



Football Conditioning

Australian Football

Future



•Knowledge +

•Ability +

•Attitude +

•Attitude +

•Knowledge or
Ability -/-

•Knowledge
and/or Ability +

•Attitude -/-

Football Conditioning

No waste of precious football training time!



The Objective



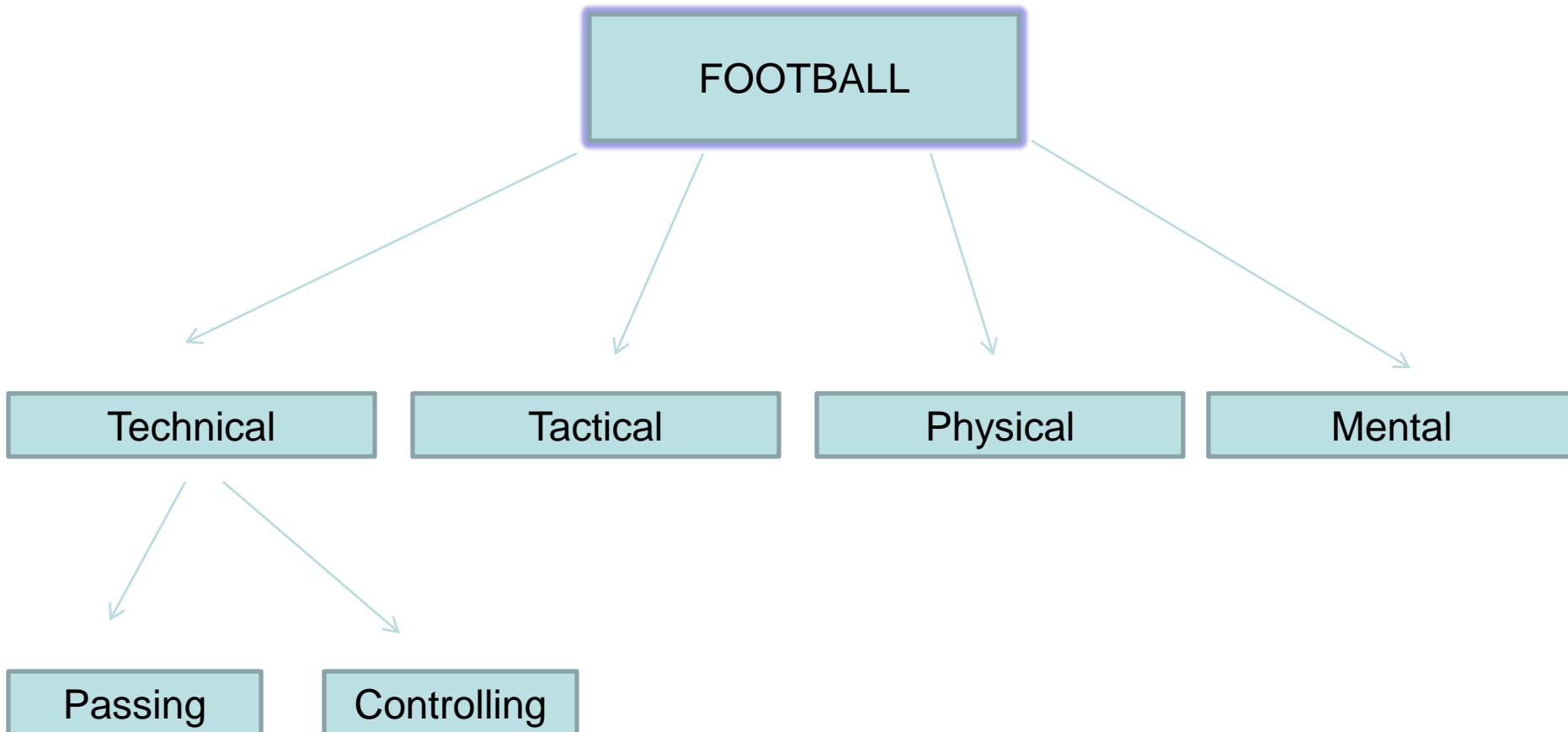
The total STRUCTURE OF FOOTBALL is always the starting point

The main moments of football are:

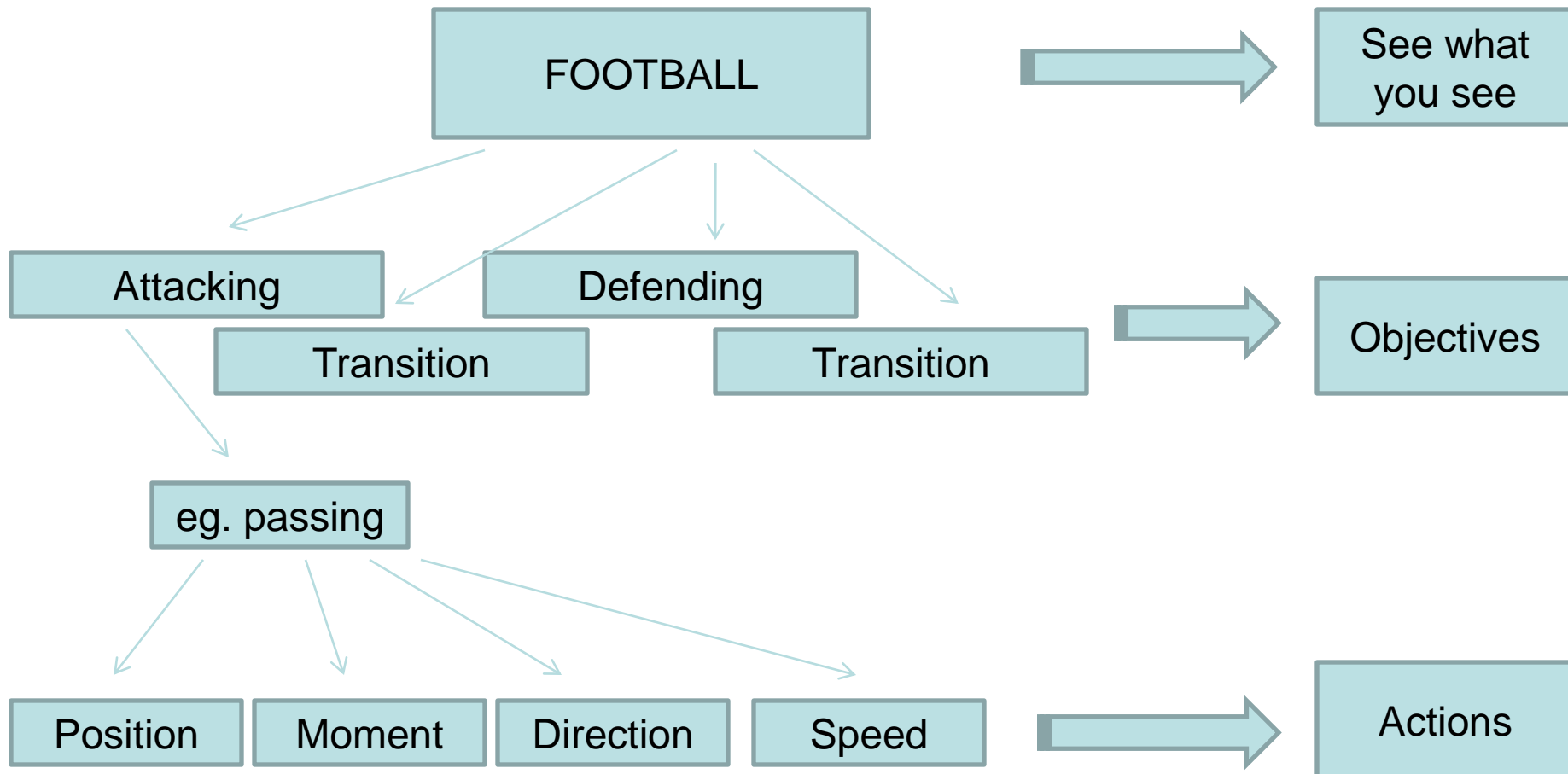
1. Ball possession
 - building up, attacking and scoring (team tasks)
2. Transition
 - BP to BPO (team tasks)
3. Ball possession opponent (BPO)
 - disturbing and defending (team tasks)
4. Transition
 - BPO to BP (team tasks)

A game of football is a constant repetition of these 4 main moments, each with its characteristic team tasks.

Traditional approach to football ...



Modern approach (action theory) to football ...



Is Mourinho Dutch?

*Everything is related to the way in which we practice. We don't have room for physical training; for traditional **endurance, strength or speed** training. **It's really all about behavior!** We work on our **playing model**, we work on our **playing principles** and **playing sub-principles**, we ensure that the players adapt to ideas that are common to all, as a means of **establishing the same behavioral language**. **We work exclusively on the match situations that** interest me, we **plan the week** according to our **thinking on recovery time, training and matches, progressiveness and alternation**. **We create habits** with the aim of **maintaining the team's fitness**, which manifests itself in ensuring we are frequently "playing well".*

Jose Mourinho



The Objective

In every training session the following questions should be answered with YES:

1. Is football being played?
2. Is football being learned (and therefore taught)?
3. Is football being experienced (and enjoyed)?
4. Do the players understand the football purpose of the exercise?
5. Do the players recognize the game related intention?
6. Are the players challenged to improve both individually and as a team?

The Objective

The National Curriculum philosophy is that the most appropriate way for teaching and learning football is to:

Leave the football context as much as possible intact and therefore the relation to the game should always be recognisable for players in all training situations and exercises.

The game is complex and unpredictable (not one situation or action is the same).

Every football action in the game is defined by various factors such as:

➤ The ball, the rules, opponents and teammates, space, time, direction, score, etc;

By isolating parts from this total context they lose their significance, in other words, the *football structure* is lost.

This is the essence of 'unorganized' street / park football where the foundations of every top player can be found.

“No waste of precious *FOOTBALL* training time!”

- As a consequence of the philosophy, physical fitness is also an inseparable (conditional) part of football’s structure which leads to the proposition:
 - Conditioning is football training.
 - Football training is conditioning.

Analysis of football conditioning by Raymond Verheijen (Ph.D. sports science, creator of “Football Conditioning” and the “Periodisation Model”) shows:

- Football is becoming more and more compact: less space on the pitch / time on the ball;
- Because of this the number of explosive football actions (‘football’ sprints / duels etc.) in professional football has increased by 40% over the last 8 to 10 years;
- The total running distance is not a decisive factor.



Conditioning for football? or Football for Conditioning?

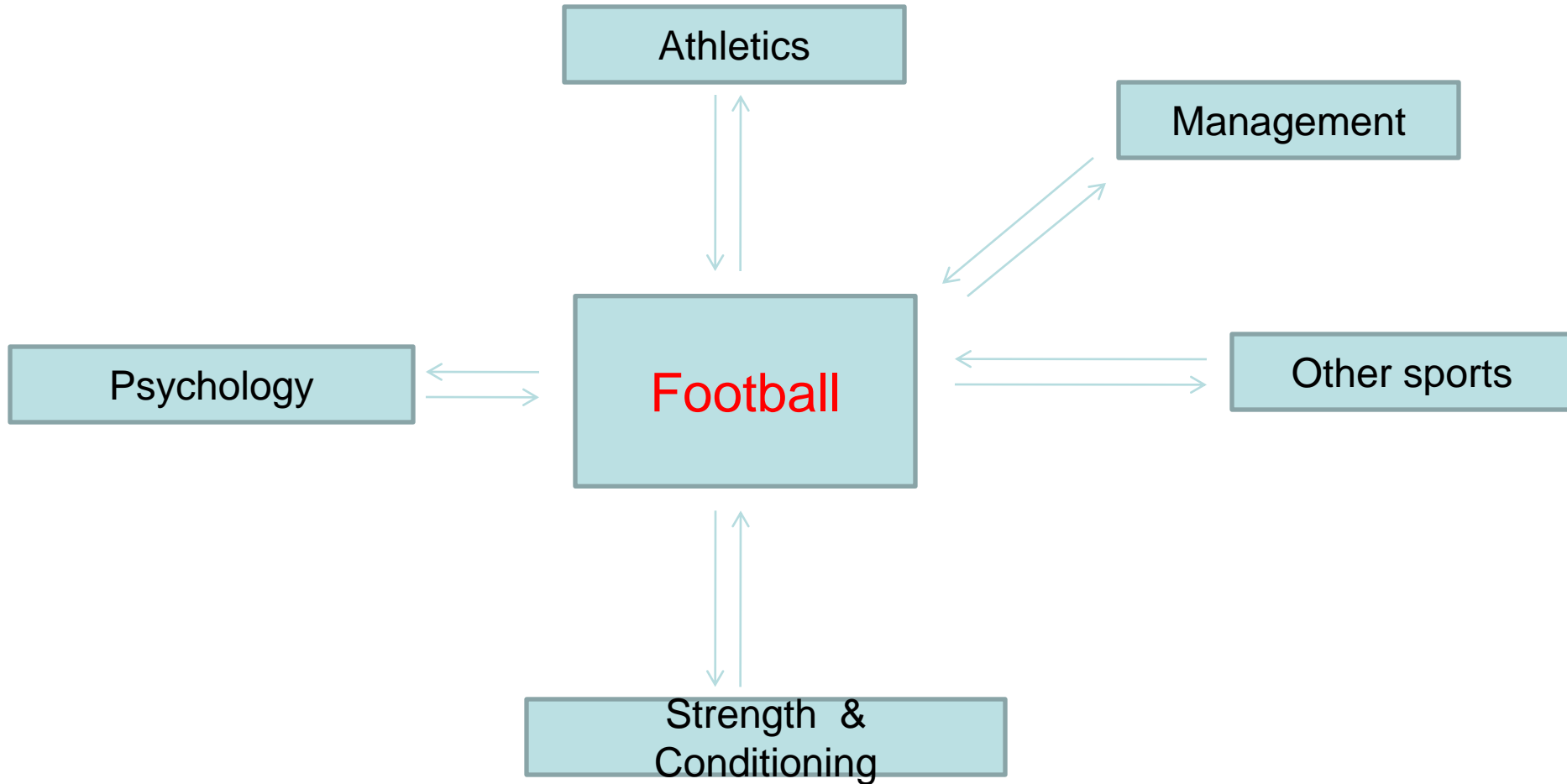
Is football and intensity sport or an endurance sport?

- How does an 800m runner train to get better?
- Can we learn from that?
- Should we do the same?

- How does a basketballer train for agility?
- Can we learn from that?
- Should we do the same?

- Is Australia regarded as a world leader in Strength and Conditioning?

Can we improve?



We play football so lets speak football language!

- Anaerobic fitness? Aerobic fitness? Aerobic capacity? Phosphate system? ATP?
- We use ATP for energy, we need oxygen only to convert what we eat (energy) to ATP (muscle energy)
- Oxygen (breathing simply restores energy (ATP) for explosive actions
- Therefore when players look tired it's not because they aren't fit, its because they aren't able to reproduce explosive actions
- Long duration running will NOT fix this, you must overload short, football specific actions
- The body will and does adapt
- Need to avoid fatigue
- Players need to be fresh
- If players are fatigued?
 - 1) Actions less than 100%
 - 2) Body fails to repair itself
 - 3) Injury



The Traditional Approach to Fitness

- When we refer to 'football actions' in terms of fitness ...
- The traditional approach is to look at football from a general fitness perspective;

Football  Fitness (Traditional)

- Position (Starting block)
- Moment (Start signal)
- Direction (Sprint lane)
- Speed (Maximum sprinting)
- Movement

The Modern Approach to Fitness

➤ When we look at fitness from a football perspective ...

Fitness  Football

- Position – moment – movement – direction
- There is no starting block (cone)
- There is no predetermined moment to start the action (no starting gun)
- There is no designated direction (no sprint lane, no set direction, cone to cone)
- There is constant movement
- Speed is the only variable

Football Actions  Physical (Football) Characteristics

The Objective

As a result the essence of teaching (training) is to always think of the actual game situation as the starting point and then simplify / modify the game situation for training. This is achieved by reducing the game specific resistances until the obtained training aim can be realised by the players.

➤ Therefore a coach must be able to:

- analyse football;
- define the 'football problems' of the team and/or the individual players in *football* language;
- design and implement exercises to realise the training aims.



Analysing Football

“In the last 15 minutes of a game the players look tired”!

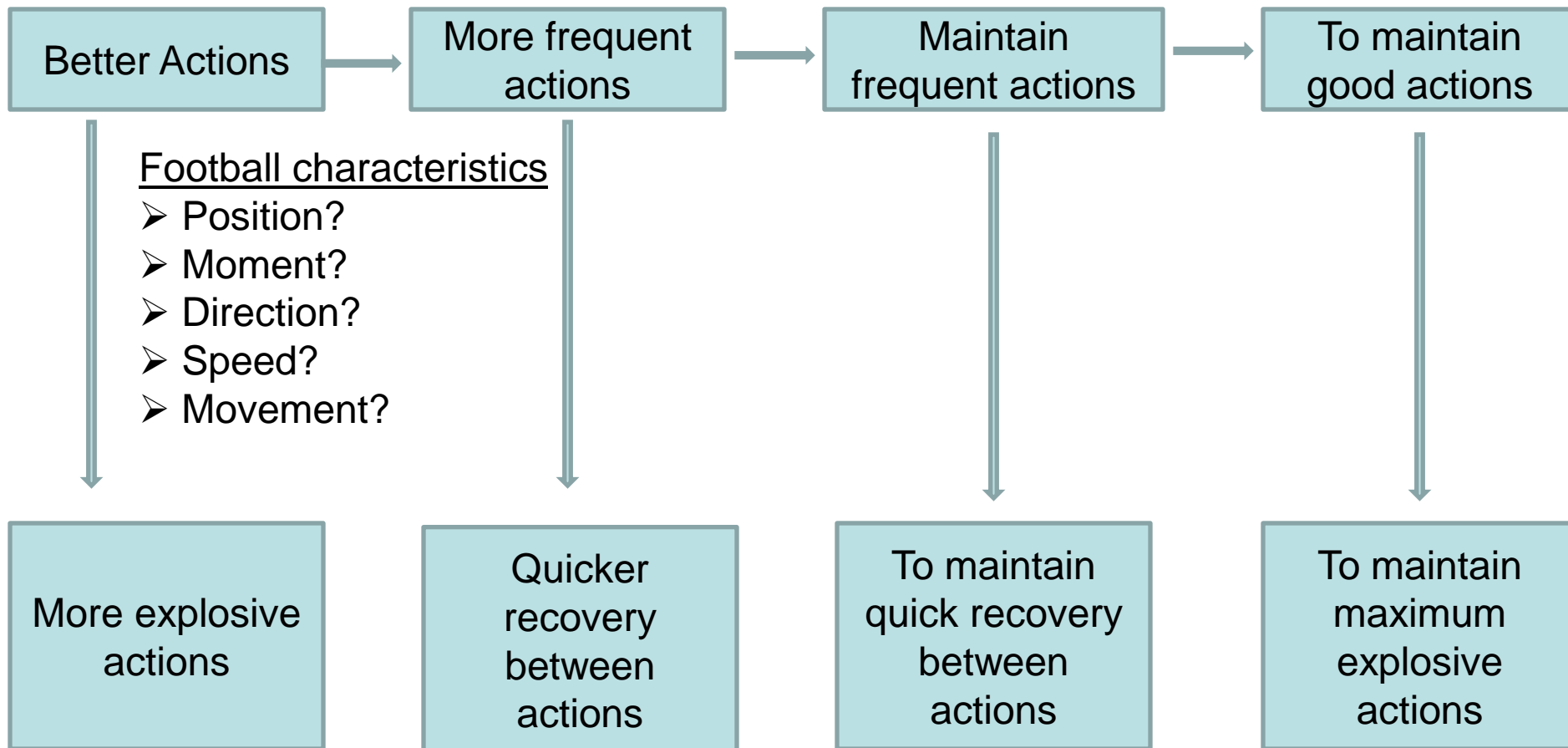
- Physical coach (of swimming, running, cycling, traditional football coach) would say they ‘lack endurance’ and ‘aerobic capacity’



- A football coach would (should) say ...
‘the players lack the ability to maintain playing football’ ... ‘the ability to maintain frequent transition’

What does a coach want?

In football language ...



In football language ...

Better Actions

Football characteristics

- Position?
- Moment?
- Direction?
- Speed?
- Movement?

More explosive actions

To enable a player to perform 100% 'football' sprints ... to train start / acceleration speed

X

To continue to perform maximum explosive actions

X

- 6 to 10 x 5 metre sprints with 30 seconds rest (maximum rest)
- 4 to 8 x 15 metre with 45 seconds rest
- 2 to 6 x 25 metre sprints with 60 seconds rest

Football Sprints - large recovery

6*5m (30''R)/4*15m(45''R)/ 2*25m(60''R)-4'RS

7*5m/4*15m/ 2*25m

7*5m/5*15m/ 2*25m

7*5m/5*15m/ 3*25m

8*5m/5*15m/ 3*25m

8*5m/6*15m/ 3*25m

8*5m/6*15m/ 4*25m

9 *5m/6*15m/ 4*25m

9 *5m/7*15m/ 4*25m

9 *5m/7*15m/ 5*25m

10*5m/7*15m/ 5*25m

10*5m/8*15m/ 5*25m

10*5m/8*15m/ 6*25m

In football language ...

More frequent
actions

Football characteristics

- Position?
- Moment?
- Direction?
- Speed?
- Movement?



Quicker
recovery
between
actions

Without conditioning ...

X.....40'.....X.....40'.....X

With conditioning ...

X...20'...X...20'...X...20'...X

- Trained with 4 v 4 / 3 v 3

4v4 / 3v3

• 2*6-8 games / 1-3'work / 3-1'R / **4'RS**

- 2*6*1'w/3'R
- 2*6*1'w/2.5'R (reduce recovery for overload)
- 2*6*1'w/2'R
- 2*6*1'w/1.5'R
- 2*6*1'w/1'R
- 2*6*1.5'w/1.0'R (increase work for overload)
- 2*6*2'w/1.0'R
- 2*6*2.5'w/1.0'R
- 2*6*3'w/1.0'R
- 2*7*3'w/1.0'R (increase sets for overload)
- 2*8*3'w/1.0'R
- 2*9*3'w/1.0'R
- 2*10*3'w/1.0'R

In football language ...

Maintain
frequent actions

Football characteristics

- Position?
- Moment?
- Direction?
- Speed?
- Movement?

To maintain
quick recovery
between
actions

To enable a player to re-produce
football sprints

- Without conditioning ...

X...X...X...X.....X

- With conditioning ...

X...X...X...X...X...X

- 11 v 11, 8 v 8, 7 v 7, 5 v 5

11v11, 8v8

- 2-6 games * 10-15' / **2'R**

- 2*10' * 2'R (start off basic and analyse how they are)

- 2*11

- 2*12

- 2*13

- 2*14

- 2*15

- 3*11 → 3*15

- 4*12 → 4*15

- 5*13 → 5*15

- 6*13 → 6*15

7v7, 6v6, 5v5

•4-6 games * 4-8 minutes' / **2'R**

•4*4.0'*2'R (start off basic and analyse how they are)

•4*4.5

•4*5.0

•4*5.5

•4*6.0

•4*6.5

•4*7.0

•4*7.5

•4*8.0

•5*7.0 → 5*8

•6*7.0 → 6*8

In football language ...

To maintain
good actions

Football characteristics

- Position?
- Moment?
- Direction?
- Speed?
- Movement?

To maintain
maximum
explosive
actions

Without conditioning ...

X...20'...X.....30'.....X.....40'.....X

With conditioning ...

X...20'...X...20'...X...20'...X...20'...X

- Repetitive sprints with short rest

Football Sprints - little rest

• 2 sets * 6 reps * 15m (10'R – 4'RS)

• 2*7*15

• 2*8*15

• 2* 9 *15

• 2*10*15 (never more than 10 in a set)

• 3*7*15 (21 sprints-previous set was 20)

• 3*8*15

• 3* 9 *15

• 3*10*15

• 4*8*15 (32 sprints-previous set was 30)

• 4* 9 *15

• 4*10*15

• 4*10*20m (maybe reduce sets here because 40 is a lot)

• 4*10*25m

Analysing football

- A coach notices that the team can only maintain the playing style intensity for 60 minutes.
- What does the coach want?
- The coach wants higher intensity that will be able to be maintained for 90 minutes.
- How?

To train for duration: 11 v 11 / 8 v 8 (Oxygen transfer system)

To train for intensity: 4 v 4 / 3 v 3 (restore phosphate system)

Quantity – 11 v 11 / 8 v 8

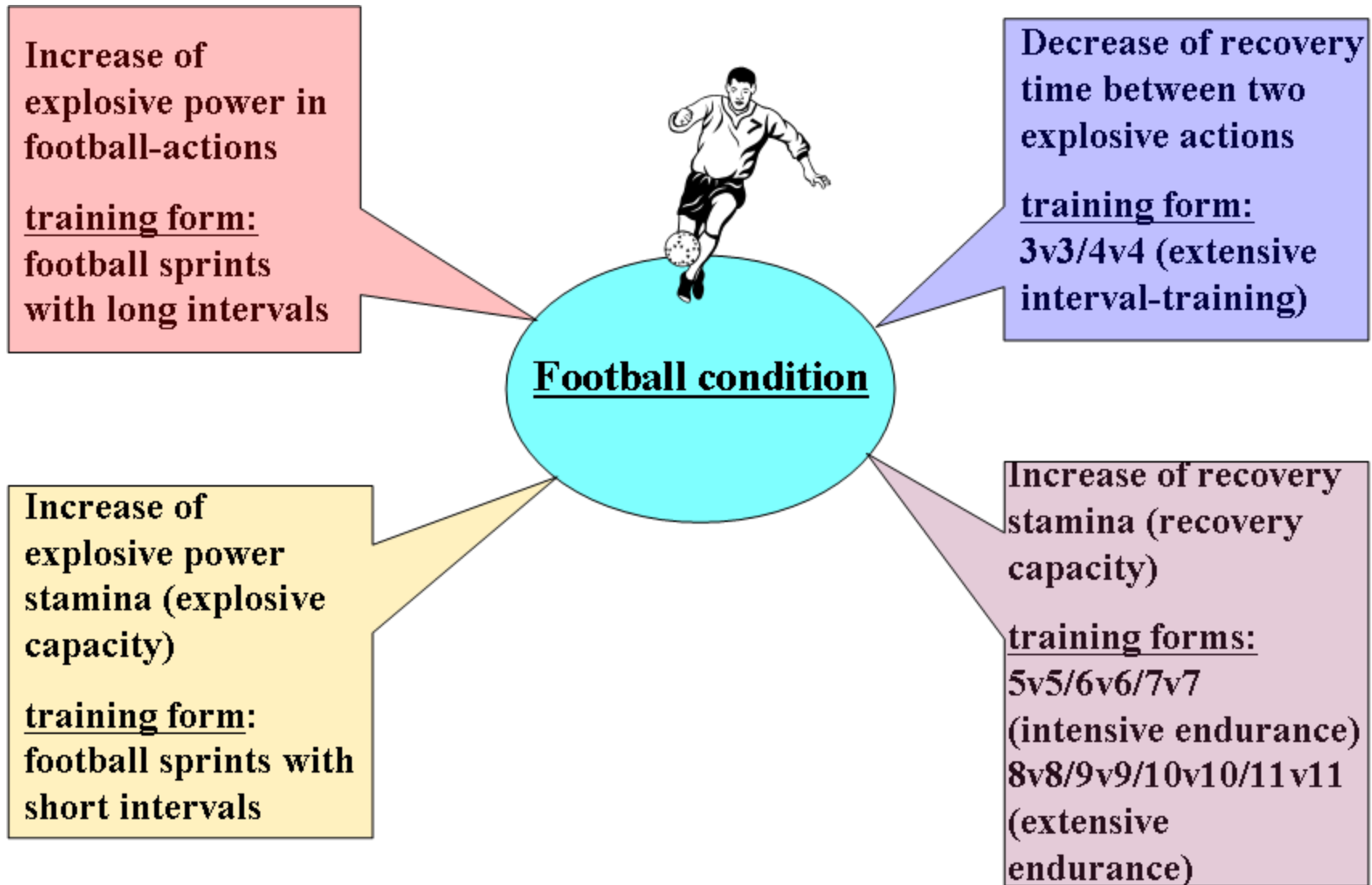
Quality – 4 v 4 / 3 v 3



'Football Conditioning' is all about:

- 1) Increase of explosive power in football actions;
- 2) Increase of explosive power stamina (explosive capacity);
- 3) Decrease of recovery time between two explosive actions;
- 4) Increase of recovery stamina (recovery capacity).

The Objective



Football Periodisation

The “Periodisation” model:

- The 4 key indicators are trained in 6 week cycles;
- Overload principle: increasing time / series, decreasing rest / intervals per 6 weeks;
- Only game related football exercises;
- Football conditioning continues the whole season;
- Apart from core stability, no ‘football conditioning’ (or conditioning whatsoever) until after growth spurt.

Basic 6 Week Periodisation

Week 1 and 2	Week 3 and 4	Week 5 and 6
Explosivity Preparation Exercises (EPE)	Football Sprints (FS) with short rests (Quantity)	Football Sprints with long rests (Quality)
11v11 / 8v8	7v7 / 5v5	4v4 / 3v3

- Blocks of 2 weeks
- Generally at the start of pre-season if you try to play with a high intensity you can't maintain for very long
- So we start with high volume (11v11/8v8) and move to high intensity (4v4,3v3)
- We go from quantity to quality
- We must complete EPE's in the first two weeks of every cycle in order to prepare the body for the explosive actions to follow

Explosivity Preparation Exercises (EPE's)

- Acceleration run through's
- Usually part of a warm up
- 6*60m @ 60% 60''R
- 7*50m @ 75% 50''R
- 8*40m @ 80% 40''R
- 9*30m @ 90% 30''R
- 10*20m @ 100% 20''R

Periodisation of **CONDITIONING ONLY**

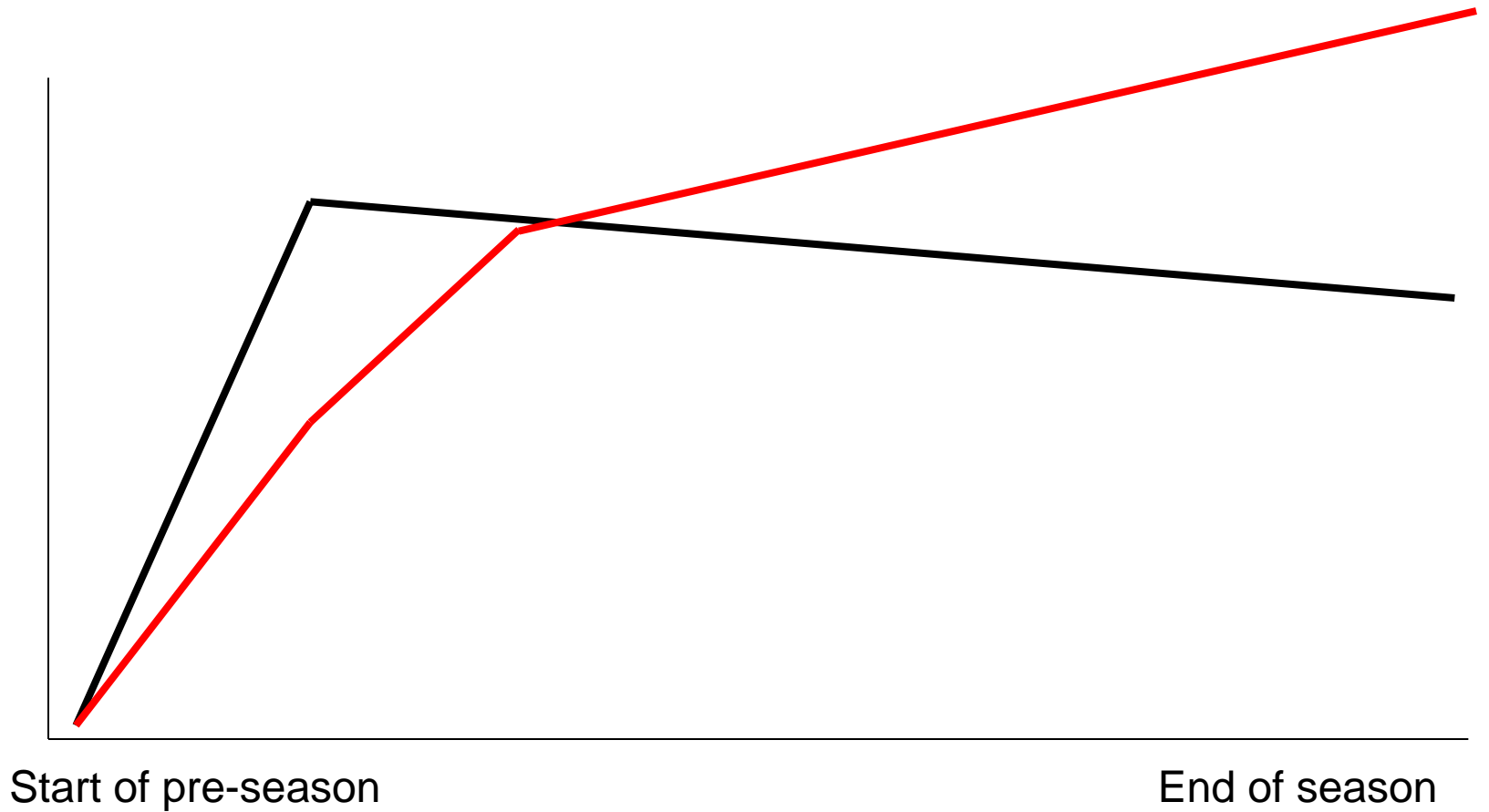
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Cycle 1	Explosivity Prep Exercises		Football Sprints with little rest		Football Sprints with much rest	
	8v8 - 11v11		7v7 - 5v5		4v4 - 3v3	
	3 * 12'	3 * 13'	4 * 5'	4 * 5.5'	2*6*1' (3'R)	2*6*1' (2.5'R)
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Cycle 2	8v8 - 11v11		7v7 - 5v5		4v4 - 3v3	
	3 * 13'	3 * 14'	4 * 5.5'	4 * 6'	2*6*1' (2.5'R)	2*6*1' (2'R)
		Week 1	Week 2	Week 3	Week 4	Week 5
Cycle 3	8v8 - 11v11		7v7 - 5v5		4v4 - 3v3	
	3 * 14'	3 * 15'	4 * 6'	4 * 6.5'	2*6*1' (2'R)	2*6*1' (1.5'R)
		Week 1	Week 2	Week 3	Week 4	Week 5
Cycle 4	8v8 - 11v11		7v7 - 5v5		4v4 - 3v3	
	3 * 15'	4 * 12'	4 * 6.5'	4 * 7'	2*6*1' (1.5'R)	2*6*1' (1'R)
		Week 1	Week 2	Week 3	Week 4	Week 5
Cycle 5	8v8 - 11v11		7v7 - 5v5		4v4 - 3v3	
	4 * 12'	4 * 13'	4 * 7'	4 * 7.5'	2*6*1' (1'R)	2*6*1' (0.45''R)
		Week 1	Week 2	Week 3	Week 4	Week 5
Cycle 6	8v8 - 11v11		7v7 - 5v5		4v4 - 3v3	
	4 * 13'	4 * 14'	4 * 7.5'	4 * 8'	2*6*1' (0.45''R)	2*6*1' (0.30''R)

Field Sizes

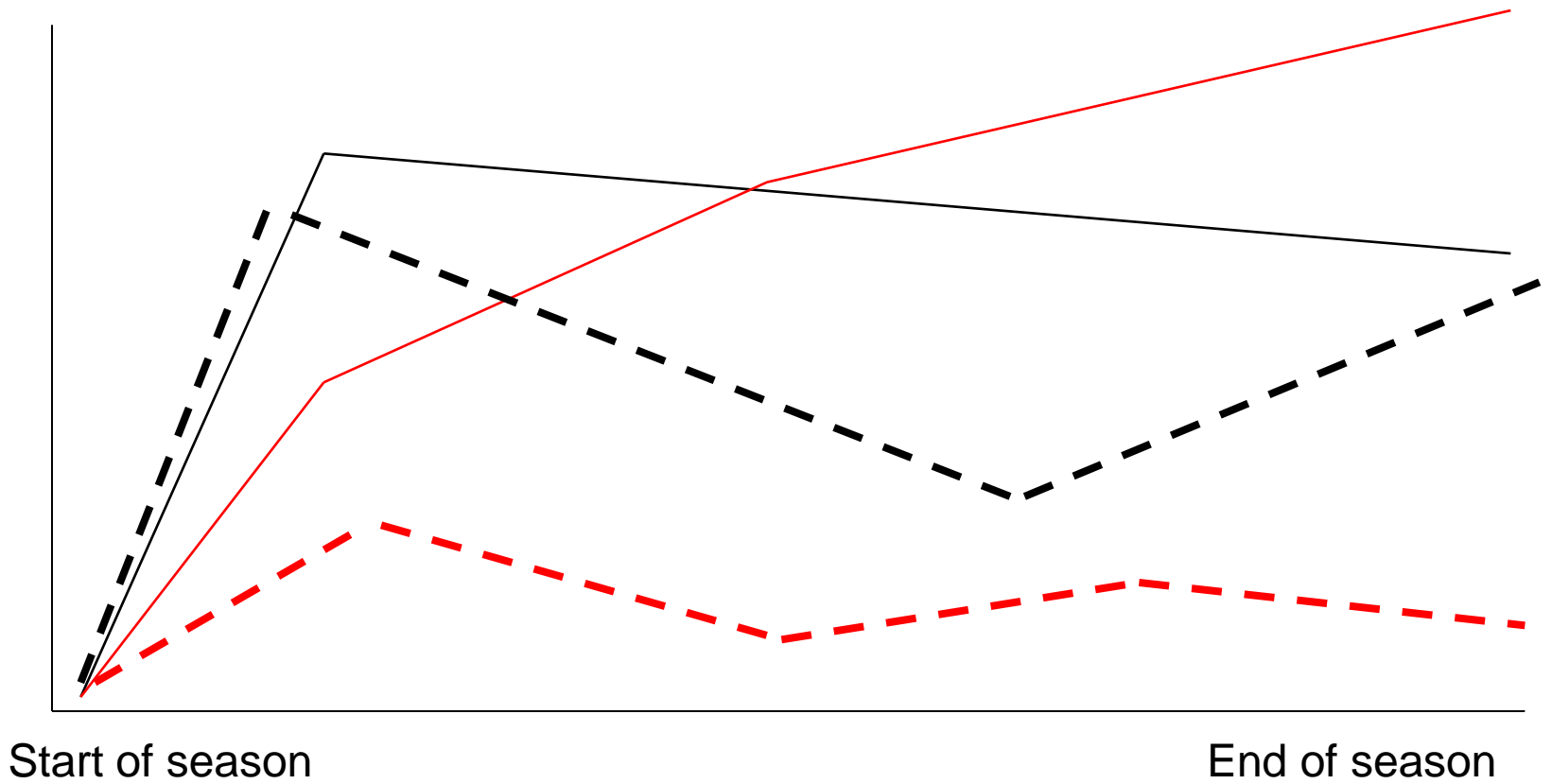
*11 v 11: 10 outfield players, field size approx. 100 metres x 60 metres

Players numbers	Outfield players	Formula	Filed dimensions
11 v 11	10	10m x 6m	100m x 60m
10 v 10	9	9m x 6m	90m x 54m
9v 9	8	8m x 6m	80m x 48m
8 v 8	7	7m x 6m	70m x 42m
7 v 7	6	6m x 6m	60m x 36m
6 v 6	5	5m x 6m	50m x 30m
5 v 5	4	4m x 6m	40m x 24m
4 v 4	3	3m x 6m	30m x 18m
3 v 3	2	2m x 6m	20m x 12m
2 v 2	1	1m x 6m	10m x 6m
1 v 1	1	1m x 6m	10m x 6m

Fitness Level



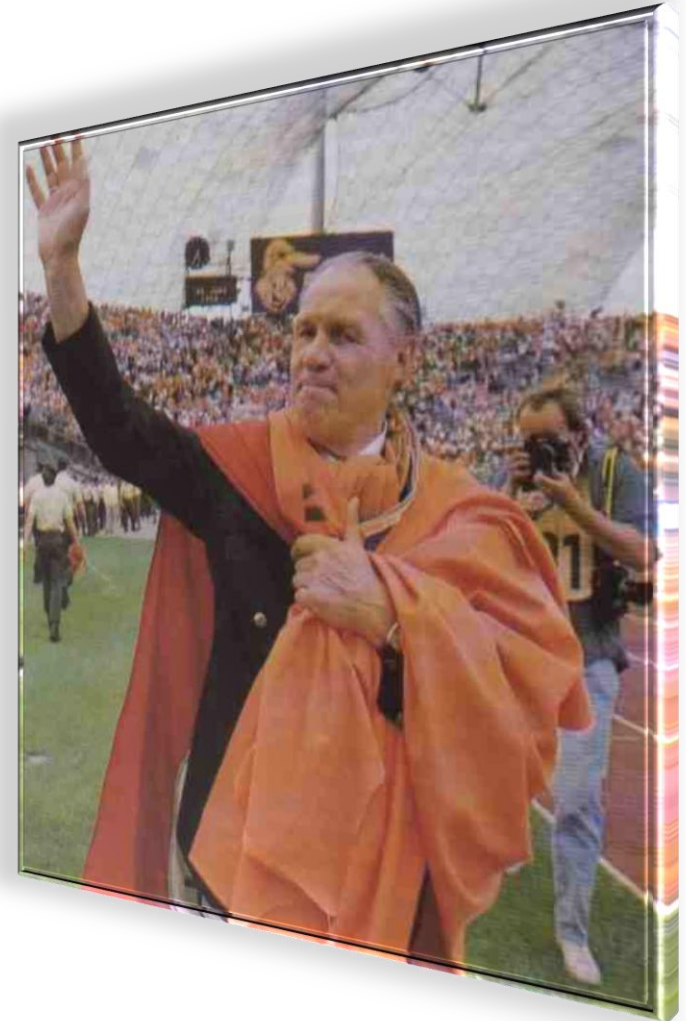
Number of Injuries



FIFA Coach of the Century

“It is all about reaching the limits of the performance level of your team. To achieve this team building has to be seen as a total process, which is handled methodically. This demands that the coach, besides technical knowledge (as a player), possesses well-developed theoretical knowledge both of the game of football and the components underpinning effective team building”.

Rinus Michels



Football = Conditioning
Conditioning = Football



Football Physiology Summary

Football is an EXPLOSIVE sport, not endurance

We use ATP for energy, we need oxygen only to convert what we eat (energy) to ATP (muscle energy)

Oxygen (breathing) simply restores energy (ATP) for explosive actions

Therefore when players look tired its NOT because they aren't aerobically fit, its because they aren't able to reproduce explosive actions

Long duration running will NOT fix this, you must overload short, football specific actions.

The body WILL adapt

Summary

1. Better Actions

- More explosive actions
- $X^{100\%}$ = football sprints with max rest
- $X^{100\%}$ = starting and acceleration speeds
- Training effect is a bigger chunk of ATP used per action

2. Maintain Good Actions

- Maintain max explosive actions
- $X^{100\%} \text{---} X^{90\%} \text{---} X^{80\%} \text{---} X^{70\%}$ to $X^{100\%} \text{---} X^{100\%} \text{---} X^{90\%} \text{---} X^{80\%}$
- Football sprints with small rest
- Repeated short sprinting
- Training effect is a bigger total pool of ATP or bigger tank

3. Greater Number of Actions

- Quicker recovery between actions
- $X \text{---} X$ to $X \text{--} X \text{--} X$
- 4v4, 3v3
- Extensive interval training
- Training effect is a quicker refilling of tank

4. Maintain Greater Number of Actions

- Maintain quicker recovery
- $X \text{--} X \text{---} X \text{---} X$ to $X \text{--} X \text{--} X \text{--} X$
- 11v11, 8v8 or 7v7, 5v5 on big pitch
- Extensive or Intensive endurance training
- Training effect is maintaining a quicker refilling of tank