

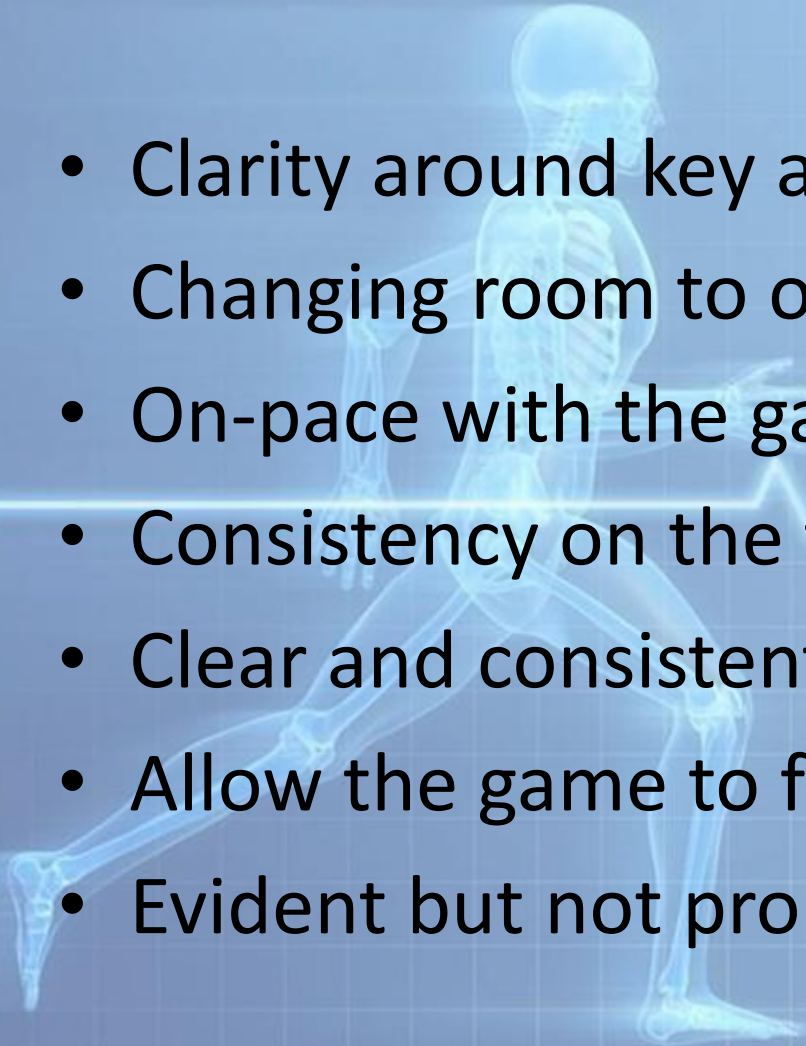


CONDITIONING – 'Chore' or Essential

Dave Rowland
National Coach Mentor
England Athletics

What did I want!!

- Clarity around key areas
- Changing room to on-field consistency
- On-pace with the game
- Consistency on the field
- Clear and consistent explanation and decision
- Allow the game to flow and play itself out
- Evident but not prominent



Passion for the 'Game'

- RFU Core Values

- Teamwork, Respect, Enjoyment, Discipline, Sportsmanship

- Motivation

- Give back, Stay in the game, Perform, Control

- Responsibility

- Pivotal nature of the referee in a 'good game'
- Pulling on the shirt
- Reputations are hard earned not by right

Expectations?

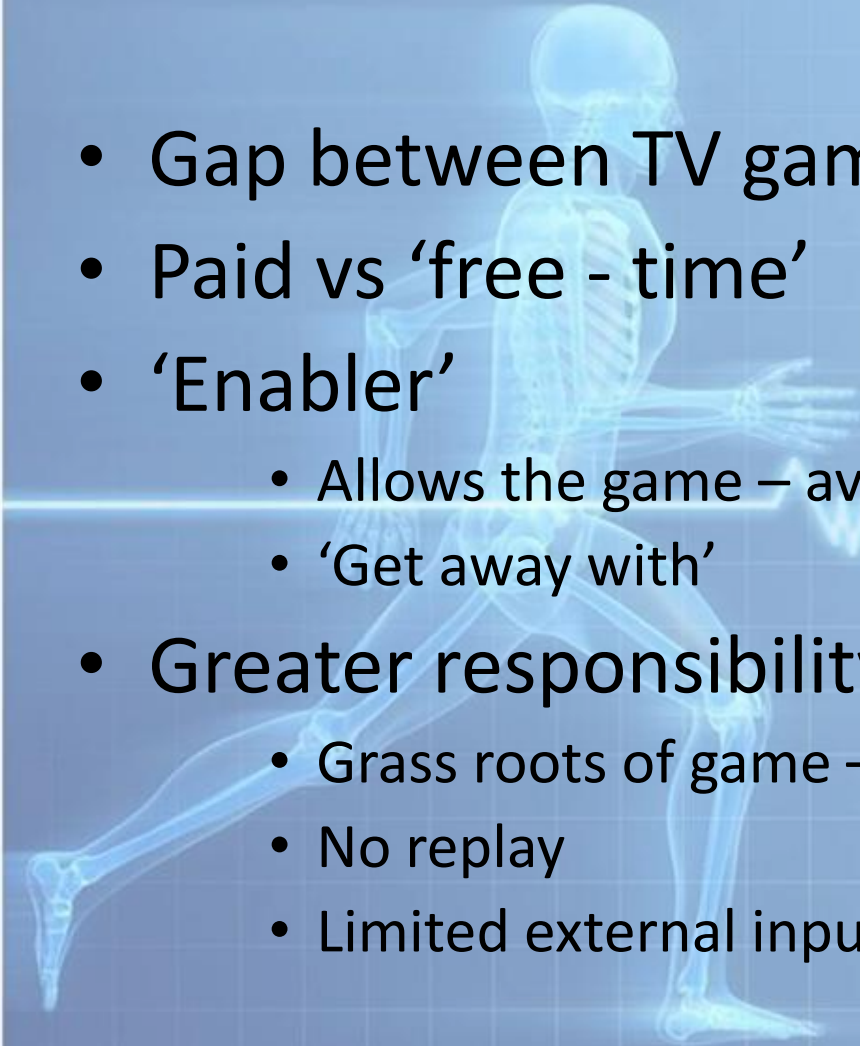
- Manage 'war' or provide support for excellence?
- "modern referee is an athlete" *P. O'Brien*
- "referees must be fitter to keep up with the increasing demands of the modern game"
W. Smith
- Professional 'game' is here at all levels
- Increasing levels of fitness at all levels

Research

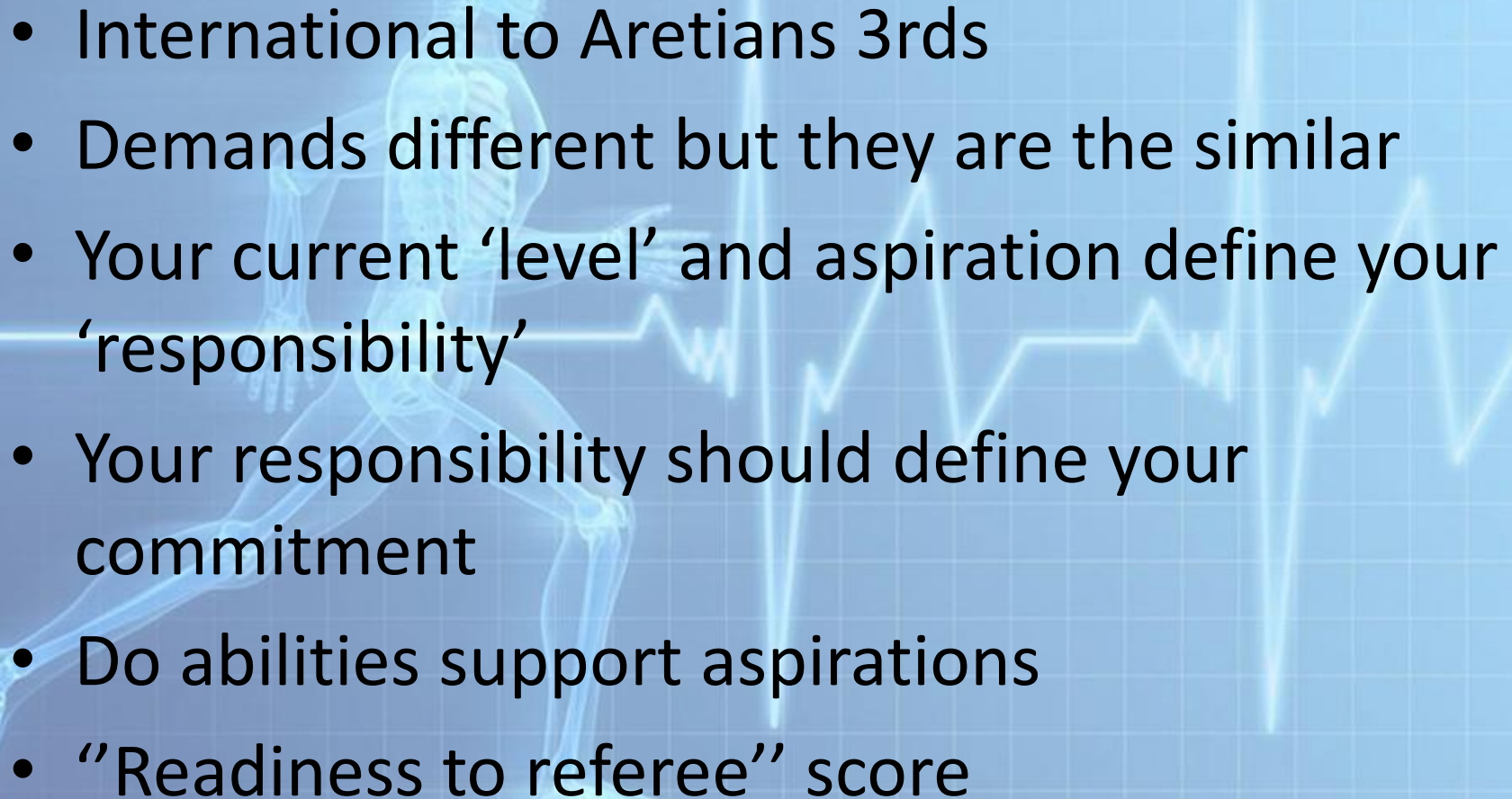
- Elite referees, 2005
 - Knowledge & application of Law – dynamic
 - Contextual judgement – tenor of game/style
 - Personality & management skills – verbal/non-verbal
 - Fitness, positioning and mechanics
 - Apply to ALL levels of refereeing, not restricted to elite
 - Basis of RFU competence based approach
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Elite vs 'Saturday outing'

- Gap between TV game (4 officials etc)
- Paid vs 'free - time'
- 'Enabler'
 - Allows the game – availability/readiness to ref
 - 'Get away with'
- Greater responsibility
 - Grass roots of game – its survival
 - No replay
 - Limited external input



Continuum and Commitment

- International to Aretians 3rds
 - Demands different but they are the similar
 - Your current 'level' and aspiration define your 'responsibility'
 - Your responsibility should define your commitment
 - Do abilities support aspirations
 - "Readiness to referee" score
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International

- Global Positioning System GPS Data
- Accelerometer Data
- Tells Us:
 - Up to 8km/game
 - Up to 400 pace changes/game
 - Up to 70% of game 'High Intensity' Zone – i.e. working hard!

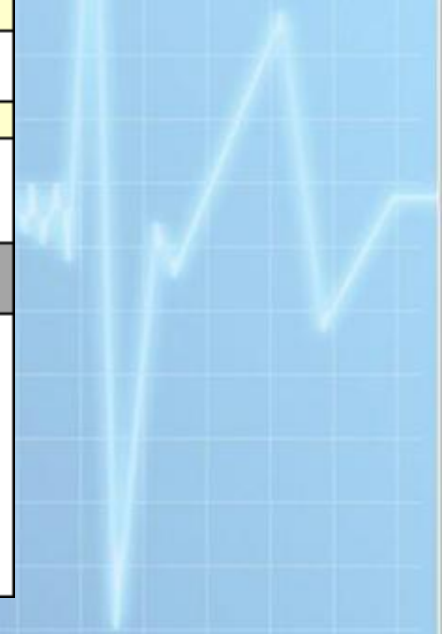


Data



International Activity Levels

iRB International Panel Group game summary		January 30, 2011		
		1 st	2 nd Half	Full game
Distance (D)				
Total D (metres)	3427.3	3399.4	6842.3	
Mean Metres/minute	79.3	75.1	77.2	
Heart Rate (HR) bpm				
HR _{mean}	147.5	141.8	144.8	
HR _{min}	104.5	108.8	100.1	
HR _{max}	175.3	176.2	178.8	
<i>%Time spent in relative % HR_{max} zones</i>				
1 (0-<70 %HR_{max})	17.7	24.1	20.8	
2 (70-79)	31.4	36.0	33.7	
3 (80-89)	38.6	31.1	34.9	
4 (90-100)	12.8	8.8	10.9	
5 (>100-110)	0.1	0.0	0.0	
6 (>110-120)	0.0	0.0	0.0	
Total Low Intensity activity (LIA)	49.1	59.2	54.1	
Total High Intensity activity (HIA)	51.5	39.3	45.4	

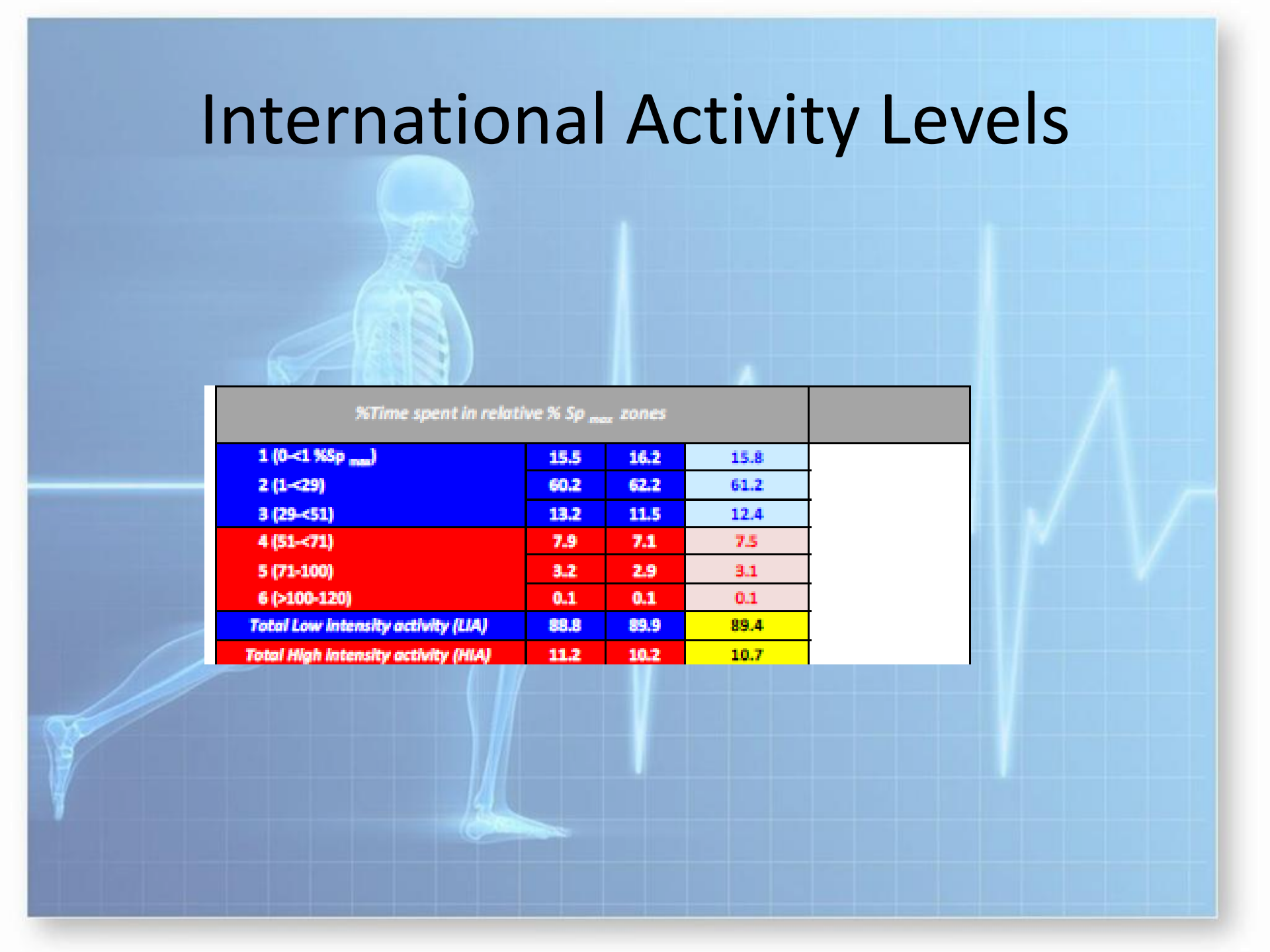


Relative Activity Levels

- Maximum Heart Rate reflects individual CV fitness status
- Factors affecting HR
 - Muscular demands
 - High force vs low force
 - Temperature
 - Hydration
 - Sleep
 - Anxiety



International Activity Levels

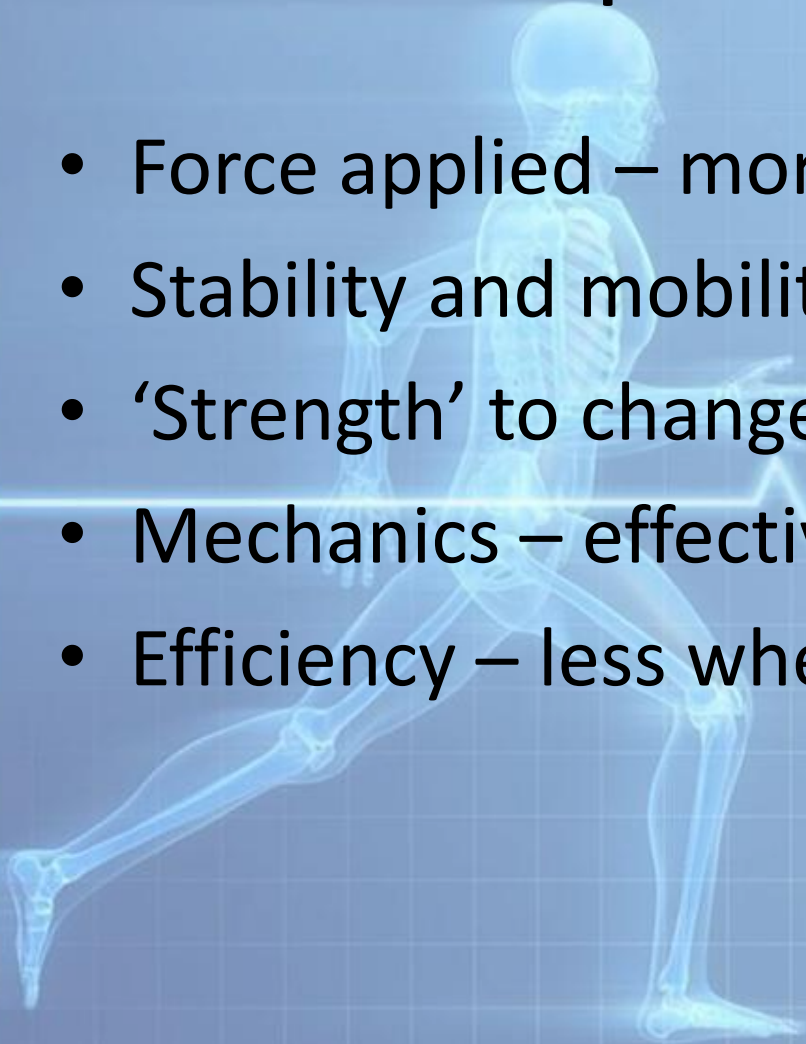


The background features a semi-transparent human skeleton on the left and a line graph on the right, both set against a light blue grid. The skeleton is shown in profile, and the line graph has several peaks and troughs.

<i>%Time spent in relative % Sp_{max} zones</i>			
1 (0-<1 %Sp_{max})	15.5	16.2	15.8
2 (1-<29)	60.2	62.2	61.2
3 (29-<51)	13.2	11.5	12.4
4 (51-<71)	7.9	7.1	7.5
5 (71-100)	3.2	2.9	3.1
6 (>100-120)	0.1	0.1	0.1
Total Low Intensity activity (LIA)	88.8	89.9	89.4
Total High Intensity activity (HIA)	11.2	10.2	10.7

Speed & Agility

- Force applied – more force = faster
- Stability and mobility
- ‘Strength’ to change direction quickly
- Mechanics – effectiveness & efficiency
- Efficiency – less when fatigued




Fatigue

- Cognitive processes are impaired when fatigued - quality of decision, law and context
- Emotionally less robust when fatigued – personality & management
- Right place right time to make the decision with the best information
 - survival=don't bother='experience tells me'
- Best state to make good 'management' decisions

Evidence & Experience

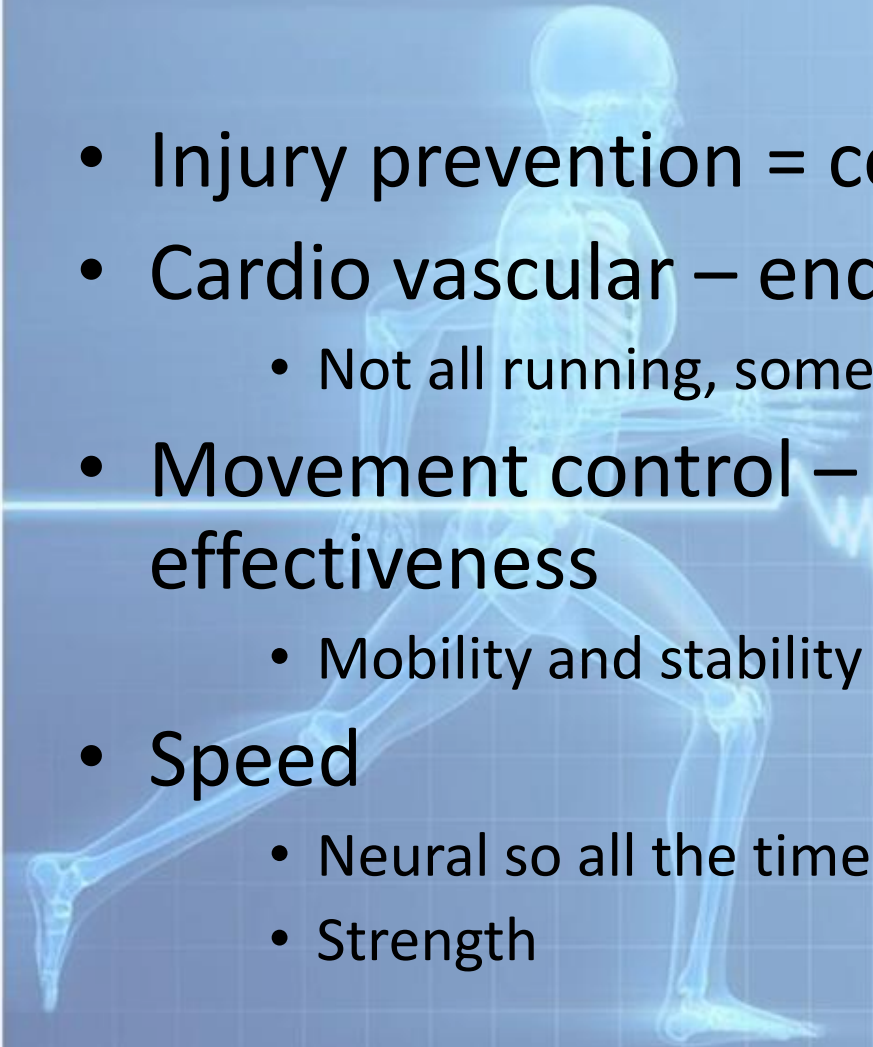
- Quality of decision improves & stabilises
 - What price the warm up- physical and mental
- Some physical activity improves cognition
- Being in right place is critical – knowledge + capacity to get there
- First half is faster and higher intensity than second half
- More injuries in second half
- Passing of time makes each decision more critical in eyes of players and coaches

How much?

- **Healthy-** dead referees' decision making in doubt
 - **Relative to current level and aspiration**
 - Fitness is easiest of the 4 key themes to address
 - Capacity to be right time right place **CONSISTENTLY**
 - **Relative to your general condition**
 - Injury status
 - Weight
 - Current fitness position
 - **Minimum standards to allow 'respect'**
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What?

- Injury prevention = conditioned athletes
- Cardio vascular – endurance
 - Not all running, some off feet and circuit based
- Movement control – efficiency and effectiveness
 - Mobility and stability
- Speed
 - Neural so all the time
 - Strength



Time Commitment

- NOT 5 x 2 hours/week
- Players train 3-4x/week and depend on you
- 3 x week for 60 mins
- Ideally with gym facilities but not essential
- Pre-Season in an essential 'bank' from which to draw but top up in the season
- Team ethos miss so much = let's do it together

Summary

- Preparation is everything
 - Hydration, food, sleep, conditioning, warm up/down, social
 - Not obsessive, just well thought through
- Jersey = responsibility
- Difference between accountability and responsibility
- Physical preparation ensures other skills can be applied effectively and consistently
- Game has and will continue to change – stay with it or be left behind
- Not a rugby player, but prepared enough to stay one step ahead

Thank you

1. Upholding some of the key values that so clearly differentiate rugby from football
 2. Doing so in increasingly challenging times with more vocal coaches and players less keen to take responsibility for their shortcomings
 3. Providing the support necessary to allow the game we all love to carry on
 4. Listening to a personal view on what steps might be next
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