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COMPARATIVE STUDY ON USING DOPING SUBSTANCES OR METHODS BETWEEN INDIVIDUAL SPORTS AND TEAM SPORTS

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Abstract: *Doping represents the use of substances that are harmful to health in order to obtain an athletic performance. The list of prohibited substances has grown to a stunning number, having a constant evolution in time because of those who resorted to new and new doping substances and/or methods to artificial improvement of athletic performence, and in the field of athletic health these substances do a lot of damage.*
The purpose of the study is to bring in front the extent of doping between individual sports and team sports.The aim of the study is to give a wake-up call regarding the increase of athletes who resort to this kind of prohbited methods from individual and team sports.Conclusions: after the study it been concluded that obtaining athletic performance that were not in accordance with the active regulation wasn't stopped, on the contrary this continued, spreading in almost all athletic disciplines, in team sports but mainly in individual ones.The anti doping campain enlarged its targeting area beginning with 1989 but hasn't succeded to eradicate doping and only to lessen this scourge. This happens because of the fact that high performance sport became a business , a spectacle for which the spectators are willing to pay and the athletes are willing to assume any risk regarding their own health to satisfy their need to become famous and to have financial gain.

Key words: *doping, athletes, individual sports, team sports.*

1. Introduction

Doping represents the use of some substances (natural of synthetic) that are harmful to health with the objective to gain athletic performance, this is the definition given by the vast majority of the field specialists [3], [5], [9], [10].

Targeting the artificial improvement of athletic performance, doping is opposing one of the essential principles of competing in sports, the one to encourage a fair and reasonable competition, at the end of which the best one should win. The use by athletes of different prohibited medical substances, in order to improve performance, puts them on an uneven places, being totally not indicated, because it brings harm to the health condition of the athlete and also represent a violation of the ethical sportive norms and of the Olympic principles [12].

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Ever since antiquity methods to increase force and stamina to men have been used, from bull testicles to honey, wine and various plants. The word doping appears for the first time in the year 1889 in England and means a method to mix opium in the food of race horses, which generated the first 'fake' races and the first unfair winnings [7].

Together with the industrial revolution the organic chemistry developed and various substances began to be synthesized, from anabolic steroids to amphetamine.

The financial involvement of some organizations in sport lead to tightening the anti-doping struggle. Also, death and severe health problems, which active or retired athletes have had, raised an wake-up call in this direction.

Nowadays, there are clues that in modern athletic competitions doping gained an endemic scale. From isolated incidents, doping became present in almost all sports, at the beginning by using amphetamines, then anabolic steroids, and more recently through several ways of 'blood doping'.

The problem of doping it's a threat addressed to the health of young athletes, contradicting the principles of medical ethics. There is a lot of pressure on the medics because of commercial and national interests, in the sense of using the athletes in competitions, even if they are injured or out of shape, or to prescribe medicine which will improve athletic performance.

The physicians should put the health of the patients first, in the sense that they should not endanger the health of the patients for their desire in fame and money. They should follow the principles of medical care and protect the health of the athlete, no matter what the competition level is or potential economic consequences. Instead, the sportive organizations should provide the medics this right, securing independence in their decisions and protecting them against interest conflicts [2].

Doping According to the World Anti-Doping Code, doping is defined as the occurrence of one or more of the anti-doping rule violations:

- Presence of a prohibited substance or its metabolites or markers in an athlete's sample.
- Use or attempted use by an athlete of a prohibited substance or a prohibited method.
- Refusing or failing without compelling justification to submit to sample collection after notification as authorized in applicable anti-doping rules, or otherwise evading sample collection.

Violation of applicable requirements regarding athlete availability for out-of-competition testing, including failure to file required whereabouts information and missed tests which are declared based on rules which comply with the international standard for testing.

Tampering or attempted tampering with any part of doping control. Possession of prohibited substances and prohibited methods. Trafficking or attempted trafficking in any prohibited substance or prohibited method. Administration or attempted administration to any athlete in-competition of any prohibited method or prohibited substance.

The Doping control process Selecting the athletes – an athlete can be selected at anytime and anyplace.Notification – a doping control officer will notify the athlete and underline the rights and responsibilities. Reporting to the doping control station. Sample collection equipment. The athlete's sample - The urine sample - a minimum amount of 90mL of urine will need to be provided. Splitting the sample - the sample will be split in bottles A and B. Sealing the

samples. Measuring the specific gravity – the specific gravity is measured to ensure that the sample is not to diluted to be analyzed. Completing the doping control form Analysis – all samples are sent to WADA certified labs [15].

The Atypical Finding is a lab report or any other entity approved by WADA, which requires further investigations as provided by the International Standard for laboratories prior to the determination of a positive result, and the temporary hearing - a hearing before the official one, in which the athlete it's brought to attention the result that was found, the violation of anti-doping rules and the rights he has against applying temporary suspension. The regulatory document brings under regulation the procedures to follow in case of an atypical finding situation or receiving a temporary suspension period [9].

Wada anti-doping Statistics Wada - World Anti - Doping Agency is the international independent organization promote, coordinate and monitor the fight against doping in sport and creator of the World Anti-Doping Code. Key activities include scientific and social science research, education, athlete outreach, anti-doping capacity building, enforcement and monitoring

Code implementation. Statistics containing samples from athletes in 2010 reported by laboratories accredited by WADA [15].

Table 1

Total results reported by accredited laboratories at all sports

Sport	Total Samples per Sport	Positive findings	Athypical findings	Total Findings	Positive findigs %
Aquatics	13138	90	65	155	0.69
Archery	1156	17	4	21	1.47
Athletics	25013	196	242	438	0.78
Badminton	1250	3	2	5	0.24
Basketball	9575	139	62	201	1.45
Biathlon	1,967	0	18	18	0
Bobsleigh	1,214	2	17	19	0.16
Boxing	3874	75	35	110	1.94
Canoe / Kayak	3726	15	35	50	0.4
Curling	477	3	5	8	0.63
Cycling	21427	254	359	613	1.19
Equestrian	723	12	5	17	1.66
Fencing	1,916	8	20	28	0.42
Football	30398	146	257	403	0.48
Gymnastics	2670	14	19	33	0.52
Handball	4141	37	30	67	0.89
Hockey	2,275	30	27	57	1.32
Ice Hockey	5370	68	63	131	1.27
Judo	4068	46	28	74	1.13
Luge	434	0	3	3	0
Modern Pentathlon	569	4	2	6	0.7
Rowing	4424	10	26	36	0.23
Sailing	795	6	11	17	0.75
Shooting	2960	16	9	25	0.54

Sport	Total Samples per Sport	Positive findings	Athypical findings	Total Findings	Positive findigs %
Skating	3660	10	14	24	0.27
Skiing	5332	38	47	85	0.71
Table Tennis	985	11	8	19	1.12
Taekwondo	1556	11	9	20	0.71
Tennis	3638	17	21	38	0.47
Triathlon	3676	40	46	86	1.09
Volleyball	4750	42	33	75	0.88
Weightlifting	8316	201	46	247	2.42
Wrestling	5111	63	25	88	1.23
Total	1 80,584	1624	1593	3217	0.9

Table 2

Statistics containing sample data from athletes in 2010 at individual sports

Sport	Total Samples per Sport	Positive findings	Athypical findings	Total Findings	Positive findigs %
Athletics	25013	196	242	438	0.78
Gymnastics	2670	14	19	33	0.52
Judo	4068	46	28	74	1.13
Skiing	5332	38	47	85	0.71
Weightlifting	8316	201	46	247	2.42
Wrestling	5111	63	25	88	1.23
Total	50510	558	407	965	1.10

Table 3

Statistics containing sample data from athletes in 2010 at team sports

Sport	Total Samples per Sport	Positive findings	Athypical findings	Total Findings	Positive findigs %
Basketball	9575	139	62	201	1.45
Football	30398	146	257	403	0.48
Handball	4141	37	30	67	0.89
Hochey	2,275	30	27	57	1.32
Ice Hockey	5370	68	63	131	1.27
Voleyball	4750	42	33	75	0.88
Total	56509	462	472	934	0.81

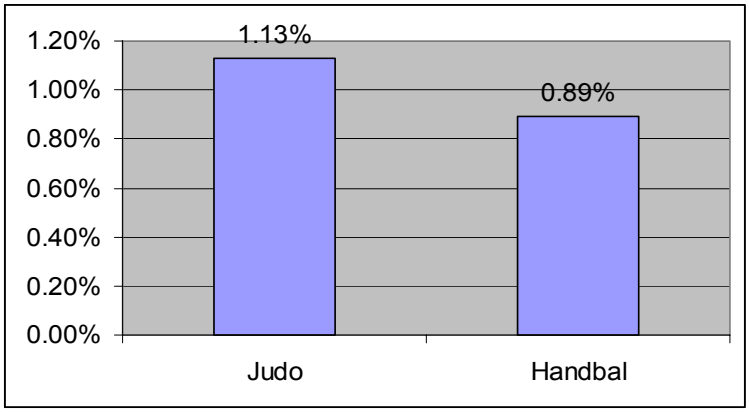

Chart 1. *Comparative chart of positive doping findings at sports judo and handball*

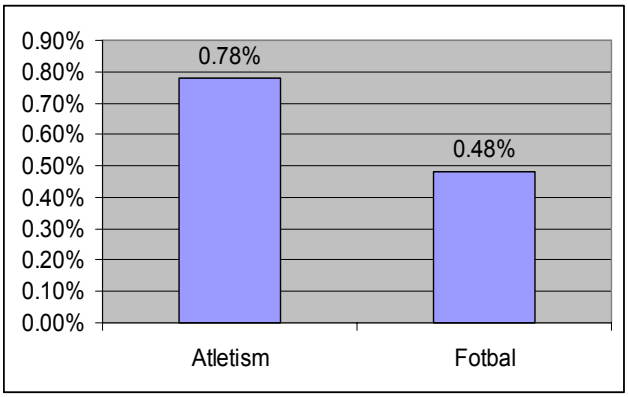

Chart 2. *Comparative chart of positive doping findings at sports athletics and football*

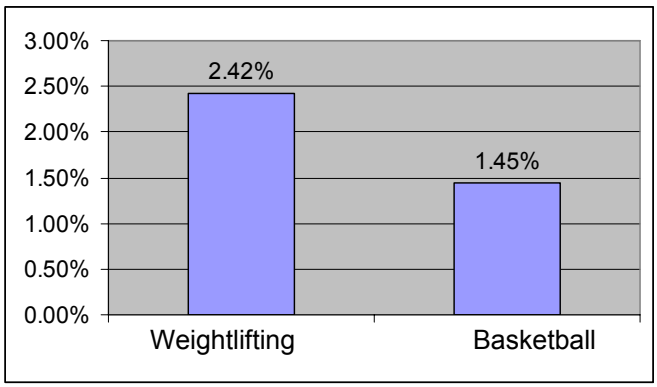

Chart 3. *Comparative chart of positive doping findings at sports weightlifting and basketball*

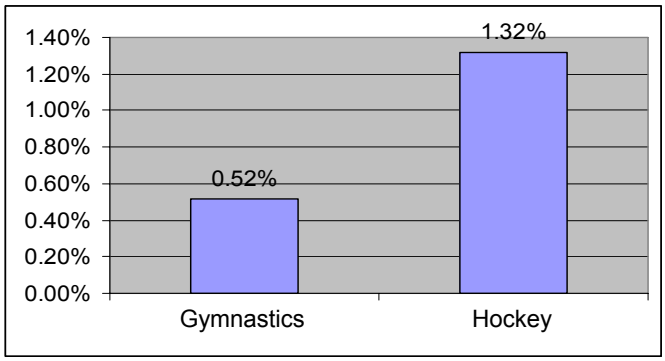

Chart 4. *Comparative chart of positive doping findings at sports gymnastics and hockey*

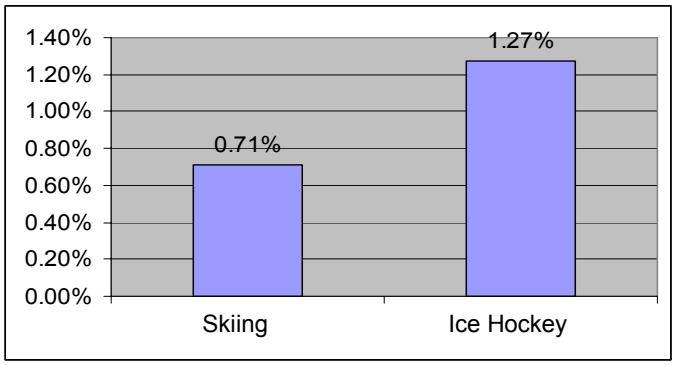

Chart 5. *Comparative chart of positive doping findings at sports skiing and ice hockey*

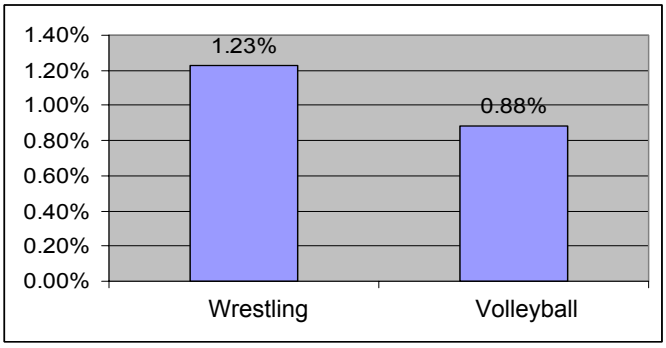

Chart 6. *Comparative chart of positive doping findings at sports wrestling and volleyball*

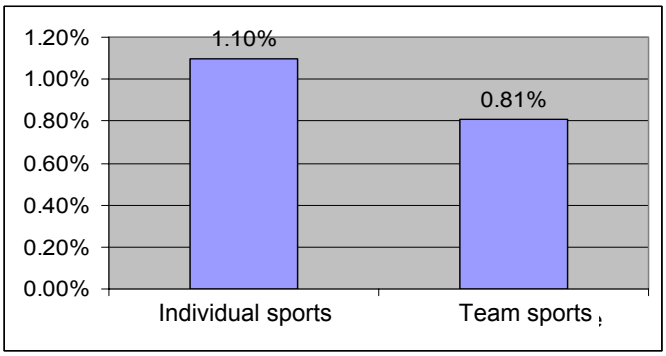

Chart 7. *Comparative chart of all positive doping findings at individual and team sports*

Analyzing the WADA Anti-Doping statistics on samples close to the number of athletes, from six individual sports and six team sports it was observed that there is a great number of athletes that do doping in team sports, not only in individual sports.

In most individual sports analyzed, the number of athletes found positive at the doping control, was greater (except gymnastics and skiing) than in team sports. Analyzing the samples football – athletics it was observed that the number of the athletes found positive was greater (196) than the football players (146), even if the samples of football players was greater (30398) compared with the athletics athletes (30398).

From the six individual sports analyzed, gymnastics is the sport with the lowest athletes found positive (0,52%). Surprisingly is the fact that on the other side, in team sports analyzed, football players have the smallest percentage in doping tests (0,48%).

The percentage analysis comparing positive findings for all twelve sports, placed weightlifting first (2,42%), basketball second (1,45%), and hokey third (1,32%).

Although the samples from team sports (56509) was greater than samples from individual sports (50510), the team sports athletes were found positive in a lower percentage (0,81%) than the ones form individual sports (1,10%)

The small difference of 0.29% between team sports and individual sports compels us to make a wakeup call regarding the increase of number of

Athletes that use this prohibited methods within the team sports and not only.

Following the study it was found that obtaining athletic performance through methods that are not in accordance with the active regulations was not stopped, but on the contrary this continued spreading in almost all sportive disciplines, both in team sports and mostly in individual sports. If in 2010 from a sample of 180585 athletes 1624 (0.9%) have been found positive, in 2011 their number increased to 1762 (1,05% from 167820 athletes) according to WADA statistics.

Even if at the beginning anti-doping test have been created and applied, both in sportive competitions and other situations, year after year new doping cases have been found as well as suspicious deaths. Efficient methods against anti-doping tests have been perfected, but always new substances appear, harder to detect and other masking methods.

How did it got here?

The high level of performance which, in order to be achieved they've forced professionalism to appear, heavy competitive seasons and training methodology which requires intense efforts, lead the athlete closer to its biological limits. The sport dependence from financial point of view towards the state and some sponsors shakes its

autonomy in favor of economical principles of demand and offer, especially in strong mediated show business sports. We add to all these the mentality to obtain victory at any price, thing that push the athletes to use prohibited methods 4

Prince Alexandre de Merode, president of the IOC Medical Commission said in an interview:

„I totally agree with this world campaing against doping in sport but I don't belive in eradicating doping but only diminuish this scourge an I have three arguments:

- high performance sport became a busines, a spectacel for which the spectators are willing to pay and athletes are willing to assume any risk regarding thier own health, to satisfy the public's request and to win financially;
- science (some private laboratories well equipped and financilly supported) is envolved in this action and is hard to suppose that sportive organisms cand manage it and finaly but not last I express a personal opinon that cheating is part of the human being" [11].

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