$\star$

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40

.   (   )   (10)

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(   )   -1
.

.   (   )   -2

(PWC 170)   -3
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-1
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-2
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-1

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‏-1 .
‏-2 .

‏-1 .
‏-2 .

‏: /   (2004 – 2003)   (40) .
‏: /   .
‏:   2003/11/1   15/12/ 2003.

-2

(‏   1999   27).

(‏   1995   51)
‏:
‏(15-10)
(‏   1995   86).

(ATP)
(ATP) (‏   1994   78)
‏(1999   15)   (5 ‏   )

(ATP) (CP)

(ATP) (ATP)

(CP)) .(164 1993)

$$CP + ADP \xrightarrow{\ CPK\ } C + ATP$$

.(CPK)

:

15 .(7 1988)

(1)

0.262	20	0.80	20.07			1
0.377	172	4.61	172.58			2
0.279	62	6.12	62.57			3
1.2	2	1.50	2.60			4

(2)

%83.33	10	( )
%75	30	
%66.67	(3)	
%58.33	PWC 170	

.

(ATP)

)

.(377 2000

(VO$_2$ Max)

(Astrand, 1976, 51)

.

(/ 170) (Physical Work Capacity)

(Fox et al., 1988, 47)

.(– – –)

3–

" "

.

(– – –)   (40)   (10)   .
(1)
(3 ±)
.

-1   .
-2   .
-3   .
-4   .
-5   (Step test)   (40) .
-6   .
-7   .
-8   .

(2)

(2)   .
(%50)
(   )
(3).

(3)

0.89	0.87	(10)
0.91	0.85	(30)
0.93	0.89	(3)
0.91	0.93	PWC 170

.

1: : (10) ( )
(40) ( )
.

( ) ( ) (10)
.

(40) (0.4)

( ) .(162 1998)

$$= 1.33 \times \dfrac{( ) \times 0.4 \times \qquad\qquad (10\text{ثوان})}{(10)}$$

2: : (30)
(10)
(30) :

$$= 1.33 \times \dfrac{( ) \times 0.4 \times \qquad\qquad (30)}{(30)}$$

3: : (3).
(40)
(3) (22)
(15) (5)
(4×15)
.(VO₂ Max).

(VO₂ Max) **=1.33-(0.42 ×** **)**

4: **PWC 170** **(step test)**.
(3) (3)
( )
(50) (40) (40) step test (3)
(15) (5) (4× 15)
(3) (3)
.

(Mudhafar, 1979, 57)

N = 1.5 × WT × h × n

N =
WT =
H = ( )
N =

:

$$PWC\ 170 = N1 + (N2\text{-}N1) + \frac{170\text{-}PS1}{PS2\text{-}PS1} = Kg.M / Min$$

$$\frac{-170}{\underline{}} + (\quad - \quad) + \quad =$$

:

PWC170 (Physical Working Capacity) = / / 170

N1 = N2 =

PS1 = PS2 =

$$\text{-1} \qquad = \qquad 100 \times \frac{}{}$$

$$\text{-2} \qquad = \quad = \frac{}{}$$

$$\text{= } \sqrt{\frac{^2(\quad)^2}{1-}}$$

-3

$$\text{-4} \qquad = \frac{(\quad - \quad)\,3}{}$$

$$\text{-} \qquad \frac{\times}{}$$

$$\text{-5} \qquad (\quad) = \sqrt{\left[\frac{^2(\quad)}{}\ -^2\right]\left[\frac{^2(\quad)}{}\ -^2\right]}$$

$$\text{-6} \qquad F = \frac{}{}$$

$\times 2$

$\times T\ 0.05 = LSD$

-4
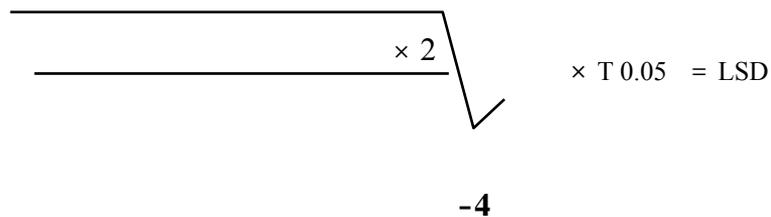
.(4)

( ) (4)

.(66.27) (61.34) (59.09) (60.86) (10)

(63.65) (67.01) (30)

.(60.54) (61.56)

.

(19.30) (4)

.(19.95) (19.63) (0.97) (0.87)

.

(26.97) (PWC 170)

(25.93) .(1.74) (22.23) (0.69)

.(23.56)

(4)

	-		-		-		-		
8.72	66.27	11.5	61.34	7.13	59.09	7.25	60.86	/ /	(10)
7.15	60.54	14.13	61.56	13.44	67.01	7.12	63.65	/ /	(30)
0.97	19.30	0.54	19.95	0.48	19.63	0.87	19.30	/ /	
0.69	26.97	1.63	23.56	1.74	22.23	2.89	25.93	/ /	PWC

(5)

	F	F				
	2.86	1.255	94.626	3		10
			75.385	36		
	2.86	0.677	81.611	3		30

			120.526	36		
	2.86	1.749	0.971	3		
			0.555	36		
	2.86	12.920	46.877	3		PWC170
			3.628	36		

.

(5).

(10)   (5)

(0.05)   (36/3)   (2.86)   (1.255)   (F)

.

(0.677)   (F)   (30)

(   )

.(Railly, 1994, 260)

(1.749)   (F)   (   )

.

(2.86)   (12.92)   (F)   (PWC 170)

(63/3)   (0.05)

.

(LSD)

.(6)

(6)

(PWC 170)   (LSD)

LSD					
	1.04	2.37	3.7	-	
1.74	4.74	1.33	-		
	3.41	-			
	-				

(6)

.   (/   170)

.

-5

-1

( ) -1

.

. ( ) -2

-3

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(PWC 170) -4

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-5

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-2

-1

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-2

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-3

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2000

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1995 1999

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A Comparative Study of Some Indicators of Aerobic and Unaerobic Abilities for Team-Games Players

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ABSTRACT

Aerobic and unaerobic abilities are considered the source of producing the energy, which enables the body to do physical activities for the longest possible period, according to the type of activity performed and the role of the player. therefore ,the indurance of the respiratory system should be high to help the player do the biochemical operations that generate the aerobic energy depending on the Oxygen.

The research aims at identifying some indicators of aerobic and unaerobic abilities for team-games players and comparing them with each other.

The researcher chooses the descriptive approach / survey study and reaches the following condusions:-

1. There are relative differences in the rules registered for the aerobic ability indicators (Phosphagenetic and lactic) for the players since no significant differences are registered.

2. No significant differences are found in Coins Test results (aerobic ability) between the four groups of the study.

3. A significant relationship is found in the part of the players in (PWC 170) test, the handball players, than the basketball players and finally the volleyball players.

The researcher recommends the following: -

1. Emphasizing the importance of developing the aerobic and the unaerobic abilities according to the rature of each game and as it achieves the functional competency.

2. There should be an association between the aerobic and the unaerobic training for racket players because this is the physical base for them.

Keywords: Aerobic Abilities, Unaerobic Abilities, Team Games.