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Advantages and Disadvantages of the Use of Doping in the Sport of Bodybuilding

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Abstract: The purposes of this study were to expose the dangers of doping practiced by Algerian teenager (18years) who practices bodybuilding and wants to seek results in the shortest time. From that, our subjects were five (5) Algerian teenager who practices bodybuilder for 5years ago and who volunteered accepted to involve doping as first experience in their practices. Our study based on the follow Analysis of blood, urine, and anthropometric measurements for two months where our work was divided into two team –research: Field team[1] and a Lab team[2]. To verify the hypothesis that support: Doping gives good visual results anthropometric external in addition, it destabilizes the regulation of vital functions. From that, our aims for this study interest: (1) Are there any statistically significant differences anthropometric between the two tests of our sample? (2) Are there any statistically significant can explain destabilizes regulation of vital functions between the two tests of our sample? For that, we have chosen the analysis of T-TEST PAIRS and correlation of the volunteer involve doping practiced by our sample to compare the implementation differences anthropometric and differences of modification in the regulation of the vital functions. Based in the results accuses in two months we confirm: (1) that the Doping gives good visual results anthropometric; (2) Doping destabilizes the regulation of vital functions.

Keywords: Use of Doping, Advantages and Disadvantages, Bodybuilding

1. Introduction

Doping is now a global problem that follows international sporting events worldwide (David A Baron, David M Martin, and Samir Abol Magd. 2007). Historically, anti-doping efforts have focused on the detection and deterrence of doping in elite sport. There is, however, a growing concern that doping is occurring outside the elite sporting system; giving rise to the belief that the misuse of doping agents in recreational sport has become a social problem and a public health concern. The reasons for our choice of this subject is due to the death of the Algerian hero and the World Championship Mohammed Benaziza fought the Giants at the age of 33 years in the category under-75 kg category. (Wikipedia, 2015) As a result, cardiovascular back, it said in the rapport that the cause come back to the doping for the Quick Preparation to the Bodybuilders Championship. Our attention for this study is due to the use of our Algerian teenager practicing this sport in the unauthorized winds of these substances by our government in addition, we can provide it from the gyms. Our set came from the reality of the gyms visits in our country that: The training weights accompanied by greater growth, due to the increase in bio-metabolism that proteins positively condense in the age of the teenager who made the perfect time to start practicing this Sports (Mohamed Mahmoud Mandalawi, 2000, p. 95). In the lack of information and program prevention in the Algerian Leisure sports. Our aims focuses on preventing, Derived from the experience of the two studies" Adolescents Training and Learning to Avoid Steroids (ATLAS; Goldberg et al., 1996, 2000) and Athletes Targeting Healthy Exercise and Nutrition Alternatives (ATHENA; Elliot et al., 2004, 2008). In order To take advantage From USA Institute of Medicine Model of Prevention. (European Union, 2014)
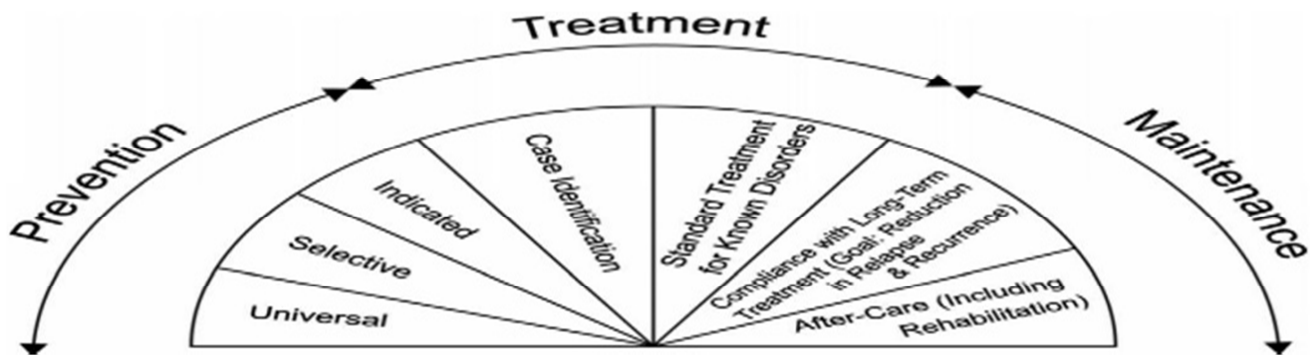
Figure 1. USA Institute of Medicine Model of Prevention (O'Connell et al., 2009).

2. Material and Methods

The research team role in this study is limited to monitoring the experience and take the measures planned with the agreement of the participants:

A. Medical tests(Lab team2 collection and interpretation)
• Were These tests added in the laboratory Sports Physiology of EPS Mostaganem
[1] Measuring the ratio of urea in the blood
[2] Measurement of Creatinine in the blood
[3] Measure the ratio of testosterone in the blood
[4] Blood glucose measurement
B. Anthropometric tests (Field team1 collection and interpretation, over the direction and coordination of teams)
[1] Measure Weight
[2] Measure the circumference of the shoulders
[3] Measure the chest circumference
[4] Measure the upper arm circumference
[5] Measuring thigh circumference
• From that, this study was limited to follow-up

[1] Unified training program for two months
[2]   The condition of taking the medical standards
• 48 hours after the last Training session
• The medical measures taken in fasting conditions
[3] Measurement variables at the beginning of the experiment
[4] The same measurement of the variables at the end of this experiment
[5] Adjust random variables (time sleep - time program - Living situation training and retrieval means).

2.1. Data Collection

Subjects

Our experience is composed of Five (5) voluntarily Algerian teenager who practices bodybuilder and wants to involve doping in their practice for two months where it was agreed that the Search team is not responsible for complications.

From this band the research team role is limited to monitoring the expirence and take measures planned with the agreement of the participants.

Table 1. (a (test1)-b (retest2)) Description of The Acquired Results of Our Sample in the test and retest.

Table 1a test 1 Anthropometric tests(cm)					Table 1a test 1 Medical tests			
sample test1	Weight	shoulders	chest	upper arm	thigh	glucose	urea	creatinine	testosterone
1	71	95	82	33	50	0.9	0.3	0.8	2.90
2	73	97	95	32	54	1	0.2	0.9	3.80
3	79	100	94	34	55	1	0.4	1.1	5.87
4	76	123	94	32	60	1.1	0.3	1.2	4.95
5	83	145	100	39	62	1.02	0.5	1.1	3.97
Mean	76.4	112	93	34	56.2	1.004	0.34	1.02	4.30
SD	4.77	21.61	6.63	2.92	4.82	0.07	0.11	0.16	1.14
Table 1b retest 2 Anthropometric Retest (cm)					Table 1b retest 2 Medical Retest			
Sample test2	Weight	shoulders	chest	upper arm	thigh	glucose	urea	Creatinine	testosterone
1	75	105	87	35	53	1.3	0.55	1.6	2.47
2	76.5	99	100	34	56	1.5	0.6	1.7	2.43
3	82.3	106	97	35	62	2	0.54	1.5	2.69
4	86	132	98	33	63	1.99	0.51	1.4	2.67
5	90.1	153	102	43	67	1.87	0.61	1.6	3.50
Mean	81.98	119.00	96.80	36.00	60.20	1.73	0.56	1.56	2.75
SD	6.34	22.86	5.81	4.00	5.63	0.32	0.04	0.11	0.43

2.2. Data Analysis

Based on the Medical tests with their natural ratios and

rates our Lab team2 confirm that all sample in the test1 are normalized but in the Retest test2 all the results are Greater than the normal limit see the normal limit and fig2.

The normal limit:
Glucose: 0.70-1.10mg/L
Urea: 0.20-0.40mg/L
Creatinine: 0.8 to 1.3 mg mg/L
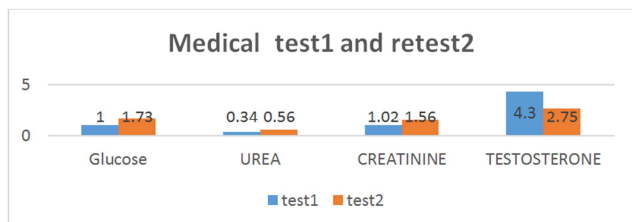Testosterone: 2.80-8ng/mL

Fig. 2. Results of medical tests.

3. Results and Discussion

Table 2a. Shows Paired Samples Statistics calculated from Anthropometric tests(cm).

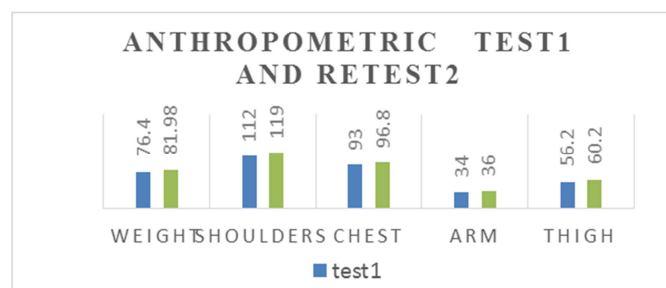| variable		Mean	N	Std. Deviation	t	Sig.
Pair 1	Weight T1	76.4000		4.77493	-4.288	.013
	Weight T2	81.9800		6.34326		
Pair 2	shoulders T1	112.0000		21.61018	-4.950	.008
	shoulders T2	119.0000		22.85826		
Pair 3	chest T1	93.0000	4	6.63325	-6.517	.003
	chest T2	96.8000		5.80517		
Pair 4	arm T1	34.0000		2.91548	-3.651	.022
	arm T2	36.0000		4.00000		
Pair 5	thigh T1	56.2000		4.81664	-4.472	.011
	thigh T2	60.2000		5.63028		

Fig 3. shows the results of Anthropometric test and retest.

Table 2b. Shows Paired Samples Correlations calculated from Anthropometric tests(cm).

variable		N	Correlation	Sig.
Pair 1	Weight & Weight T2	5	.901	.037
Pair 2	shoulders & shoulders T2	5	.991	.001
Pair 3	chest & chest T2	5	.987	.002
Pair 4	arm & arm T2	5	.986	.002
Pair 5	thigh & thigh T2	5	.938	.018

From the table 2(a-b) through the results of the paired T student and paired correlation of the variables of our samples, at the 0.05 level (2-tailed) and Degrees of freedom (n-1) that the T calculated is significant Within All comparisons. For the Paired Samples Correlations calculated is significant Within All comparisons.

4. Conclusion

4.1. Conclusion 1

Through Table 2 (a-b) and account for paired T student and paired correlation, Doping gives good visual results anthropometric external where our findings are confirmed by (Lauralee Sherwood, 2011): that Studies have confirmed that steroids can increase muscle mass when used in large amounts and coupled with heavy exercise.

Table 3a. Shows Paired Samples Statistics from the Medical tests.

variable		Mean	N	Std. Deviation	t	Sig. (2-tailed)
Pair 1	Glucose T1	1.0040		.07127	-6.212	.003
	Glucose T2	1.7320		.31539		
Pair 2	Urea T1	.3400		.11402	-4.359	.012
	Urea T2	.5620	4	.04207		
Pair 3	creatinine T1	1.02		0.16	-4. 63	.010
	creatinine T2	1.56		0.11		
Pair 4	testosteroneT1	4.30		1.14	2.91	.044
	testosteroneT2	2.75		0.43		

Table 3b. Shows Paired Samples Correlations from the Medical tests.

variable		N	Correlation	Sig.
Pair 1	glucose T1& Glucose T2	5	.798	.106
Pair 2	urea T1& Urea T2	5	.188	.763
Pair 3	creatinine T1 & creatinine T2	5	-.747	.147
Pair 4	testosterone T1 & estosteroneT2	5	.08	.888

From the table 3(a-b) through the results of the paired T student and paired correlation of the variables of our samples, at the 0.05 level (2-tailed) and Degrees of freedom (n-1) that the T calculated is significant Within All comparisons. For the Paired Samples Correlations calculated is not significant Within All comparisons.

4.2. Conclusion 2

Through Table 3 (a-b) of the paired T student and paired correlation, Doping destabilizes the regulation of vital functions and confirmation of the Lab team[2] where our finding are identical to the confirming of (Lauralee Sherwood 2011): these agents adversely affect the reproductive and cardiovascular systems and the liver Kidney. Where we agree with (John Josias Conybeare (Sir.), William Neville Mann, 1975)that the simplest test of renal function is the measurement of the blood urea level. The normal range is from 20 to 40 mg. per 100 ml. The actual level depends upon the equilibrium between urea productions from protein.

For the creatinine, we agree with (CATHEY PINCKEY AND EDWARD R. PINCKNEY, M.D., 1982): that the Normal values: Blood serum creatinine values range for 0.8 to 1.3 mg per 100-ml.

From the measured of testosterone we agreed with (David Wild, 2013) for that the Normal values Testosterone are 0.22–2.9nmol/L 9.9–27.8nmol/L for Women 0.06–0.82 ng/mL and Men 2.8–8.0 ng/mL (Bayer ACS:Centaur).

For the measured of Glucose, we agreed with (G. P. TALWAR,L .M. SRIVASTAVA, 2006) blood sugar concentration are from 70 mg/100 ml to 120 mg of glucose in blood.

Discussion and Conclusion of our experience

Through Table 3 (a-b) from our experience, we find that doping destabilizes the regulation of vital functions. from that we consider the practice of doping can only be possible with medical care, but the death of the great athletes doping Gide us explain them as medical mistakes. For this reason, we recommending our athletes to avoid these practices because the health requires a good reflection of the actors and decision makers (Yves Géry, 2012). Where our find Background theorical based on the site by (Steven B. Karch, MD, FFFLM, 2006)that the hypothesis of doping is easily advanced to the athletes who use it for quick visual successful results in our case this result is significant in the anthropometric variables. Our teenagers must avoid this ideal because their health could be in danger, from that we recommend our leaders in sports to create programs of prevention in the Algerian Leisure sports. Our aims focuses on preventing, Derived from the experience of the USA Institute of Medicine Model of Prevention and formed Anti-doping policy for the education of our athlete (Ivan Waddington,Andy Smit, 2009).

Our results and recommendation

1- Doping gives good visual results anthropometric.

2- Doping destabilizes the regulation of vital functions.

3- Formed Anti-doping policy for the education of our athlete as Program of prevention in the Algerian Leisure and athletics sports.

Our aim

For our sample and responsible in sports health in our country:

- Health foremost.
- Integrated the Anti-doping policy for the education of our athlete.

- Study the problem posed in other similar studies.
- Take advantage of this study in the assessment Program of the Algerians prevention.

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