

## IDENTIFICATION OF THE RISKS OF ANABOLIC STEROIDS IN THE ALGERIAN SPORT BODYBUILDING.

Hamadou Ali Djemel AbdNacer<sup>a</sup>, Zerf Mohammed<sup>b</sup>, Mokkedes moulay idriss<sup>c</sup>, Atouti Nouredine<sup>d</sup>, Bengoua Ali<sup>e</sup>, Mebrouki Fatiha<sup>f</sup>

*Physical Education Institute Laboratory OPAPS, University of Mostaganem, Mostaganem 27000, Algeria<sup>a,b</sup>*

*Physiology Laboratory Physical Education and Sports Institute University of Mostaganem, Mostaganem 27000, Algeria<sup>c,d,e,f</sup>*

**Email address:** Hamadou Ali: [killer\\_forma@hotmail.fr](mailto:killer_forma@hotmail.fr), Zerf Mohammed: [biomeca.zerf@outlook.com](mailto:biomeca.zerf@outlook.com), Mokkedes moulay: [mi\\_mokkedes@hotmail.fr](mailto:mi_mokkedes@hotmail.fr), Atouti Nouredine: [attouti2476@live.fr](mailto:attouti2476@live.fr), Bengoua Ali: [bengoua67@yahoo.fr](mailto:bengoua67@yahoo.fr), Mebrouki Fatiha: [mabroukifatiha@yahoo.fr](mailto:mabroukifatiha@yahoo.fr)

### Abstract

In the lack of information and program prevention in the Algerian Leisure and athletics, sports the purposes of this study were to expose the Advantages and Disadvantages of Anabolic steroids administer in the meals by Algerian bodybuilding to gain muscle volume in the shortest time.

From that, our subjects were 12 Algerian athletes confirmed who practice bodybuilder for more than 7 years ago and who volunteered accepted to participate in our experience 06 from them involve Anabolic steroids in their meals and 06 rely on natural nutrition. Our study based on the following Analysis of blood, urine, and anthropometric measurements where our work was divided into two team –research: Field team<sup>1</sup> and a Lab team<sup>2</sup>.

To verify the hypothesis that support:

Which Advantages and Disadvantages can be observed when athlete addition the Anabolic steroids in Bodybuilding from that, our aims for this study interest:

- (1) Which differences anthropometric we can observed between our samples?
- (2) Which UR Regulations can be observed in their vital functions?

For that, we have chosen the analysis of independent T-TEST to compare the implementation differences anthropometric and modification in the regulation of the vital functions in the two cases for the current study. Based in the results accuses

We confirm: (1) Anabolic steroids develop the anthropometric better than fed natural; (2) Anabolic steroids destabilizes Cycles vivo and disorderly the vital functions.

**Key words:** Risks of Anabolic steroids, Algerian Sport Bodybuilding.

## 1. INTRODUCTION

In the lack of the Anti-doping policy, the information and program prevention in the Algerian Leisure sports. Our aims were to expose the doping as a global problem that follows leisure sports, national and international sporting events worldwide (David A Baron, David M Martin, and Samir Abol Magd. 2007). Historically, anti-doping have focused on the detection and deterrence of doping in our elite sport latest case the Hichem Chaabane cycling 2015 ([algeriepatiotique.com](http://algeriepatiotique.com), 2015). The research team fears, 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 measures taken latest March 19, 2015 (ALGÉRIE PRESSE SERVICE, 2015) by Sports Minister Mohamed Tahmi that we are Considering late, In comparison with the death of the Algerian hero and the World Championship Mohammed Benaziza fought the Giants in October 4, 1992 at the age of 33 years in the category under-75 kg category. (Wikipedia, 2015) As a result, cardiovascular back, it was said in the rapport that the cause come back to the doping for the Quick Preparation to the Bodybuilders Championship Which is the first case detected in the Algerian Sports. Our attention for this study is due to the use of Anabolic steroids on the Algerian Leisure sports, were we can provide it from the

gyms.

Our set came from the reality of the gyms visits in our country that:

On one hand

1. The hypothesis of doping is easily advanced to the athletes who use it for quick visual successful results (Steven B. Karch, MD, FFFLM, 2006).
2. The training weights accompanied by greater growth, due to the increase in bio-metabolism that proteins positively condense in the practice of body building (Mohamed Mahmoud Mandalawi, 2000, p. 95).

On the another,

1. Delaying instructions of the preventive measures relevant ministries in our elite sport.
2. The absence of such a statement in the amateur sport
3. Monitor and control the distribution of these drugs sources

## 2. MATERIAL AND METHODS

The research teams' 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 team<sup>2</sup> 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 team<sup>1</sup> 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. Measurement variables Within the limits and the possibilities for researchers
2. Where the condition of taking the medical standards
  - 48 hours after the last use Anabolic steroids
3. The medical measures taken in fasting conditions
4. Adjust random variables (Age - Age Training - Height Weight -Social conditions Number of training hours and retrieval means)by an investigation that was conducted one week ago before beginning the initial experience

## Data Collection

### Subjects:

Our experience is composed of 12 volunteers Algerian athletes confirmed who practiced the bodybuilding for more than 7 years ago and who volunteered accepted to participate in our experience 6 from them involve Anabolic steroids in their practices and 6 rely on natural nutrition. The research teams role is limited to monitoring the experience and take measures planned with the agreement of the participants

Table 1 shows the Equal and the homogeneity of the Sample in Some growth indicators.

Independent Samples Test							
variables		N	Mean	Std. Deviation	df	T	Sig(2-T)
Weight	Anabolic steroids	6	79.67	4.76	10	-0.23	0.82
	natural		80.33	5.01			
Height	Anabolic steroids		184.00	6.54		0.51	0.62
	natural		182.33	4.63			
age	Anabolic		26.33	2.07	0.15	0.87	

Age practice	steroids					0.86	41.00
	natural		26.17	1.83			
	Anabolic steroids		7.83	1.17			
	natural		7.33	0.82			

Through the results table 1 the Independent Samples Test of the growth indicators variables, at the 0.05 level (2-tailed) and Degrees of freedom (2n-2) that the T calculated is not significant Within All comparisons.

From that, we confirm the homogeneity of the Sample in Weight-Height-age and Age practice

**Table2 (a-b-c-d) shows the Total Measuring values of the Variables in order to study**

Table2a Shows Sample NATURAL Anthropometric tests(cm)					Table2b Shows Sample NATURAL Medical tests			
sample NATURAL	shoulders	chest	upper arm	thigh	glucose	urea	creatinine	testosterone
1	97	85	39	53	0.92	0.39	0.8	2.9
2	96	94	42	55	1	0.27	0.9	3.8
3	99	92	36	59	1	0.45	1.01	5.87
4	101	94	37	60	1.11	0.38	1.02	4.95
5	102	96	39	61	1.04	0.55	1.1	3.97
6	104	94	35	64	1.02	0.52	1	4.67
Mean	99.83	92.50	38.00	58.67	1.02	0.43	0.97	4.36
SD	3.06	3.89	2.53	4.03	0.06	0.10	0.11	0.94
Table2c Shows Sample Anabolic steroids Anthropometric tests(cm)					Table2d Shows Sample Anabolic steroids Medical tests			
Sample Anabolic steroids	shoulders	chest	upper arm	thigh	glucose	urea	Creatinine	testosterone
1	109	89	44	57	1.77	0.55	1.63	2.04
2	112	101	39	68	1.86	0.63	1.75	2.47
3	104	99	45	64	2	0.64	1.56	2.59
4	122	99.9	43	64	1.99	0.52	1.42	2.68
5	143	104	46	69	1.87	0.63	1.61	3.06
6	107	106	42	68	1.82	0.62	1.67	3.13
Mean	116.17	99.82	43.17	65.00	1.89	0.60	1.61	2.66
SD	14.52	5.91	2.48	4.47	0.09	0.05	0.11	0.40

### Data Analysis

Based on the Medical tests with their natural ratios and rates our Lab team<sup>2</sup> confirm that sample NATURAL are normalized but the sample which add Anabolic steroids in their practice are Greater than the normal limit except in the testosterone which is Less than the natural ratios see the normal limit and fig1.

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

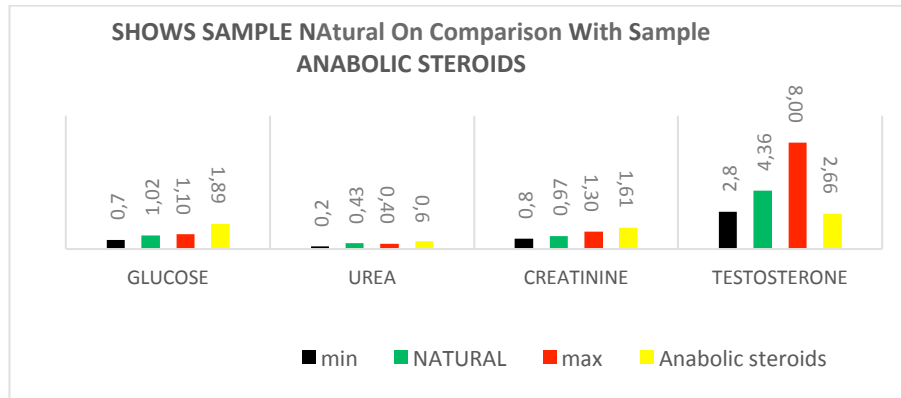


Fig 1 shows the results of medical test.

### 3. RESULTS AND DISCUSSION

Table 3 shows Independent Samples Test calculated from Anthropometric tests(cm)

variables		N	Mean	Std. Deviation	df	T	Sig(2-T)
shoulders	natural	6	99.83	3.06	10	2.69	.022
	Anabolic steroids		116.17	14.52			
chest	natural		92.50	3.89		2.53	.030
	Anabolic steroids		99.82	5.91			
upper arm	natural		38.00	2.53		3.57	.005
	Anabolic steroids		43.17	2.48			
thigh	natural		58.67	4.03		2.58	.028
	Anabolic steroids		65.00	4.47			

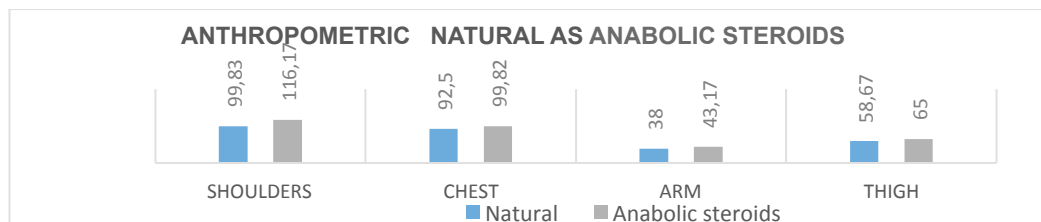


Fig 2 shows the results of Anthropometric natural as Anabolic steroids.

From the fig2 through the results table 3, the Independent Samples Test calculated from Anthropometric tests (cm) is significant Within All comparisons for Anabolic steroids sample.

**Table 4 shows Independent Samples Test calculated from medical tests(cm)**

variables		N	Mean	Std. Deviation	df	T	Sing(2-T)
glucose	natural	6	1.02	.062	10	19.18	.000
	Anabolic steroids		1.88	.092			
urea	natural		.43	.102		3.68	.004
	Anabolic steroids		.59	.050			
creatinine	natural		.97	.106		10.13	.000
	Anabolic steroids		1.61	.11			
testosterone	natural		4.36	1.03		3.758	.004
	Anabolic steroids		2.66	.40			

From the table 4 through the results of the Independent Samples Test calculated from Anthropometric tests (cm) is significant Within All comparisons for Anabolic steroids sample. Except in the testosterone, which is less than the sample witch don't practice the Anabolic steroids

#### Discussion and Conclusion of our experience

Our discussion is based on what Indicates (C Saudan, N Baume, N Robinson, L Avois, P Mangin, M Saugy, 2006) that the Anabolic steroids are synthetic derivatives of testosterone, modified to enhance its anabolic actions (promotion of protein synthesis and muscle growth). The impact of this research rolling around the drugs and dietary supplements that have become promoted in sports halls:

Within the limits and possibilities, we confirm:

- [1] Through the fig2 and Table 3 the account of the Independent Samples Test, shows that the Anabolic steroids develops the anthropometric better than fed natural where (Lauralee Sherwood, 2011) confirms our findings: that Studies have confirmed that steroids can increase muscle mass when used in large amounts and coupled with heavy exercise.
- [2] Through Table 4 of the account of the Independent Samples Test, shows that the Anabolic steroids destabilizes Cycles vivo and disorderly the vital functions 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.

For those reasons, we recommend 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 theoretical based on the site by (Steven B. Karch, MD, FFFLM, 2006)that the hypothesis of doping and the use of Anabolic steroids 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. Based on data medical standards our sportive must avoid this ideal because their health will be Susceptible to diseases, mostly lead the user to death as the example of our champion Benaziza, in case of the body building and the result of the Similar studies that the Nutritional supplements can be a source of positive doping cases as some supplements contain prohibited substances without showing this on their label (Olivier de Hon, Bart Coumans, 2007) from that we recommend our leaders in sports to create Anti-doping policy in the Algerian Leisure sports. Our aims focuses on preventing, and formed Anti-doping policy for the education of our athlete (Ivan Waddington,Andy Smit, 2009)

#### 4. OUR RESULTS AND RECOMMENDATION:

- 1- Anabolic steroids develops the anthropometric better than fed natural.
- 2- Anabolic steroids destabilizes Cycles vivo and disorderly the 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 and 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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