

Recommended Pre-Season Training Plan May – August 2008

This is a 13-week programme that has been divided into 3 separate sections, each with its own aim. Because your fitness test times vary, I am leaving it up to you when you start the programme.

2-4 weeks of Rest / Active Recovery Training

Complete rest and/or cycling, football, tennis, squash etc.

Aims

- ◆ Psychological preparation for pre-season training

3 weeks of General Preparatory Training

Medium intensity training with a structured re-introduction to running

Aims

- ◆ A structured reintroduction into regular physical training sessions
- ◆ Development of your aerobic fitness, which will provide sufficient fitness levels to cope with the increases in training intensity that follow during the specific preparation phase
- ◆ Development of general strength that will help to reduce the incidence of injury and also enable the attainment of greater levels of strength and a transition into power training as the weeks progress.

6 weeks of Specific Preparatory Training

High Intensity, Speed Endurance and Speed training

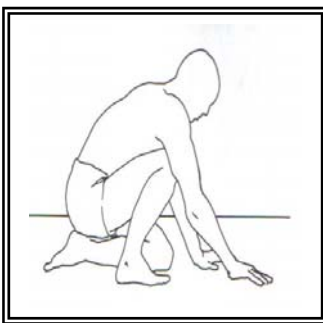
Aims

- ◆ To train your aerobic energy system to cope with the demands of high intensity exercise along and to recover rapidly during and after training sessions.
- ◆ Develop anaerobic energy system to tolerate fatigue and to produce energy rapidly (speed) and frequently (speed endurance).
- ◆ To develop a good level of body strength and core stability which will help to reduce the incidence of injury and also enable the attainment of greater levels of strength and a transition into power training as the weeks progress.

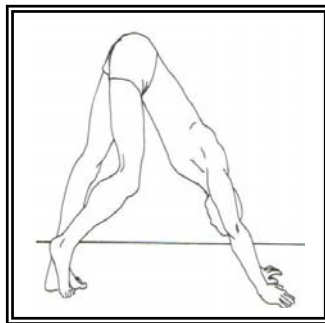
Please contact me if you need the plan tailored to your individual needs, i.e., rest, matches, holidays, fitness test etc.

GENERAL TRAINING ADVICE:

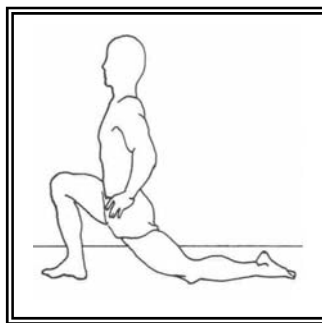
- ◆ Try to perform all runs on a forgiving surface such as grass
- ◆ Do not underestimate the importance of your stretches during the warm down. Hold each stretch for 25 - 30", repeating each stretch 3-4x per muscle group
- ◆ Recent research on soccer players has demonstrated a strong relationship between pre-season range of motion (ROM) in the hip and knee (quadriceps) flexor muscles and incidence of muscle strain injury in these muscle groups.
- ◆ Specifically, those players who injured the knee or hip flexor muscles during the season had a lower pre-season ROM when compared to the uninjured players.
- ◆ Similar relationships have been reported for other lower limb muscle groups, e.g. hamstrings
- ◆ Therefore, place particular emphasis on your stretching during pre-season training in order to minimise the potential risk of soft tissue injury
- ◆ Try to perform at least one dedicated flexibility and conditioning per week. Most of the conditioning exercises can also be performed either at the end of your warm up or as part of your cool down



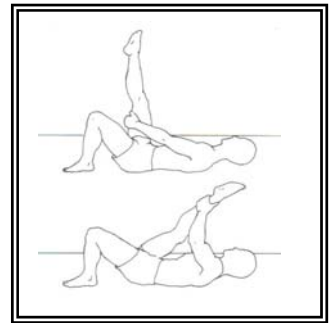
Achilles tendon



Calves



Hip Flexors



Hamstrings



PROFESSIONAL GAME MATCH OFFICIALS

GENERAL PREPARATORY Week 1

MONDAY

REST DAY

TUESDAY

REST DAY

WEDNESDAY

EXERCISE 1 – MEDIUM INTENSITY AEROBIC TRAINING

Warm Up: 10' cycling, mobility exercises and stretching
Exercise: 30' continuous cycling
Intensity: 70 – 80%HR_{max}, RPE 2 – 4
Cool Down: 5' cycling, followed by 15' static stretching

THURSDAY

EXERCISE 2 – CONDITIONING EXERCISES

Warm Up: 10' cycling, mobility exercises and stretching
Exercise: 20 – 30' conditioning exercises
Intensity: RPE 2 – 4
Cool Down: 5' cycling, followed by 15' static stretching

FRIDAY

REST DAY

SATURDAY

EXERCISE 3 – INTERMITTENT AEROBIC TRAINING

Warm Up: 10' jogging, mobility exercises and stretching
Exercise: 30' intermittent game (Squash, badminton, tennis, 5-a-side etc.)
Intensity: 70-80%HR_{max}, RPE 3 – 5
Cool Down: 5' jogging, followed by 15' static stretching

SUNDAY

FLEXIBILITY TRAINING

Exercise: 5' jogging, followed by 30' static stretching

PROFESSIONAL GAME MATCH OFFICIALS

MONDAY

EXERCISE 1 – MEDIUM INTENSITY AEROBIC TRAINING

Warm Up: 10' jogging, mobility exercises and stretching
Exercise: 25' continuous run
Intensity: 76 – 84%HR_{max}, RPE 2 – 4
Cool Down: 5' jogging, followed by 15' static stretching

TUESDAY

FLEXIBILITY TRAINING

Exercise: 5' jogging, followed by 30' static stretching

WEDNESDAY

EXERCISE 2 – MEDIUM INTENSITY AEROBIC TRAINING

Warm Up: 5' cycling, mobility exercises and stretching
Exercise: 30' cycling (intermittent program)
Intensity: 70 – 80%HR_{max}, RPE 2 – 4
Cool Down: 5' cycling, followed by 15' static stretching

THURSDAY

EXERCISE 3 – CONDITIONING EXERCISES

Warm Up: 10' cycling, mobility exercises and stretching
Exercise: 20 – 30' conditioning exercises
Intensity: RPE 2 – 4
Cool Down: 5' cycling, followed by 15' static stretching

FRIDAY

REST DAY

SATURDAY

EXERCISE 4 – MEDIUM / HIGH INTENSITY AEROBIC TRAINING

Warm Up: 10' jogging, mobility exercises and stretching
Exercise: 12'30" on 5' off x2
Intensity: 84 – 88%HR_{max}, RPE 3 – 5
Cool Down: 5' jogging, followed by 15' static stretching

SUNDAY

REST DAY

PROFESSIONAL GAME MATCH OFFICIALS

MONDAY

EXERCISE 1 – MEDIUM INTENSITY AEROBIC TRAINING

Warm Up: 5' cycling, mobility exercises and stretching
Exercise: 35' cycling (intermittent program) or Spinning class
Intensity: 76 – 84%HR_{max}, RPE 3 – 5
Cool Down: 5' jogging, followed by 15' static stretching

TUESDAY

FLEXIBILITY TRAINING

Exercise: 5' jogging, followed by 30' static stretching

WEDNESDAY

EXERCISE 2 – HIGH INTENSITY AEROBIC TRAINING

Warm Up: 10' jogging, mobility exercises and stretching
Exercise: 12' on, 4' off x2
Intensity: 86 – 88%HR_{max}, RPE 4 – 6
Cool Down: 5' jogging, followed by 15' static stretching

THURSDAY

EXERCISE 3 – CONDITIONING EXERCISES

Warm Up: 10' cycling, mobility exercises and stretching
Exercise: 20 – 30' conditioning exercises
Intensity: RPE 2 – 4
Cool Down: 5' cycling, followed by 15' static stretching

FRIDAY

EXERCISE 4 – INTERMITTENT AEROBIC TRAINING

Warm Up: 10' jogging, mobility exercises and stretching
Exercise: 30' intermittent game (Squash, badminton, tennis, 5-a-side etc.)
Intensity: 70-80%HR_{max}, RPE 3 – 5
Cool Down: 5' jogging, followed by 15' static stretching

SATURDAY

EXERCISE 5 – HIGH INTENSITY AEROBIC TRAINING

Warm Up: 10' jogging, mobility exercises and stretching
Exercise: 4' on, 1' off x5
Intensity: 86 – 90%HR_{max}, RPE 5 – 7
Cool Down: 5' jogging, followed by 15' static stretching

SUNDAY

REST DAY

SPECIFIC PREPARATORY Week I

MONDAY

EXERCISE 1 – ¾ PACE SPEED TRAINING

Warm Up: 10' jogging, mobility exercises and stretching
 Exercise: 5x 20m sprints, with 30" rest in between each sprint
 4' recovery
 5x 25m sprints, with 30" rest in between each sprint
 4' recovery
 5x 30m sprints, with 40" rest in between each sprint
 Total sprint distance 375m
 Intensity: ¾ pace, RPE 2 – 4
 Cool Down: 10' jogging, followed by 15'static stretching

TUESDAY

EXERCISE 2 – CONDITIONING EXERCISES

Warm Up: 10' cycling, mobility exercises and stretching
 Exercise: 20 – 30' conditioning exercises
 Intensity: RPE 2 – 4
 Cool Down: 5' cycling, followed by 15'static stretching

WEDNESDAY

EXERCISE 3 – HIGH INTENSITY AEROBIC TRAINING

Warm Up: 10' jogging, mobility exercises and stretching
 Exercise: 6' on, 1' off x5
 Intensity: 86 – 90%HR_{max}, RPE 5 – 7
 Cool Down: 5' jogging, followed by 15'static stretching

THURSDAY

EXERCISE 4 – MEDIUM INTENSITY AEROBIC TRAINING

Warm Up: 10' jogging, mobility exercises and stretching
 Exercise: 40' continuous cycling (or rowing; 4x 10')
 Intensity: 70 - 80%HR_{max}, RPE 3 – 5
 Cool Down: 5' jogging, followed by 15'static stretching

FRIDAY

REST DAY

SATURDAY

EXERCISE 5 – HIGH INTENSITY AEROBIC TRAINING

Warm Up: 10' jogging, mobility exercises and stretching
 Exercise: 150m, 300m, 450m, 600m, 450m, 300m, 150m, 300, 450, 600m intervals Each interval to be followed by 2' recovery jogging
 Total of 3750m
 Record and note the time taken for each individual HI run
 Exercise duration of ± 36' (16' HI & 20' recovery jogging)
 Intensity: 88 – 92%HR_{max}, RPE 7 - 9
 Cool Down: 5' jogging, followed by 15'static stretching

SUNDAY

REST DAY



PROFESSIONAL GAME MATCH OFFICIALS

SPECIFIC PREPARATORY Week II

MONDAY

EXERCISE 1 – CONDITIONING EXERCISES

Warm Up: 10' cycling, mobility exercises and stretching
Exercise: 20 – 30' conditioning exercises
Intensity: RPE 2 – 4
Cool Down: 5' cycling, followed by 15' static stretching

TUESDAY

EXERCISE 2 – SPEED ENDURANCE TRAINING

Warm Up: 10' jogging, mobility exercises and stretching
Exercise: 8 x 150m maximal sprints with 60" rec. between each. Perform a 2nd set after 10' rec.
Intensity: >90% HR_{max} RPE 7 – 8
Cool Down: 10' jogging, followed by 15' static stretching

WEDNESDAY

REST DAY

THURSDAY

EXERCISE 4 – HIGH INTENSITY AEROBIC TRAINING

Warm Up: 10' jogging, mobility exercises and stretching
Exercise: 2' HI running with 2' recovery X 10
Intensity: 86-90% HR_{max}, RPE 7 – 8
Cool Down: 5' jogging, followed by 15' static stretching

FRIDAY

REST DAY

SATURDAY

EXERCISE 5 – HIGH INTENSITY AEROBIC TRAINING

Warm Up: 10' jogging, mobility exercises and stretching
Exercise: 25' Continuous HI running
Intensity: 86 – 88%HR_{max}, RPE 7 - 8
Cool Down: 5' jogging, followed by 15' static stretching

SUNDAY

REST DAY

PROFESSIONAL GAME MATCH OFFICIALS

MONDAY

EXERCISE 1 – SPEED ENDURANCE TRAINING

Warm Up: 10' jogging, mobility exercises and stretching
 Exercise: 8x 100m in 17-19", followed by 30" recovery
 5' Rest
 Repeat
 Intensity: 90-95% Maximal Speed, RPE 7 - 9
 Cool Down: 5' jogging, followed by 15'static stretching

TUESDAY

REST DAY

WEDNESDAY

EXERCISE 2 – HIGH INTENSITY TRAINING

Warm Up: 10' rowing, mobility exercises and stretching
 Exercise: Using a rowing machine
 4 x 2000m
 5' rest in between each interval
 Pace 1'50" – 2'10" per 500m
 Stroke Rate 26 to 28 spm
 Intensity: 85-90%HR_{max}, RPE 7 - 9
 Cool Down: 5' rowing, followed by 15'static stretching

THURSDAY

EXERCISE 3 – CONDITIONING EXERCISES

Warm Up: 10' cycling, mobility exercises and stretching
 Exercise: 20 – 30' conditioning exercises
 Intensity: RPE 2 – 4
 Cool Down: 5' cycling, followed by 15'static stretching

FRIDAY

EXERCISE 4 – SPEED TRAINING

Warm Up: 10' jogging, mobility exercises and stretching
 Exercise: 5x 20m sprints, with 30" rest in between each sprint
 4' recovery
 5x 25m sprints, with 30" rest in between each sprint
 4' recovery
 5x 30m sprints, with 40" rest in between each sprint
 Total sprint distance 375m
 Intensity: Maximal pace, RPE 3 - 5
 Cool Down: 5' jogging, followed by 15'static stretching

SATURDAY

EXERCISE 5 – HIGH INTENSITY AEROBIC TRAINING

Warm Up: 10' jogging, mobility exercises and stretching
 Exercise: 3x 1000m in <4'30"

3' recovery jogging in between each 1000m
Followed by 3x 500m in <2'15"
2' recovery jogging in between each 500m
Total exercise duration of $\pm 36'$ (21' HI running, with 15' recovery jogging)
Intensity: 85 - 95%HR_{max}, RPE 7 - 9
Cool Down: 5' jogging, followed by 15' static stretching

SUNDAY
REST DAY



**PROFESSIONAL GAME
MATCH OFFICIALS**

SPECIFIC PREPARATORY Week IV

MONDAY

EXERCISE 1 – HIGH INTENSITY AEROBIC TRAINING

Warm Up: 10' jogging, mobility exercises and stretching
Exercise: 4' on, 3' off x4
Record the distance for each interval
Intensity: 90-95%HR_{max}, RPE 8 - 9
Cool Down: 5' jogging, followed by 15'static stretching

TUESDAY

EXERCISE 2 – CONDITIONING EXERCISES

Warm Up: 10' cycling, mobility exercises and stretching
Exercise: 20 – 30' conditioning exercises
Intensity: RPE 2 – 4
Cool Down: 5' cycling, followed by 15'static stretching

WEDNESDAY

EXERCISE 3 – SPEED TRAINING

Warm Up: 10' jogging, mobility exercises and stretching
Exercise: 5x 25m sprints, with 30" rest in between each sprint
4' recovery
5x 30m sprints, with 40" rest in between each sprint
4' recovery
4x 40m sprints, with 60" rest in between each sprint
Total sprint distance 435m
Intensity: Maximal pace, RPE 3 - 5
Cool Down: 5' jogging, followed by 15'static stretching

THURSDAY

REST DAY

FRIDAY

EXERCISE 4 – HIGH INTENSITY TRAINING

Warm Up: 10' rowing, mobility exercises and stretching
Exercises: Using a rowing machine
Pace 1'50" – 2'00" per 500m
3x 1000m, with 2' recovery in between
4x 500m, with 1' recovery in between
5x 250m, with 30" recovery in between
Intensity: 85-95%HR_{max}, RPE 5 - 7
Cool Down: 10' cycling, followed by 15'static stretching

SATURDAY

EXERCISE 5 – SPEED ENDURANCE TRAINING

Warm Up: 10' jogging, mobility exercises and stretching
Exercise: 6x 7" intervals, followed by 20" recovery
3' Rest
Repeat x4
Intensity: 90-95% Maximal Speed, RPE 7 - 9
Cool Down: 5' jogging, followed by 15' static stretching

SUNDAY
REST DAY

SPECIFIC PREPARATORY Week V

PROFESSIONAL GAME MATCH OFFICIALS

MONDAY

EXERCISE 1 – HIGH INTENSITY AEROBIC TRAINING

Warm Up: 10' jogging, mobility exercises and stretching
 Exercise: 3x 1000m, with 3' recovery jogging in between each 1000m – aim to run the intervals 5-10" faster than on 19th July
 Followed by 3x 500m, with 2' recovery jogging in between each 500m – aim to run the intervals 3-7" faster than on 19th July
 Total exercise duration of $\pm 34'$ (19' HI running, with 15' recovery jogging)
 Intensity: 85 - 95%HR_{max}, RPE 7 - 9
 Cool Down: 5' jogging, followed by 15' static stretching

TUESDAY

EXERCISE 2 – CONDITIONING EXERCISES

Warm Up: 10' cycling, mobility exercises and stretching
 Exercise: 20 – 30' conditioning exercises
 Intensity: RPE 2 – 4
 Cool Down: 5' cycling, followed by 15' static stretching

WEDNESDAY

EXERCISE 3 – SPEED TRAINING

Warm Up: 10' jogging, mobility exercises and stretching
 Exercise: 5x 25m sprints, with 30" rest in between each sprint
 4' recovery
 5x 30m sprints, with 40" rest in between each sprint
 4' recovery
 4x 40m sprints, with 60" rest in between each sprint
 Total sprint distance 435m
 Intensity: Maximal pace, RPE 3 - 5
 Cool Down: 5' jogging, followed by 15' static stretching

THURSDAY

REST DAY

FRIDAY

EXERCISE 4 – HIGH INTENSITY AEROBIC TRAINING

Warm Up: 10' jogging, mobility exercises and stretching
 Exercise: 2' on, 1' off x8
 Record the distance for each interval
 Intensity: 90 - 92%HR_{max}, RPE 7 - 9
 Cool Down: 5' jogging, followed by 15' static stretching

SATURDAY

EXERCISE 5 – SPEED ENDURANCE TRAINING

Warm Up: 10' jogging, mobility exercises and stretching

Exercise: From a 5m rolling start, perform a 40m run at maximal speed, followed by a slow deceleration and 25" recovery
Repeat x5 for a total of 5 x40m sprints ($\pm 3'$)
4' active recovery jogging & stretching. This equals 1 SET
Perform a total of 4 SETS
SE exercise duration (inc. recovery) = $\pm 28'$

Intensity: $> 90\%HR_{max}$, RPE 6 - 8

Cool Down: 5' jogging, followed by 15' static stretching

SUNDAY
REST DAY

PROFESSIONAL GAME MATCH OFFICIALS

MONDAY

EXERCISE 1 – HIGH INTENSITY AEROBIC TRAINING

Warm Up: 10' jogging, mobility exercises and stretching
 Exercise: 1' on, 30' off x8
 Record the distance for each interval
 5' recovery
 Repeat
 Intensity: 90 - 92%HR_{max}, RPE 7 - 9
 Cool Down: 5' jogging, followed by 15'static stretching

TUESDAY

EXERCISE 2 – CONDITIONING EXERCISES

Warm Up: 10' cycling, mobility exercises and stretching
 Exercise: 20 – 30' conditioning exercises
 Intensity: RPE 2 – 4
 Cool Down: 5' cycling, followed by 15'static stretching

WEDNESDAY

EXERCISE 3 – SPEED TRAINING

Warm Up: 10' jogging, mobility exercises and stretching
 Exercise: 15x 10m sprints, with 30" rest in between each sprint
 4' recovery
 6x 40m sprints, with 60" rest in between each sprint
 Total sprint distance 390m
 Intensity: Maximal pace, RPE 3 - 5
 Cool Down: 5' jogging, followed by 15'static stretching

THURSDAY

REST DAY

FRIDAY

EXERCISE 4 – HIGH INTENSITY AEROBIC TRAINING

Warm Up: 10' jogging, mobility exercises and stretching
 Exercise: 30' on, 30" off x 12
 Record the distance for each interval
 5' recovery
 Repeat
 Intensity: 90 - 92%HR_{max}, RPE 7 - 9
 Cool Down: 5' jogging, followed by 15'static stretching

SATURDAY

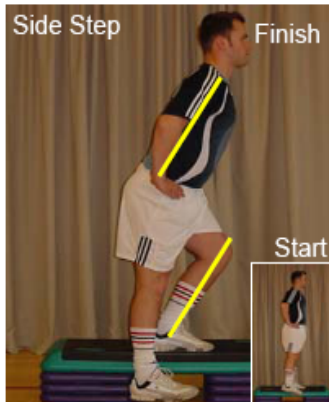
REST DAY

SUNDAY

REST DAY

1) LOWER LIMB

Perform these 3 exercises for 30" each in sequence x2 with 15" rest in between.



Area - Thigh & Hip

Action - Keep heel of supporting foot in contact with step as body weight is lowered to the floor. Stop once the heel of the non weight bearing foot touches the floor.

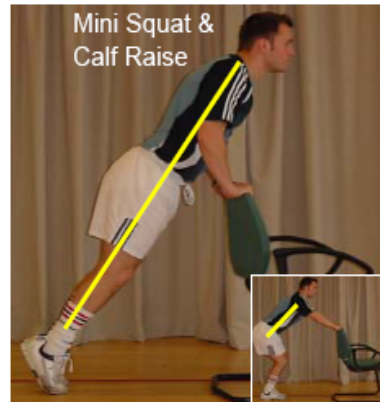
Technique - Keep back straight. At the bottom the trunk should be parallel with the line of the supporting shin.



Area - Hip & Trunk Stabilisers

Action - Stand in a stride position. Keeping the chest out & the shoulders back, drop down so that body weight is lowered vertically. At the bottom the knees should be at 90° with the trunk aligned vertically above the rear thigh.

Technique - Don't allow the leading knee to lunge forward of the ankle. At the bottom of the squat the rear knee should be in line with the hip & shoulder of the same side. Avoid sticking the backside out & dropping the shoulders forward



Area - Lower Limb 'Push-Off' Muscles

Action - Start with the knees slightly bent & heels in contact with floor. Maintain balance with hand support & drive forwards & upwards. Finish with the knees fully extended & the heels lifted maximally from the floor.

Technique - Keep the back straight throughout the exercise.

2) CALF

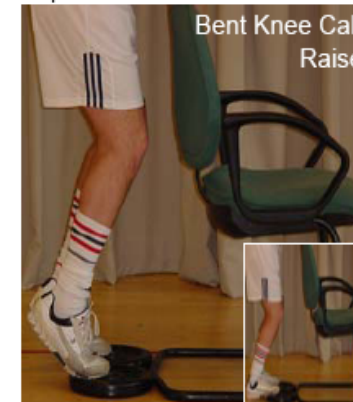
Perform these exercises for 30" each in sequence x2 with 15" rest between exercises



Area - Superficial Calf Muscles

Action - Place your toes on a small raise. Keep the knees extended & taking the weight through your hands - push up onto your toes.

Technique - Perform the movement slowly. The raise should be sufficient to allow the heels to touch the floor & to cause a slight stretching sensation in the calf area at the start of the exercise.



Area - Deep Calf Muscles

Action - Place your toes on a small raise. Keep the knees partially bent & taking the weight through your hands - push up onto your toes. Keep the knees bent as you do this.

Technique - Perform the movement slowly. The raise under the toes together with the degree of knee bend should be sufficient to allow the heels to touch the floor & to cause a slight stretching sensation in the calf area at the start of the exercise.

3) HAMSTRING

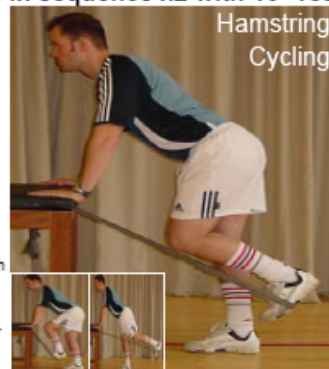
Perform these 5 exercises for 30" each in sequence x2 with 15" rest in between exercises



Area - Hamstring

Action - Place your heels on a bench & position the body near enough to the bench so that the knees are bent between 45-90°. Push down on the heels & lift the backside as high as possible

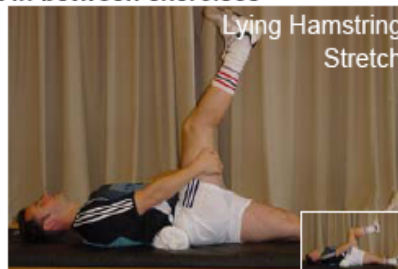
Technique - Placing the hands on the floor makes the exercise easier than placing the arms across the chest.



Area - Hamstring (endurance)

Action - Place your heels on a bench & position the body near enough to the bench so that the knees are bent between 45-90°. Push down on the heels & lift the backside as high as possible

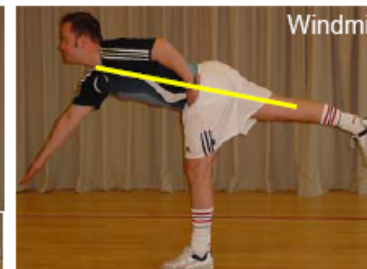
Technique - The resistance should be low so that high reps can be performed (20+). Keep the back straight throughout the exercise. Don't allow the lower back to bend as the knee is taken forwards.



Area - Hamstring (flexibility)

Action - Place a rolled towel beneath the small of the back. Keep the leg that isn't to be stretched flat to the floor. Grasp with both hands behind the thigh and then straighten the knee until a stretch sensation is felt on the back of the thigh. Hold for a count of 8 and repeat x10.

Technique - Keep the non-stretched leg flat to the floor.



Area - Hamstring (eccentric)

Action - Standing upright, keep the back straight & tip forwards maintaining a straight line down the length of the trunk and the non weight bearing leg. Reach down towards the floor and stop when tightness is experienced at the back of the thigh.

Technique - Perform the movement slowly & don't let the back bend - keep the backside in a 'stuck out' position.



Area - Hamstring (flexibility)

Action - Sit with the back straight & the backside in a 'stuck out' position. Tip the shoulders forwards, then straighten the knee by pulling on a belt that is looped around the foot. Hold at the point of stretch for a count of 8. repeat x10.

Technique - Don't let the lower back bend as the stretch is applied - the backside must be kept in the 'stuck out' position throughout the exercise.

4) GLUTS

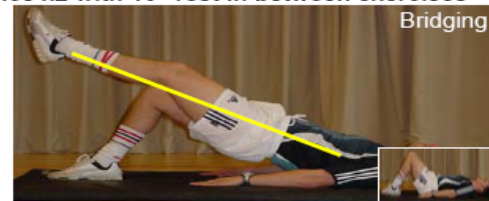
Perform these 2 exercises for 30" each in sequence x2 with 15" rest in between exercises



Area - Buttock

Action - Support the upper body over the end of a table. Maintain a straight lower back as the bent knee is lifted to achieve full hip extension. Perform the movement smoothly and slowly.

Technique - Keep the knee bent to 90° throughout the movement - this shortens the hamstrings & focuses the effort onto the buttock muscles. Keep the back straight - don't let it over extend as the leg is lifted or bend the leg as the leg is lowered.



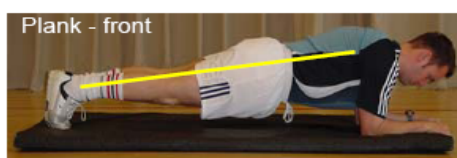
Area - Buttock & Trunk

Action - Start with the knees & hip bent with the feet flat to the floor. Push up on both legs to lift the backside. Transfer weight to one foot then lift the other foot.

Technique - Engage the buttock muscles in preference to the hamstrings. Don't let the hip of the lifted leg drop as the weight is taken off the foot. Placing the hands on the floor makes the exercise easier than placing the arms across the chest.

5) TRUNK

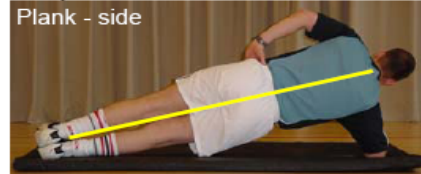
Perform these 4 exercises for 30" each in sequence x2 with 15" rest in between exercises



Area - Trunk (front abdominals)

Action - Take the weight through the toes & forearms whilst maintaining a straight trunk. Hold this position for a count of 10 and then roll into a side plank position.

Technique - Don't let the backside sag beneath the horizontal & keep the head in line with the trunk.



Area - Trunk (side abdominals)

Action - Take the weight through the side of the foot & forearms whilst maintaining a straight trunk. Hold this position for a count of 10 and then roll into the front plank position.

Technique - Keep the head in line with the trunk and don't allow the backside to fall back into a 'jackknife' position.



Area - Trunk & Hip Extensors

Action - Keep the supporting knee directly under the hip & the supporting arm directly beneath the shoulder. Without twisting excessively - straighten the opposite arm and leg.

Technique - Perform the movements slowly and smoothly. Aim to have as little wobble as possible & no excessive trunk twisting.



Area - Trunk (front abdominals)

Action - Start with the back straight & maintain this as the bar rolls away from the body.

Technique - Don't allow the lower back to fall into hyper-extension at the end of the roll out. Initiate movements first from hips then the arms.