourable results, from under-water interval-training programs improving flexibility, agility and anaerobic power, while decreasing musculoskeletal impact placed on the ligaments, joints, and tendons

Hydrotherapy is also a well-established method in reducing fatigue and DOMS post-game (Delayed Onset of Muscle Soreness). This mode of aquatic exercise is utilised often by professional teams and extremely beneficial for the recovery process.

Types of Aquatic training programs

Fitness experts agree … the best way to improve your fitness level is to perform a variety of routines and programs. The body is incredibly adaptable and quickly acclimates itself to a continuous workout plan. For example, if your resistance training involves using the same weight for the same amount of repetitions week after week, your body will adapt and your progress will plateau. The same is true with cardio activities … jogging on a treadmill at the same speed for the same distance will fail to improve your level of fitness.

Adding in even one aqua-running workout per week will make a significant difference, not to mention keeping your motivation high and preventing workout boredom. The best news is, the water provides significant resistance, so you'll experience an effective workout in much less time!

Aquatic running -20 minute workout – ideal for injury recovery

Minutes 0 – 3: Warm up at normal walking pace.

Minutes 3 – 5: Two minutes at your jogging pace.

Minutes 5 – 7: Take things up to brisk jogging pace for these two minutes.

Minutes 7 – 9: Race pace (exertion level = hard) for two minutes.

Minutes 9 – 11: Two minute sprint! Maximum effort!

Minutes 11 – 13: Still intense for these two minutes, but back to your race pace.

Minutes 13 – 15: Decrease your intensity to jogging/brisk jogging for two minutes.

Minutes 15 – 17: Two minutes down to jogging pace.

Minutes 17 – 20: Three minute cool down at normal walking pace.

Aquatic running - 45 minute workout – ideal for fitness enhancement

This advanced workout mimics the demands of many games and replicates an effective land based workout.

This workout uses four minute increments interspersed with one-minute intervals at your maximum pace.

Minutes 0 – 4: Warm up at easy jog.

Minutes 4 – 8: You should be nice and warm. Go into a brisk jog.

Minutes 8 – 12: Four minutes at your race pace.

Minute 12 – 13: Take it up to a sprint for one minute.

Minutes 13 – 17: Let's do the cycle again. Four minutes at brisk jog.

Minutes 17 – 21: Now four minutes at race pace.

Minute 21 – 22: One minute sprint. Maximum intensity!

Minutes 22 – 26: Take a breather. Four minutes at easy walk.

Minutes 26 – 30: We're starting the cycle again. Four minutes at Level brisk jog.

Minutes 30 – 34: Four minutes at race pace.

Minute 34 – 35: Here's that one minute sprint pace again!

Minutes 35 – 39: Start to ramp down. Four minutes at easy jog.

Minutes 39 – 45: Give yourself six minutes to cool down at easy walk / jog.

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