

## The Study of Advantages and Disadvantages of Using Anabolic Steroids (Testosterone) In Power Sports and Tunability with Neural Network

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### ABSTRACT

Nowadays, many of common people and a large number of athletes consume steroids without. They have enough knowledge about their lateral effects. This is a threat to their health. In some cases lead to study advantages using. Anabolic steroids or in another word, Testosterone by athletes doing heavy sports like weight lifting and power lifting. Then, we address to irreparable effects of using Testosterone and regressive positive obtained results of this paper. Finally, athletes will decide to consume or not this drug. At last we could regulate research results by neural network. Obtained error diagram of this training shows our success.

**KEY WORDS:** Neural Network, Testosterone, sport, power

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### I. INTRODUCTION

Anabolic steroid is a group of medical medicine which they made of Testosterone hormones or from material contains this hormone. Testosterone is primary sexual hormone in men. Which it excretes out of sexual glandular cells in testicle of mal sex. The amount of their excretion varies in different ages and during various periods of life. On the hand increasing in this hormone leads to increasing growth or Anabolic changes in body. And one of these changes is increasing in combining protein molecules and storing protein in muscles. In modern societies, physical strength and muscularity, is one of the ideal qualities for males. In fact achieving the goal either can be high risk temporarily or can be practical with proper diet, good exercises and under physician supervision permanently. One of the reasons for prevailing use of hormone drugs among athletes is lacking drugs testing, since this test is costly. As we can see, in most of competitions in every country .medicines test are not performed. Since this test is costly. It is performed only in Olympics. So athletes don't fear of disclosing their using medicines, at least in their own country and for this, many sportsmen in semi professional level whose want to be popular, use hormone drugs which make them unhealthy. Often individuals, whom by using steroids became successful, deny using them and only saying it to their much closed friend, although they never say that they are suffering from drugs side effects, so their friends have misunderstanding about drugs and their effects. According to researches and investigations which performed on this aspects, in most of literature, importance and warring about the harmful effects of steroid drugs explained, so every one who wants to using these drugs because of other's body development resulted of using these drugs, at first neglects their side effects and use it. So in this study, first those aspects which seem positive examined and then their irrecoverable harmful and most important temporary and receivable positive effects are described. Finally, athletes must decide about using or not using these drugs. The main structure of all steroids is composed of 2 components namely Testosterone and Nandrolone which today, by using them and their Derivatives, there are a lot of hormone drugs in wide world and this extend the scope of misusing them. Commercially, Hormones are 2 types: injecting ampoules and oral tablets. The most popular tablets of hormone are Oxy methadone ,Methandienone, Dianabol and the most common injecting hormones are:

Testosterone,Nandrolone,Sostanol,Mestabol,Deca,Winstrol,Sostanol, Decasostanol,Omadrine deca nandrolone, Dextroxy, Stanolozol ,Durabolin and Anadur.

### II. MATERIALS AND METHODS

Each of these drugs has especial applications, for example: increasing mass index, increasing body strength, Endurance, increasing muscular strength, reducing lipid tissue around muscles and losing weight. In following table, you can see the results of investigations about the main reasons of using drugs among users.

### III. RESULT

**Table 1:** Reasons of use

Reasons Of Use	Men
Enhancing Muscular Strength	77%
Enhancing Sexual Qualities	13.5%
Enhancing Performance	17%
Losing Weight	38.3%
Enhancing Muscular Mass	49.8%
Increasing Mental Strength	31%
Rising Weight	97%

Now, because the numbers of drug users who use it for increasing their body strength – is high, we examine the effects of one of the most popular drugs namely Testosterone which is used by athletes very much too increasing muscular strength.

For showing Testosterone effects on athletes, we investigate increasing numbers of sinkers in exercises of people who work power lifting and bodybuilding professionally.

In following table you can see results of our researches.

Table2: result of Neural Network

days of a complete period Usage of Testosterone	dose of usage in each day(mg)	increasing sinkers compared to first day(kg)	days of a complete period Usage of Testosterone	dose of usage in each day(mg)	increasing sinkers compared to first day(kg)
1	5	0	40	75	28
2	5	0	41	80	28
3	5	0	42	80	28
4	10	2	43	80	30
5	10	2	44	80	30
6	10	4	45	85	30
7	10	4	46	85	30
8	15	6	47	85	35
9	15	6	58	85	35
10	20	6	59	90	38
11	20	8	50	90	40
12	20	8	51	90	40
13	25	8	52	95	42
14	25	10	53	95	43
15	30	10	54	95	44
16	30	10	55	95	45
17	35	10	56	95	45
18	35	10	57	95	45
19	35	10	58	95	50
20	40	13	59	95	50
21	40	13	60	95	50

22	40	14	61	100	55
23	45	14	62	100	60
24	45	15	63	100	60
25	45	15			
26	50	15			
27	50	18			
28	50	18			
29	55	18			
30	55	20			
31	60	20			
32	60	20			
33	60	22			
34	65	22			
35	65	24			
36	65	24			
37	70	25			
38	70	25			
39	75	25			

According to present data and by using of Neural Network, we designed a net and presented a diagram which is related to error. In fact, Neural Network has used regress engineering method and amount of consuming necessary doze in each day can be obtained by increasing in certain weight for special athlete as an input.

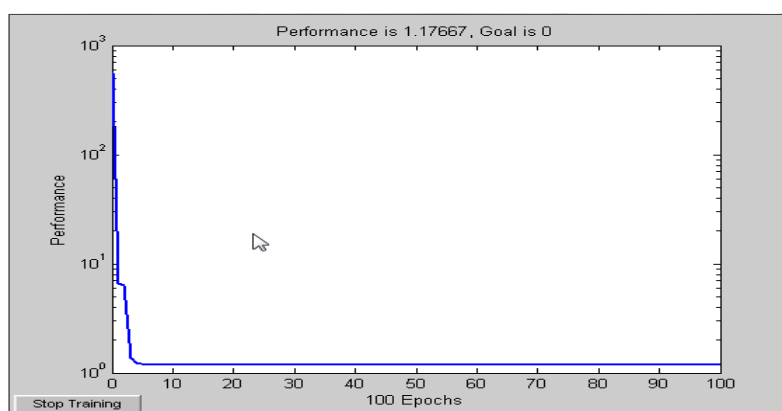


Diagram 1: error diagram

Before examining side effects of hormones, it is necessary to recall that each of them has special effects .Now we summarized some of the most prevailing and common effects of them:

If these drugs used by children who are in development age, they make premature suspension of bony development. As the statistics of table show, Probability of damaging of tendon in athletes- who by using these drugs try to uprising most sinkers-is very high, and this tearing of tendon is just for additional pressure on muscle and this is same case which we have faced it many times and in some cases tearing of tendon causes some one cannot upraise even one 5 kg sinker forever.

If these drugs used for a long period of time, they cause coagulation and closing vessels .increasing level of LDL makes arteriosclerosis and decreasing of Triglyceride level and reducing high concentration of lipoprotein. Steroids users, suffering from anxiety and discomfort .there are many reports about their aggressive behavior against their stimulations. The most popular side effects of these drugs are: Depression, psychic problems and antisocial behavior resulted of increasing libido.

FSH and LH are necessary in our body ,If some one used steroid drugs, these drugs make dependency on doses in structure LH hormone and stimulate internal glands about FSH hormone and using high dose in one period ,cause infertility .in some cases these drugs increasing risk of prostate cancer and make smallness of testicular in men.

Hormone drugs misuse in women leading to modeling men's baldness ,hirsutism ,smallness of breast and menstruation ,acne ,dermatological, fatness of skin and hair ,cancer ,cachexia ,anemia ,increasing retardation and cardiovascular and behavioral problems as explained before. And in men cause premature Moulting ,acne fatness of skin and hair, dermatological increasing lipid tissue ,cachexia, anemia ,increasing retardation and escalating muscular , cardiovascular , sexual and behavioral problems as we said before These drugs influence directly on liver and destroy enzymes AST,ALT,LOH,CK which cause hepatitis and cholesterol and liver cancer and they influence on kidney and cause increasing serum urea ,serum uric acid and Hypophosphatemia.

#### **IV. CONCLUSION**

According to mentioned above, most athletes that consume Anabolic steroids are not aware of harms (disadvantages) of this drug. They do not know that using these drugs may threaten to their health. Solving this problem needs complete efforts including making culture in our society and verifying that positive effects of these drugs are temporary and unstable, while their negative effects are stable and permanently and with good diet and continuous exercises we can achieve best results compared to hormone drugs this results stable.

It is better to say that medical setting pharmacy don't give this drugs without doctor prescription and health ministry must control the shops and settings which sell drugs ,so athletes can study more about their side effects before using them. Finally rejecting popular athletes who used this drugs for being popular ,can be very effective preventing other athletes misusing of drugs because these efforts is good for keeping athletes and society healthy

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