WEEK 35 from Monday 28th of August to Sunday 3rd of September
Macrocycle III, week 1 (Training week 13)

Mon. 28th: Tr. 46

* Act. Rec.

- 50' recovery session in a fitness centre, including
  - 10' warm up (walking & jogging on a treadmill between 6 & 13 km/hr, followed by mobilisation exercises)
  - 30' non-weight bearing exercises (70% HR_{max}), such as:
    - 10-12' cycling (80-90 cycles/min)
    - 8-12' rowing (25-30 cycles/min)
    - 10-12' gliding / stepping (60-70 cycles/min)
  - 10' stretching followed by sauna, jacuzzi, massage

Total duration: 50'

Tue. 29th: Tr. 47

* Low Int.

- 5' jogging slowly building up to 70% HR_{max} (± 1 km)

* Warm up

- 20' extensive warming up, mobilisation and stretching

* Strength

- Advanced set of strength and injury prevention exercises (week 4)

* High Int.

- In a fitness centre, this HI-run can be done a regular treadmill. Outside, it can be performed anywhere. To prevent injuries, however, it is better to practice on a soft ground than on any surface that is too demanding for articulations and tendons. As shown below, it can also be done on a regular field of play. Referees start in the centre circle. They run clockwise to target 1, return to the start position, run to target 2, return to the start position and so on. The coach can keep the timing and whistle each time the referees have to change from HI running to jogging or vice versa.

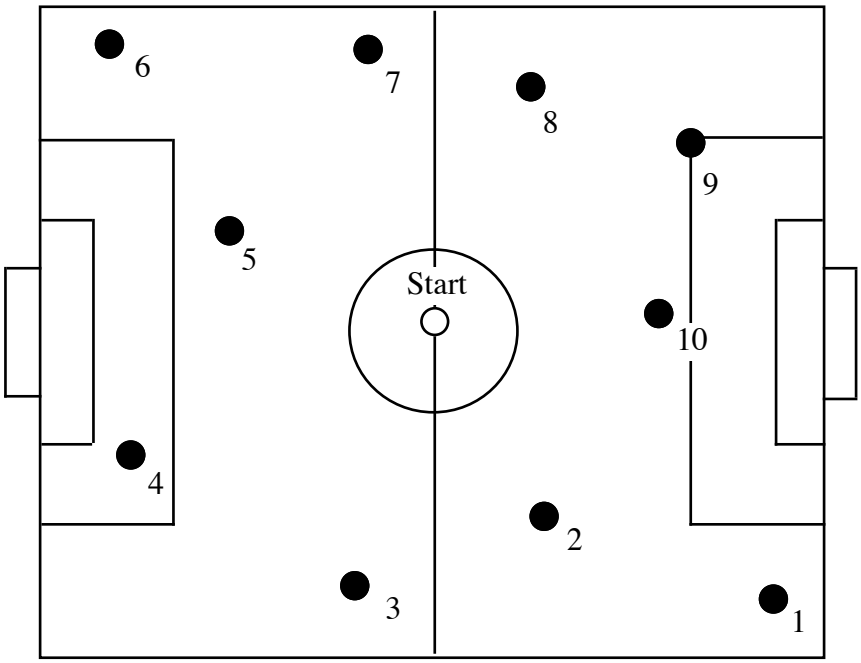
- 20" run at 90% HR_{max} (appr. 100 m), 10" jogging (Set 1)
- 40" run at 90% HR_{max} (appr. 200 m), 20" jogging
- 60" run at 90% HR_{max} (appr. 300 m), 30" jogging
- 80" run at 90% HR_{max} (appr. 400 m), 40" jogging

- 20" run at 90% HR_{max} (appr. 100 m), 10" jogging (Set 2)
- 40" run at 90% HR_{max} (appr. 200 m), 20" jogging
- 60" run at 90% HR_{max} (appr. 300 m), 30" jogging
- 80" run at 90% HR_{max} (appr. 400 m), 40" jogging

- 5' passive recovery (until bpm < 65% HR_{max})

- From a coaching point of view, the easiest way to run this intermittent exercise, is to whistle each time the referees have to change from activity. For Set 1 and 2, the time table is:

0 (20" HI tempo) - 20" (J) - 30" (T) - 1'10" (J) - 1'30" (T) - 2'30" (J) - 3' (T) - 4'20" (J) - 5' (T) - 5'20" (J) - 5'30" (T) - 6'10" (J) - 6'30" (T) - 7'30" (J) - 8' (T) - 9'20" (J) - 10' (Stop)



- For the next 2 sets, the same time table can be used:

- 20" run at 90% HR_{max} (appr. 100 m), 10" jogging (Set 3)
- 40" run at 90% HR_{max} (appr. 200 m), 20" jogging
- 60" run at 90% HR_{max} (appr. 300 m), 30" jogging
- 80" run at 90% HR_{max} (appr. 400 m), 40" jogging

- 20" run at 90% HR_{max} (appr. 100 m), 10" jogging (Set 4)
- 40" run at 90% HR_{max} (appr. 200 m), 20" jogging
- 60" run at 90% HR_{max} (appr. 300 m), 30" jogging
- 80" run at 90% HR_{max} (appr. 400 m), 40" jogging

- All together, this HI exercise takes 10' for Set 1 & 2 and 10' for set 3 & 4, so 20' in total with 5' passive recovery in between

* Cool down - 5' jogging and walking, followed by 10' extensive stretching

Total duration: 75'

Wed. 30th: REST or PASSIVE RECOVERY

Thu. 31st: Tr. 48

* Low Int. - 5' jogging slowly building up to 80% HR_{max} (± 1 km)

* Warm up - 20' extensive warming up, mobilisation and stretching

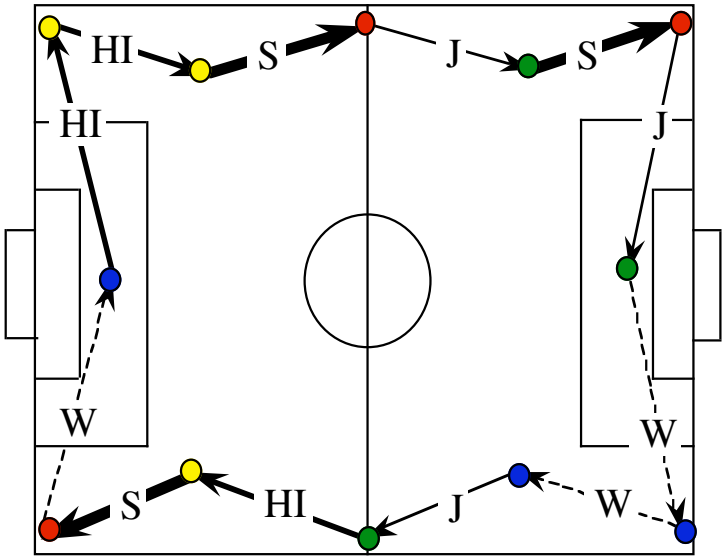
* Strength - Advanced set of strength and injury prevention exercises (week 4)

* Speed End. - Set 1: Field exercise, 5 laps of 2' each.
During each lap, there are 12 different activities. The colour of the next cone determines the intensity of the next activity as follows:
- walking to the blue cones
- jogging to the green cones
- high intensity tempo run to the yellow cones
- sprinting to the red cones

- 4' passive recovery (until bpm < 65% HR_{max})

- Field exercise Set 2 (again 5 laps of 2' each)

- All together, this exercise takes 10' + 4' recovery + 10' = ± 24'



* Match play - If referees have a group training session then a 10' regular match can be played with the restriction that the ball can only be touched twice ('control & pass'). If the game is not played fast enough, another restriction can be implemented, i.e. to score all members of a team have to be on the attacking part.

- Alternatively, if it is not possible to play a match, referees may perform a 10' medium intensity jogging (80% HR_{max}).

* Cool down - 5' jogging and walking, followed by 10' extensive stretching

Total duration: 84'

Fri. 1st: REST or PASSIVE RECOVERY

Sat. 2nd: Tr. 49

* Warm up
- 20' extensive warming up, mobilisation and stretching

* Speed
- Variations on the 60 m distance as follows:
- 20 m sprint up, 20 m walk down, 6 x or 120 m sprint in total
- 2' recovery and stretching

- 40 m sprint up, 40 m walk down, 4 x or 160 m sprint in total (2 x with a change in direction to the left, 2 x to the right)
- 3' recovery and stretching

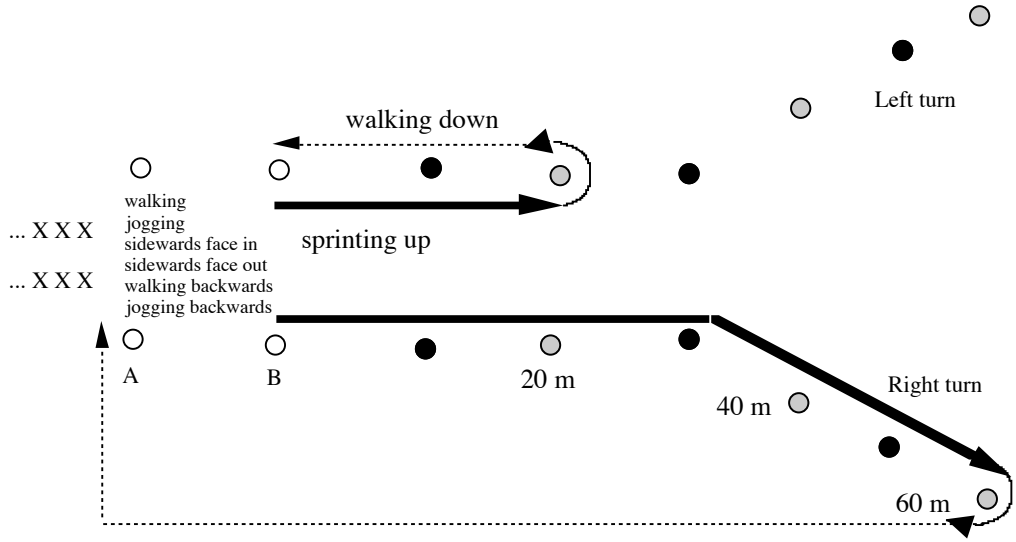
- 60 m sprint up, 60 m walk down, 2 x or 120 m sprint in total (1 x with a change in direction to the left, 1 x to the right)

* Tips

1) Sprints always have to be done from a dynamic position (heel-lifts, knee-lifts,…) and upon a visual signal as in the game. This can be given by the coach 1) who bounces a ball on the ground, or 2) who drops his whistle. Alternatively, it is also possible that referees work 2 x 2.

2) Decelerate smoothly after completing each sprint.

3) Use the polar watch to determine the recovery time in between repetitions: it should be less than 60-65% of HR_{max} before you start the next repetition (± 120 bpm).



- The total exercise time is 15'.

* Cool down
- 5' jogging and walking, followed by 10' extensive stretching

Total duration: 50'

Sun. 3rd: Those referees who don't have a game to officiate in the weekend, may do some intermittent activities such as playing badminton, football, squash, or tennis.

WEEK 13 Macrocycle III, week 1 Training Objective	Session 1 Monday AR	Session 2 Tuesday HI	Session 3 Thursday SE	Session 4 Fri/Sat SP	Weekly Total (mins)	% Activity Breakdown
Warm up	10	20	20	20	70	27.0%
High Int.	0	20	0	0	20	7.7%
Low Int.	0	5	5	0	10	3.9%
Med. Int. / Ext. Sp.	0	0	0	0	0	0.0%
Speed End.	0	0	20	0	20	7.7%
Speed/Agility	0	0	0	10	10	3.9%
Match practice	0	0	10	0	10	3.9%
Act. Recovery	30	0	0	0	30	11.6%
Strength	0	10	10	0	20	7.7%
Pass. Recovery	0	5	4	5	14	5.4%
Cool down & Str.	10	15	15	15	55	21.2%
TOTAL	50	75	84	50	259	100.0%

P.S. All the training sessions are based upon percentages of the maximal heart rate % HR_{max}. Therefore, for those who do not possess a heart rate monitor, the following exercise intensity classifications should be used:

% HR_{max}	**Type of training**	**Perceived exertion**
< 65% HR_{max}	Passive Recovery (PR)	Very easy
65-75% HR_{max}	Low Intensity (LI)	Easy to comfortable
76-85% HR_{max}	Medium Intensity (MI)	Uncomfortable to stressful
86-95% HR_{max}	High Intensity (HI)	Hard to very hard
> 95% HR_{max}	Maximal Effort (ME)	Maximal