



**LARBI BEN M'HIDI  
UNIVERSITY**



# **Introduction to the field of science and techniques of physical and sports activities**

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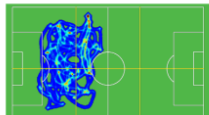


# Training load



	Time Played (minutes)	00:10:16	# Decelerations	0	HD Distance (10km/h)	0.19
	Distance (km)	1.32	# Decelerations	0	HD Distance (20km/h)	0.01
	# Accelerations >3 m/s <sup>2</sup>	9	# Sprints >10 km/h	2	Max Acceleration (m/s <sup>2</sup> )	4.14
	# Accelerations >4 m/s <sup>2</sup>	1	# Sprints >10 km/h	0		
PLAYER NO. 21	# Accelerations >5 m/s <sup>2</sup>	0	Max Speed (km/h)	21.49		
SENSOR NO. 07	# Decelerations >3 m/s <sup>2</sup>	7	Avg. Speed (km/h)	7.65		
(Period 1)						

Field Position Heat Map



Intensity vs. Time



## Sleep

Very, very good Very, very bad



## Stress

Very, very low Very, very high



## Fatigue

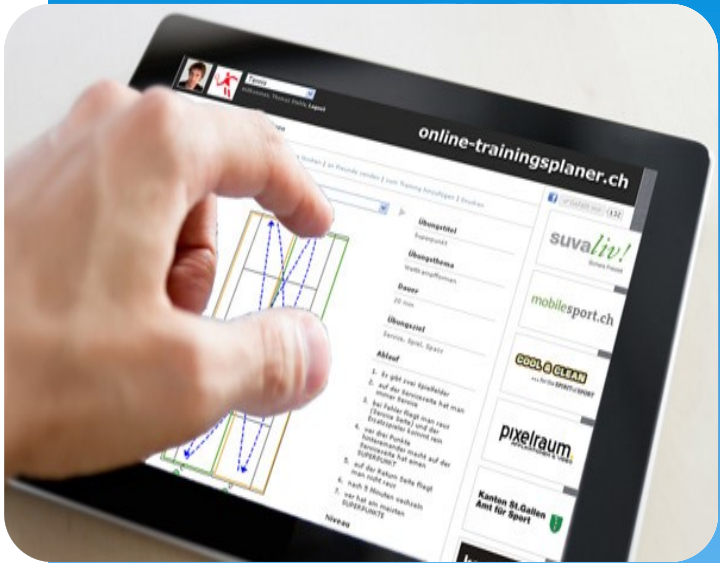
Very, very low Very, very high



## Muscle Soreness

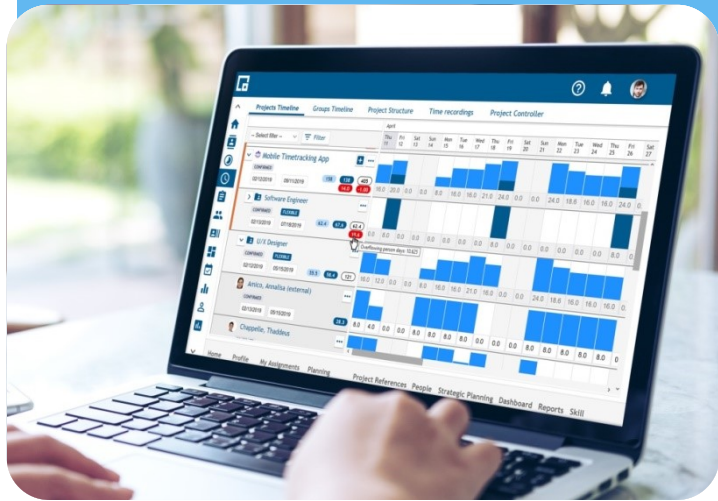
Very, very low Very, very high





## Training load

Represents the positive controlled and controlled effect of the content of training or competition on the functional and organic organs of the athlete's body

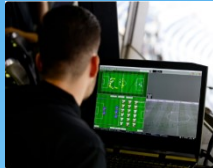




# Types of training loads



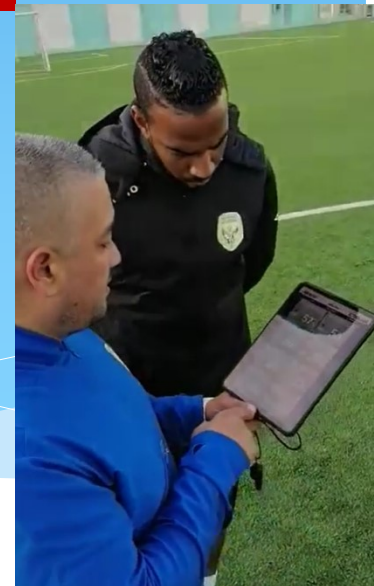
## INTERNAL LOAD



## EXTERNAL LOAD

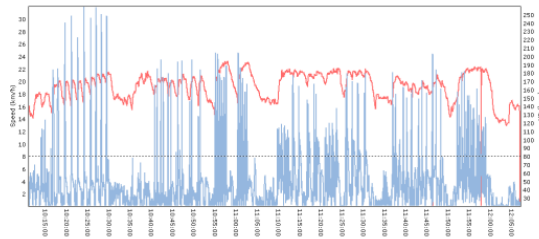


## COMPETITION LOAD



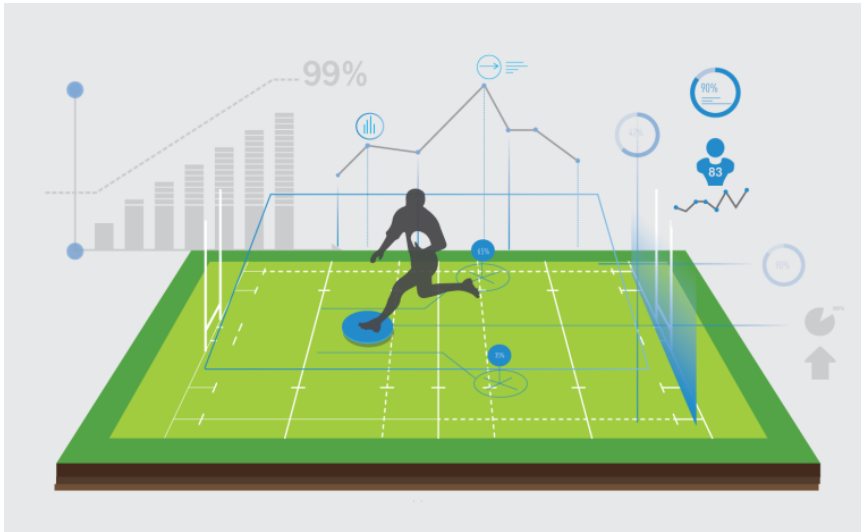
# Internal load

It is the physiological and psychological response with the mechanical requirements of the external load



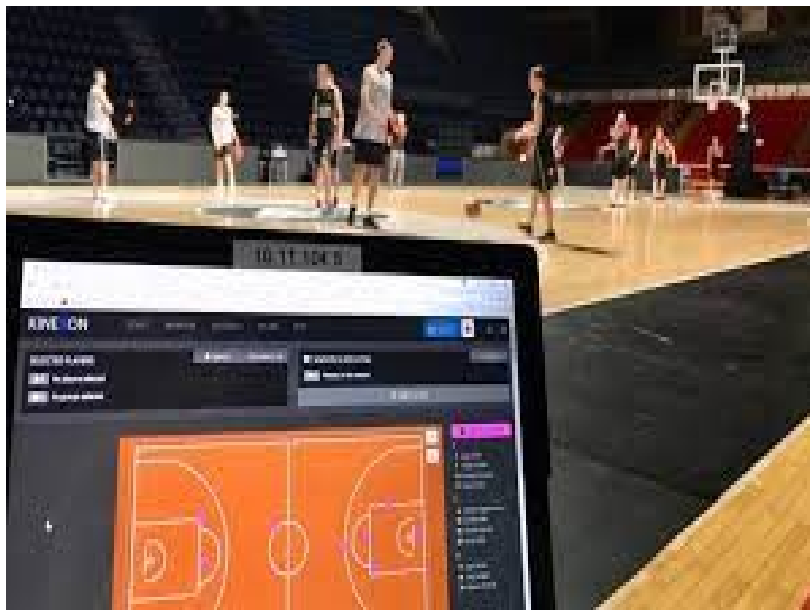
# External load

Represented in the responses of the musculoskeletal system to the real requirements of the competition and the contents of the training



# Competition load

7

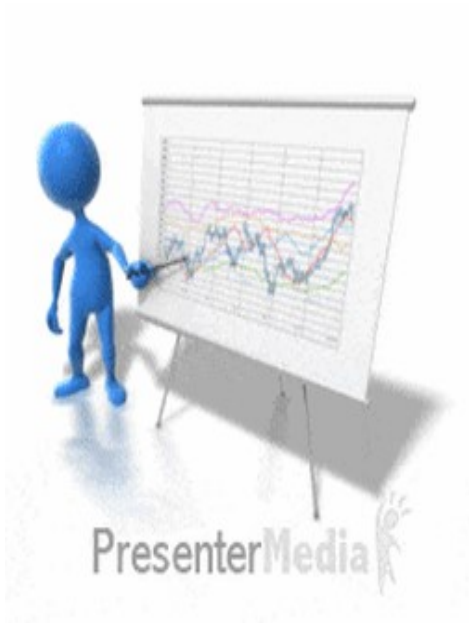
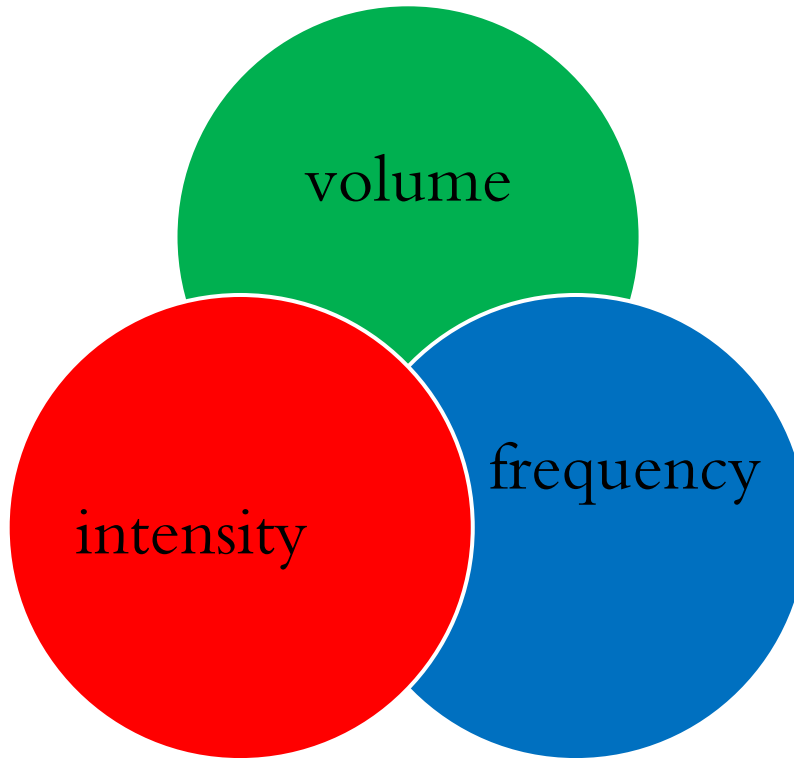


It is represented in both the psychological and mental pressure imposed on the athlete as a result of the intensity of the competition or the increase in the degree of difficulty

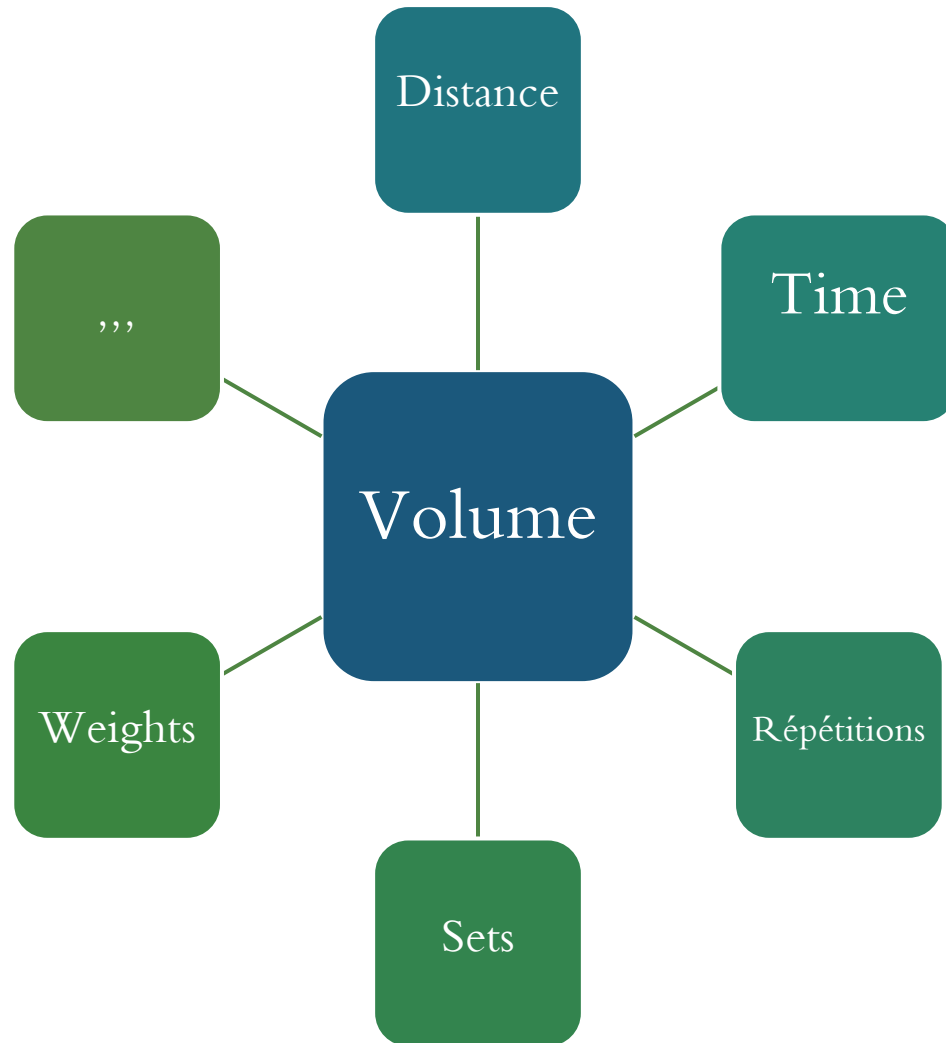
- Reaching the ideal form
- Stay away from improvisation in training
- Avoid sports injuries
- Moving to the principle of individual work
- Enhance communication between physical Trainer and athlete



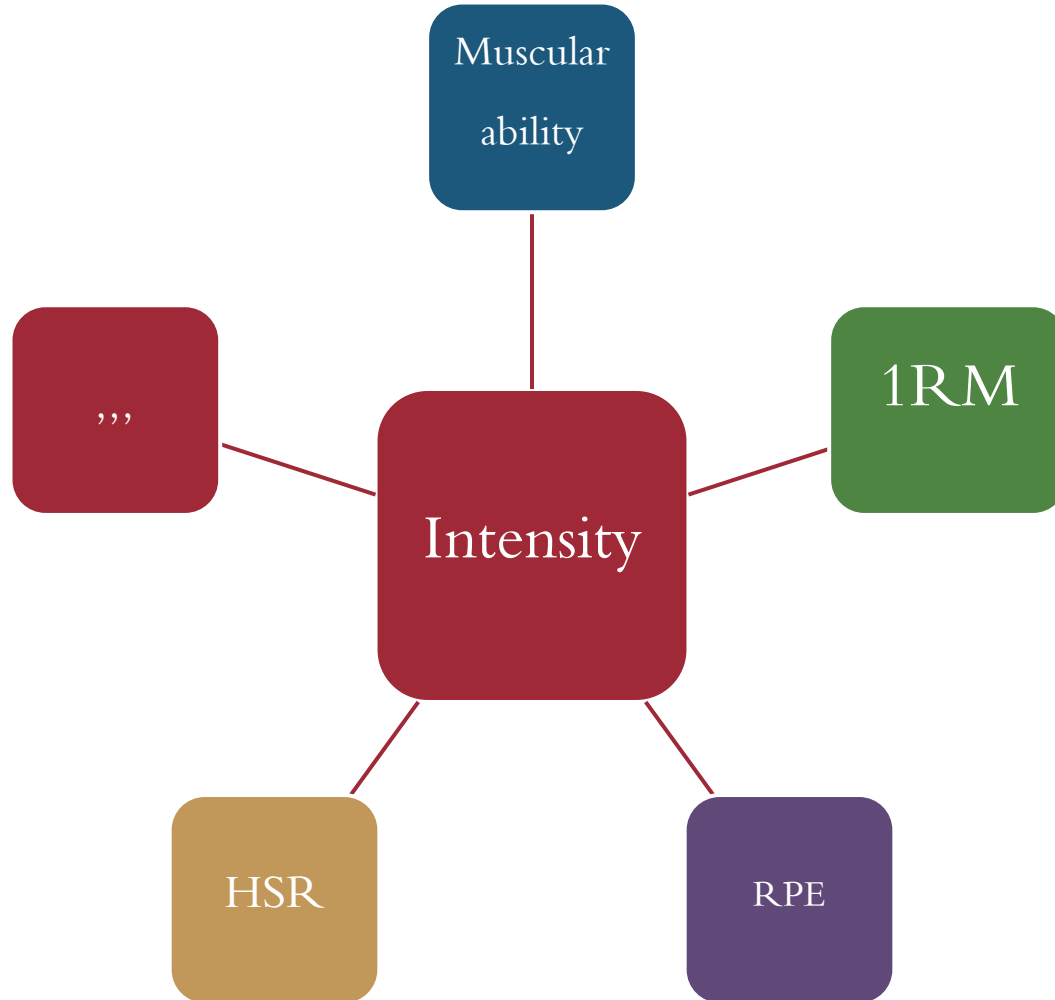
Training load is the product of  
intensity  $\times$  volume  $\times$  frequency



# Volume indicators



# Intensity indicators



# Frequency is the distribution of explosive movements through time and its relationship to recovery

Number of explosive movements/time

1976

1 effort / 1'17

n= 62±15



2007

1 effort / 55"

n= 98±22