Journal of Positive School Psychology http://journalppw.com
2022, Vol. 6, No. 7, 4709-4713

The Effect Of Cold Water Recovery On Some Physiological Variables Of Athletes

M. Mudher Moayad Abdullah[1] , **Dr. Mustafa Sabah Saleh**[2] , **Dr. Ahmed Ali Hussein**[3]

[1]*Iraq/Mosul University - College of Basic Education - Department of Physical Education and Sports Sciences, Mudher83@gmail.com*
[2]*Iraq/Al-Farahidi University/College of Education/Department of Physical education and sports Science, Mustafa.s.saleh@uoalfarahidi.edu.iq*
[3]*Iraq/Al-Farahidi University/College of Education/Department of Physical education and sports Science, ahmed.a.hussein@uoalfarahidi.edu.iq*

Abstract

The aims of the research to identify the effect of Recovery with cold water in some physiological variables (Pulse Rate, Blood Pressure, Lactic Acid, Temperature Body, Blood (Ph), metabolism, Basal Metabolic Rate), and adopted, and adopted. The experimental approach, with the design of one experimental group, on a sample of the (10) players, between the ages of (18 and 19 years, was chosen intentionally from the Sherwanah Club participating in the sports tag (2021-2022), The tests were identified and applied to the research sample and the results of their results (SPSS), and the conclusions were that the recovery of the Recovery in all variables using cold water, low basal metabolism, body temperature and blood degree (PH), and a positive improvement in (cold water Recovery 3 ˚ - 6˚) In variables: pulse rate, systolic blood pressure, diastolic blood pressure, and lactic acid concentration when hospitalizing using cold water, And the need to pay attention to directing coaches to the fastest Recovery using cold water because of its positive effects in the body's return to the normal state. And pay attention to the Recovery process to improve the functions of the body and get rid of fatigue products as soon as possible to complete the athletes sports competitions.

Keywords: Recovery, physiological variables of athletes.

Research problem:

Interest in getting rid of fatigue and Recovery increases day after day, and this increase is due to the remarkable rapid development in the sizes of training loads and their intensity that reached levels that have reached the point of risk to the health and life of the athlete (2: 51).

The Recovery indicates the restoration of the renewal of the physiological and psychological state indicators of the human being after exposure to excessive pressure or exposed under the influence of the performance of a specific activity. These cases can be measured or estimated objectively by measuring these psychological and physiological indicators (1: 52).

Through the researchers 'work, as specialists of rehabilitation and sports injuries, he discovered some health problems in a noticeable increase, especially when it requires achieving high levels of physical exertion in the field of preparing the player for the competition or sports competition. The body is for the normal state, and this is what the

researchers called to conduct this study with the aim of identifying the effect of Recovery with cold water on some physiological variables in athletes.

The research Aims:

To know:

The effect of cold water Recovery on some physiological variables (Pulsereate, Blood Pressure, Lactic Acid, Tempeature Body, Blood Phic PH, Blood PHOS, Basal Metabolic Rate).

the researcher hypothesized:

There are differences between the variables under study of the tribal and postalist measures in favor of the post measurement.

Study methodology:

The researchers used the experimental curriculum with its steps and procedures for the nature of the research and achieving its aims by using the pre -measurement of one experimental group.

Study Society and its sample:

The research community is represented by the athletes of Sherwan, where (10) players were chosen intentionally from the ages of (18 and 19 years.

Measurement Tools and Test:

After homogeneity of the research sample in the measurements of both length, weight and age, and (BMI), the researchers deliberately to The following tools have been used to conduct search tests: TREADMILL to perform physical exertion until the stage of fatigue, the Rest Meter to measure weight and length, the blood pressure meter (SPYGMOMONTER), the lactic acid, and a degree measuring a degree PH, B.M.R (B.M.M), the Body Temperature, as the researchers have seen research and scientific studies of Recovery, and the independent (experimental) variable was identified in the Recovery method with cold water from During a cold water basin, its temperature (3-6) during (2-3) minutes (3: 436-437), to experiment in the physiological variables that are both Pulse Rate, Blood Pressure, and Lactic Acid , Body Temperature, PH blood, and (B.M.R), basal metabolism. Personal interviews were conducted with the concerned and sample personalities to conduct the measurements during the period from 10/8/2021 to 17/8/2021 to conduct measurements before performing a high -intensity physical exertion for the research sample, within a week at the Sherwan Sports Club in coordination with the club management and the selection of athletes to apply and write down the results of the measurements With the forms that the researchers prepared, the devices and tools used to conduct measurements were prepared and ensure their safety, and to perform physical effort until the stage of fatigue and measurement, After the completion of the performance directly and after the use of the Recover method, and the alert to the players attending a specific date for measurement and the absence of any physiological changes, such as (stress) in order to ensure the sincerity of the measurements, the application of tribal measurements of the research Recovery with cold water and make dimensions. and the researcher checked them with the help of the (SPSS) system. (Mean, Std. Deviation, Median, SkEWNESS, ANOVA, Wilcoxon Signed Ranks Test).

Results and discussion:

Table 1: Results of the study groups of the Description of the measurements (comfort- after the effort- the healing of the Recovery) of the research sample (cold water Recover 3˚- 6˚)

The tests	n	comfort	after the effort	before the Recovery

		Mean	±SD	Mean	±SD	Mean	±SD
Pulse rate	10	72.4	4.624	174.5	7.792	88.7	2.359
SYS	10	124.5	5.039	139.3	4.191	123.4	4.195
DIA	10	79.8	2.616	94	4.163	79.2	1.687
Lactic aced	10	1.43	.1252	7.82	.9693	3.67	.845
Body temperature	10	36.5	.527	37.7	.483	36.3	.483
pH in blood	10	7.268	.57629	7.71	.66408	7.295	.367
B.M.R	10	1815.3	38.257	1879.30	48.872	1859.1	46.441

Table 2: Results of the study groups of the indication of the differences between the results of the three research measurements

The tests	Grope	Means	Rest	after the effort	before the Recovery
Pulse rate	pretest	72.4		-102.1*	-16.3*
	Posttest	88.7	16.3*	-85.8*	
SYS	pretest	124.5		-14.8*	1.1
	Posttest	123.4	-1.1	-15.9*	
DIA	pretest	79.8		-14.2*	.6
	Posttest	79.2	-.6	-14.8*	
Lactic aced	pretest	1.43		-6.39*	-2.24*
	Posttest	3.67	2.24*	-4.15*	
Body temperature	pretest	36.5		-1.2*	.2
	Posttest	36.3	-.2	-1.4*	
B.M.R	pretest	1815.3		-64*	-43.8*
	Posttest	1859.1	43.8*	-20.2	

Table 3: Results of the study groups of the percentage of development between the results of the research measurements (comfort- by the effort)

The tests	n	comfort	after the effort	percentage of development
		Mean	Mean	
Pulse rate	10	72.4	174.5	141 %
SYS	10	124.5	139.3	11.88 %
DIA	10	79.8	94	17.79 %
Lactic aced	10	1.43	7.82	446.85 %
Body temperature	10	36.5	37.7	3.28 %
pH in blood	10	7.268	7.71	6.1 %
B.M.R	10	1815.3	1879.3	3.52 %

Table 4: Results of the study groups of the percentage of development between the results of the research measurements (after the effort- before the Recovery)

The tests	n	after the effort	before the Recovery	percentage of development
		Mean	Mean	

Pulse rate	10	174.5	88.7	-49.16 %
SYS	10	139.3	123.4	-11.41 %
DIA	10	94	79.2	-15.74 %
Lactic aced	10	7.82	3.67	-53.1 %
Body temperature	10	37.7	36.3	-5.38 %
pH in blood	10	7.71	7.295	-5.38 %
B.M.R	10	1879.3	1859.1	-1.1 %

These results are consistent with the study of Khaled Muhammad Al -Amir (2015 AD), 'Asasu' and his participants. (2011) Ascensao et al, 'Rosel' and his participants. (2011) RowSell et al, 'Ani Delixters' and others. (2013) Anne Delexrat et.al where they reached the best means of Recovery with cold water in studies according to the nature of the research (3) (5) (6) (4). The variables are under study between the tribal, post -measurement in favor of the post measurement.

Conclusions and Applications:

1. the Recovery in all variables using cold water.
2. low basal metabolism, body temperature and blood degree (PH).
3. A positive improvement in (cold water Recovery 3 ˚ - 6˚) In variables: pulse rate, systolic blood pressure, diastolic blood pressure, and lactic acid concentration when hospitalizing using cold water
4. The need to pay attention to directing coaches to the fastest Recovery using cold water because of its positive effects in the body's return to the normal state.
5. Pay attention to the Recovery process to improve the functions of the body and get rid of fatigue products as soon as possible to complete the athletes sports competitions.
6. It is necessary to pay attention to the use of cold water after the beginning of a feeling of fatigue so that healing and avoiding sporting injuries.
7. The optimal attention to the body immersion style in cold water under the influence of different degrees of cooling to heal the players after high and violent physical efforts .

Sources:

1. **Abu Al-Ala Ahmed Abdel-Fattah (2001):** The Health Culture of athletes, Dar Al-Fikr Al-Arabi, Cairo.
2. **Abu Al-Ala Ahmed Abdel-Fattah. (1999):** Hospitalization in the sports field, Dar Al-Fikr Al-Arabi, Cairo.
3. **Anne Delextrat, Julio Calleja-Gonzalez, Audrey Hippocrate& Neil David Clarke (2013):** Effects of sports massage and intermittent cold-water immersion on recovery from matches by basketball players, Journal of Sports Sciences, Volume 31, pp.11-19.
4. **Ascensao A, Leite M, Rebelo AN, Magalhaes S, Magalhaes J.(2011):** Effects of cold water immersion on the recovery of physical performance and muscle damage following a one-off soccer match ,J Sports Sci. 2011 Feb ,29(3):217-25.
5. **Khaled Muhammad Al-Amir (2015):** The effect of hospitalization exercises in the water community after high physical exertion at the level of creatine Kenis concentration, muscle pain and some physiological variables, Master Thesis, Faculty of Physical Education, Assiut University.
6. **Rowsell GJ1, Coutts AJ, Reaburn P, Hill-Haas S. (2011):** Effect of post-match cold-water immersion on

subsequent match running performance in junior soccer players during tournament play, J Sports Sci. 2011 Jan,29(1):1-6.