

# The use of Prohibited Substances in Playing Games: With special reference to Asian Games

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**Abstract-** *This article highlights the tendency of using prohibited substances by the athletes who participated in Asian Games. The study has utilized Secondary data and data were gathered from the text books and the relevant websites and the database of last eight (8) Asian games held. Descriptive research method was used to analyze the gathered data. Out of all the eight games, the athletes who participated in 1994 Hiroshima games have used the highest number of prohibited substances. Male athletes used prohibited substances more than the female athletes. The most used substance was DHIYDROTESTOSLE. There is a declination of the use of prohibited substances from the first Asian games to the last Asian games.*

**Keywords:** *Prohibited Substances; Athletes; Asian games*

## 1. INTRODUCTION

Modern Olympic Games started in the year 1896, and from that period there was a trend to conduct the mega sports events in a well-organized manner. Athletes all over the world could participate in the Olympic Games and athletes in the Asian region are eligible to participate in the Asian games. Asian games is the second largest game in the world and it is held every four (4) years. The games were regulated by the Asian games federation. Asian Games is also known as ASIAD. Guru Dutt Sondhi (10th December 1890- 20<sup>th</sup> November 1996) is the founder

of the Asian Games which was initially held in 1951 at New Delhi. He was a sports administrator in India and the manager of the Indian Olympic team for three Olympics. He is the one who found the Asian Games Federation (AGF).

In 1994, Games included the inaugural participation of the former republics of the Soviet Union; Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan. It was the inaugural Games held in a host country outside its capital city.(23) Following are the countries which sponsored the Asian Games.

### 1.1 Asian Games Sponsored Countries

1 <sup>st</sup> Games	1951	New Delhi, India
2 <sup>nd</sup> Games	1954	Manila, Philippine
3 <sup>rd</sup> Games	1958	Tokyo, Japan
4 <sup>th</sup> Games	1962	Jakarta, Indonesia
5 <sup>th</sup> Games	1966	Bangkok, Thailand
6 <sup>th</sup> Games	1970	Bangkok, Thailand
7 <sup>th</sup> Games	1974	Tehran
8 <sup>th</sup> Games	1978	Bangkok, Thailand
9 <sup>th</sup> Games	1982	New Delhi, India
10 <sup>th</sup> Games	1986	Seoul, Korea
11 <sup>th</sup> Games	1990	Beijing, China
12 <sup>th</sup> Games	1994	Hiroshima, Japan
13 <sup>th</sup> Games	1998	Bangkok, Thailand
14 <sup>th</sup> Games	2002	Busan,
15 <sup>th</sup> Games	2006	Doha
16 <sup>th</sup> Games	2010	Guangzhou

17 <sup>th</sup> Games	2014	Incheon, China
18 <sup>th</sup> Games	2018	Jakarta, Indonesia

## 1.2 The countries Asian Games were held



## 1.3 Prohibited Substances

According to the WADA (World Anti-Doping Agency) the substance such as a drug that is banded or forbidden by law or other authority is called a prohibited substance. The synthetic drugs like hCG, hGH, ACTH, and EPO are known as analogues having similar effect to peptide hormones. WADA has categorized prohibited substances into six (6) categories.

- S0 - Non approved substance
- S1 - Anabolic agents
- S2- Hormones
- S3- Beta 2 agonists
- S4 - Hormones and metabolic modulators
- S5 - Diuretics and masking agents

## 1.4 Methods Of Using Prohibited Substances

- M1 – Manipulation of blood and blood component
- M2 – Chemical and Physical manipulation
- M3 – Gene Doping

## 1.5 Side effects of blood doping

- Increasing blood viscosity
- Clotting susceptibility
- Hypertension

Vasoconstriction

Kidney dysfunction

Risk of cardiac arrest, brain strokes and pulmonary embolism

Science 2004, and as mandated by WADA has published substances and methods. The list which forms one of the six international standers, identifies Doping at the Asian Games

## 2. OBJECTIVES OF THE STUDY

The main objective of this study is, To identify the tendency of taking prohibited substances in Asian Games Specific objective is To identify what are the prohibited substances

## 3. RESEARCH METHOD

This research is based on the secondary data and data were gathered via doping database of last seven (7) Asian Games which was held, books and relevant websites. Descriptive research method was used to analyze the gathered data. (J.A.P.Kumari et, al 2019[23], V.Charika Wickramaratne 2016)[24].

#### 4. DATA ANALYSIS

Table 01: Prohibited Substances used in 1994 games.

Main article: <a href="#">1994 Asian Games</a>	NOC	Sport	Banned substance	Medals	Ref
Main article: <a href="#">1994 Asian Games</a>	 <a href="#">China</a>	<a href="#">Athletics</a>	<a href="#">Dihydrotestosterone</a>	1 (Women's 400 m hurdles)	<a href="#">[4]</a>
Main article: <a href="#">1994 Asian Games</a>	 <a href="#">China</a>	<a href="#">Canoeing</a>	<a href="#">Dihydrotestosterone</a>	1 (Men's C-1 500 m) 1 (Men's C-1 1000 m) 2 (Men's C-2 500 m)	<a href="#">[4]</a>
Main article: <a href="#">1994 Asian Games</a>	 <a href="#">China</a>	<a href="#">Canoeing</a>	<a href="#">Dihydrotestosterone</a>	2 (Men's C-2 1000 m)	<a href="#">[4]</a>
Main article: <a href="#">1994 Asian Games</a>	 <a href="#">China</a>	<a href="#">Cycling</a>	<a href="#">Dihydrotestosterone</a>	1 (Women's sprint)	<a href="#">[4]</a>
Main article: <a href="#">1994 Asian Games</a>	 <a href="#">China</a>	<a href="#">Swimming</a>	<a href="#">Dihydrotestosterone</a>	3 (Men's 400 m individual medley)	<a href="#">[5]</a>
Main article: <a href="#">1994 Asian Games</a>	 <a href="#">China</a>	<a href="#">Swimming</a>	<a href="#">Dihydrotestosterone</a>	1 (Men's 50 m freestyle)	<a href="#">[5]</a>
Main article: <a href="#">1994 Asian Games</a>	 <a href="#">China</a>	<a href="#">Swimming</a>	<a href="#">Dihydrotestosterone</a>	1 (Women's 50 m freestyle) 1 (Women's 200 m freestyle) 1 (Women's 200 m individual medley) 1 (Women's 4 × 100 m freestyle relay) 2 (Women's 100 m freestyle) 2 (Women's 100 m backstroke)	<a href="#">[5]</a>
Main article: <a href="#">1994 Asian Games</a>	 <a href="#">China</a>	<a href="#">Swimming</a>	<a href="#">Dihydrotestosterone</a>	1 (Men's 200 m freestyle) 1 (Men's 200 m individual medley) 1 (Men's 400 m individual medley) 1 (Men's 4 × 200 m)	<a href="#">[5]</a>

Main article: <a href="#">1994 Asian Games</a>	NOC	Sport	Banned substance	Medals	Ref
				freestyle relay) ② (Men's 4 × 100 m freestyle relay)	
Main article: <a href="#">1994 Asian Games</a>	 <a href="#">China</a>	<a href="#">Swimming</a>	<a href="#">Dihydrotestosterone</a>	② (Women's 400 m freestyle)	<a href="#">[5]</a>
Main article: <a href="#">1994 Asian Games</a>	 <a href="#">China</a>	<a href="#">Swimming</a>	<a href="#">Dihydrotestosterone</a>	① (Men's 200 m butterfly)	<a href="#">[5]</a>
Main article: <a href="#">1994 Asian Games</a>	 <a href="#">China</a>	<a href="#">Swimming</a>	<a href="#">Dihydrotestosterone</a>	① (Women's 400 m freestyle) ② (Women's 800 m freestyle)	<a href="#">[5]</a>

Table 02: Prohibited substances used in 1998 games. Main article: [1998 Asian Games](#)




Name	NOC	Sport	Banned substance	Medals	Ref
<a href="#">Abdullah Sabt Ghulam</a>	 <a href="#">United Arab Emirates</a>	<a href="#">Athletics</a>	<a href="#">Ephedrine</a>		<a href="#">[6]</a>
<a href="#">Fakhruddin Abdulmajid</a>	 <a href="#">United Arab Emirates</a>	<a href="#">Karate</a>	<a href="#">Ephedrine</a>	② (Men's kumite 75 kg)	<a href="#">[6]</a>
<a href="#">Ayed Khawaldeh</a>	 <a href="#">Jordan</a>	<a href="#">Weightlifting</a>	<a href="#">Triamterene</a>		<a href="#">[7]</a>
<a href="#">Jaber Al-Ajmi</a>	 <a href="#">Kuwait</a>	<a href="#">Weightlifting</a>	<a href="#">Nandrolone</a>		<a href="#">[7]</a>

Table 03: Prohibited substances used in 2002 games. Main article: [2002 Asian Games](#)


Name	NOC	Sport	Banned substance	Medals	Ref
<a href="#">Youssef El-Zein</a>	 <a href="#">Lebanon</a>	<a href="#">Bodybuilding</a>	Missed the test	③ (Men's +90 kg)	<a href="#">[8]</a>

Table 04: Prohibited substances used in 2006 games. Main article: [2006 Asian Games](#)

Name	NOC	Sport	Banned substance	Medals	Ref
<a href="#">Santhi Soundarajan</a>	 <a href="#">India</a>	<a href="#">Athletics</a>	Male hormone	② ( <a href="#">Women's 800 m</a> )	<a href="#">[9]</a>

Name	NOC	Sport	Banned substance	Medals	Ref
<a href="#">Sayed Faisal Husain</a>	 <a href="#">Bahrain</a>	<a href="#">Bodybuilding</a>		<sup>2</sup> ( <a href="#">Men's 70 kg</a> )	<a href="#">[10]</a>
<a href="#">Faez Abdul-Hassan</a>	 <a href="#">Iraq</a>	<a href="#">Bodybuilding</a>	<a href="#">Nandrolone</a>		<a href="#">[11]</a>
<a href="#">Kim Myong-hun</a>	 <a href="#">South Korea</a>	<a href="#">Bodybuilding</a>		<sup>2</sup> ( <a href="#">Men's 90 kg</a> )	<a href="#">[12]</a>
<a href="#">Salem Ghanem Al-Shamsi</a>	 <a href="#">United Arab Emirates</a>	<a href="#">Bodybuilding</a>			<a href="#">[13]</a>
<a href="#">Kyi Kyi Than</a>	 <a href="#">Myanmar</a>	<a href="#">Weightlifting</a>	<a href="#">Diuretic</a>		<a href="#">[11]</a>
<a href="#">Mya Sanda Oo</a>	 <a href="#">Myanmar</a>	<a href="#">Weightlifting</a>	<a href="#">Metabolite</a>	<sup>2</sup> ( <a href="#">Women's 75 kg</a> )	<a href="#">[11]</a>
<a href="#">Elmira Ramileva</a>	 <a href="#">Uzbekistan</a>	<a href="#">Weightlifting</a>	<a href="#">Stanozolol</a>		<a href="#">[11]</a>
<a href="#">Aleksandr Urinov</a>	 <a href="#">Uzbekistan</a>	<a href="#">Weightlifting</a>	<a href="#">Cannabis</a>		<a href="#">[11]</a>

Table 05: Prohibited substances used in 2010 Games. Main article: [2010 Asian Games](#)

Name	NOC	Sport	Banned substance	Medals	Ref
<a href="#">Suresh Sathya</a>	 <a href="#">India</a>	<a href="#">Athletics</a>	<a href="#">Nandrolone</a>		<a href="#">[14]</a>
<a href="#">Ahmed Dheeb</a>	 <a href="#">Qatar</a>	<a href="#">Athletics</a>	<a href="#">Testosterone</a>	<sup>2</sup> ( <a href="#">Men's discus throw</a> )	<a href="#">[15]</a>
<a href="#">Abdelnasser Awajna</a>	 <a href="#">Palestine</a>	<a href="#">Athletics</a>	<a href="#">Norandrosterone</a>		<a href="#">[15]</a>
<a href="#">Masoud Rigi</a>	 <a href="#">Iran</a>	<a href="#">Boxing</a>	<a href="#">Nandrolone</a>		<a href="#">[16]</a>
<a href="#">Shokir Muminov</a>	 <a href="#">Uzbekistan</a>	<a href="#">Judo</a>	<a href="#">Methylhexanamine</a>	<sup>2</sup> ( <a href="#">Men's 81 kg</a> )	<a href="#">[17]</a>
<a href="#">Jakhongir Muminov</a>	 <a href="#">Uzbekistan</a>	<a href="#">Wrestling</a>	<a href="#">Methylhexanamine</a>		<a href="#">[18]</a>


Table 06: Prohibited substances used in 2014 games. Main article: [2014 Asian Games](#)

Name	NOC	Sport	Banned substance	Medals	Ref
<a href="#">Betlhem Desalegn</a>	 <a href="#">United Arab Emirates</a>	<a href="#">Athletics</a>	<a href="#">Biological passport</a> abnormalities		<a href="#">[19]</a>
<a href="#">Khurshed Beknazarov</a>	 <a href="#">Tajikistan</a>	<a href="#">Football</a>	<a href="#">Methylhexanamine</a>		<a href="#">[20]</a>

Name	NOC	Sport	Banned substance	Medals	Ref
<a href="#">Nouraddin Al-Kurdi</a>	 <a href="#">Syria</a>	<a href="#">Karate</a>	<a href="#">Clenbuterol</a>		<a href="#">[21]</a>
<a href="#">Yi Sophany</a>	 <a href="#">Cambodia</a>	<a href="#">Soft tennis</a>	<a href="#">Sibutramine</a>		<a href="#">[22]</a>
<a href="#">Park Tae-hwan</a>	 <a href="#">South Korea</a>	<a href="#">Swimming</a>	<a href="#">Nebido</a>	<a href="#">2</a> ( <a href="#">Men's 100 m freestyle</a> ) <a href="#">3</a> ( <a href="#">Men's 200 m freestyle</a> ) <a href="#">3</a> ( <a href="#">Men's 400 m freestyle</a> ) <a href="#">3</a> ( <a href="#">Men's 4 × 100 m freestyle relay</a> ) <a href="#">3</a> ( <a href="#">Men's 4 × 200 m freestyle relay</a> ) <a href="#">3</a> ( <a href="#">Men's 4 × 100 m medley relay</a> )	<a href="#">[23]</a>
<a href="#">Mohammed Jassim</a>	 <a href="#">Iraq</a>	<a href="#">Weightlifting</a>	<a href="#">Etiocholanolone</a>		<a href="#">[21]</a>
<a href="#">Tai Cheau Xuen</a>	 <a href="#">Malaysia</a>	<a href="#">Wushu</a>	<a href="#">Sibutramine</a>	<a href="#">1</a> ( <a href="#">Women's nanquan</a> )	<a href="#">[24]</a>

Table 07: Prohibited substances used in 2018 . Main article: [2018 Asian Games](#)

Name	NOC	Sport	Banned substance	Medals	Ref
<a href="#">Kemi Adekoya</a>	 <a href="#">Bahrain</a>	<a href="#">Athletics</a>	<a href="#">Stanozolol</a>	<a href="#">1</a> ( <a href="#">Women's 400 m hurdles</a> ) <a href="#">1</a> ( <a href="#">Mixed 4 × 400 m relay</a> )	<a href="#">[25]</a>
<a href="#">Sanjivani Jadhav</a>	 <a href="#">India</a>	<a href="#">Athletics</a>	<a href="#">Probenecid</a>		<a href="#">[25]</a>
<a href="#">Nirmala Sheoran</a>	 <a href="#">India</a>	<a href="#">Athletics</a>	<a href="#">Drostanolone</a> and <a href="#">Metenolone</a>		<a href="#">[26]</a>
<a href="#">Kumush Yuldashova</a>	 <a href="#">Uzbekistan</a>	<a href="#">Kurash</a>	<a href="#">Stanozolol</a>	<a href="#">1</a> ( <a href="#">Women's 78 kg</a> )	<a href="#">[27]</a>
<a href="#">Pürevdorjiin Orkhon</a>	 <a href="#">Mongolia</a>	<a href="#">Wrestling</a>	<a href="#">Stanozolol</a>	<a href="#">1</a> ( <a href="#">Women's freestyle 62 kg</a> )	<a href="#">[28]</a>

Name	NOC	Sport	Banned substance	Medals	Ref
<a href="#">Rüstem Nazarow</a>	 <a href="#">Turkmenistan</a>	<a href="#">Wrestling</a>	<a href="#">Furosemide</a>		<a href="#">[29]</a>

Tendency of using prohibited substances in Asian Games

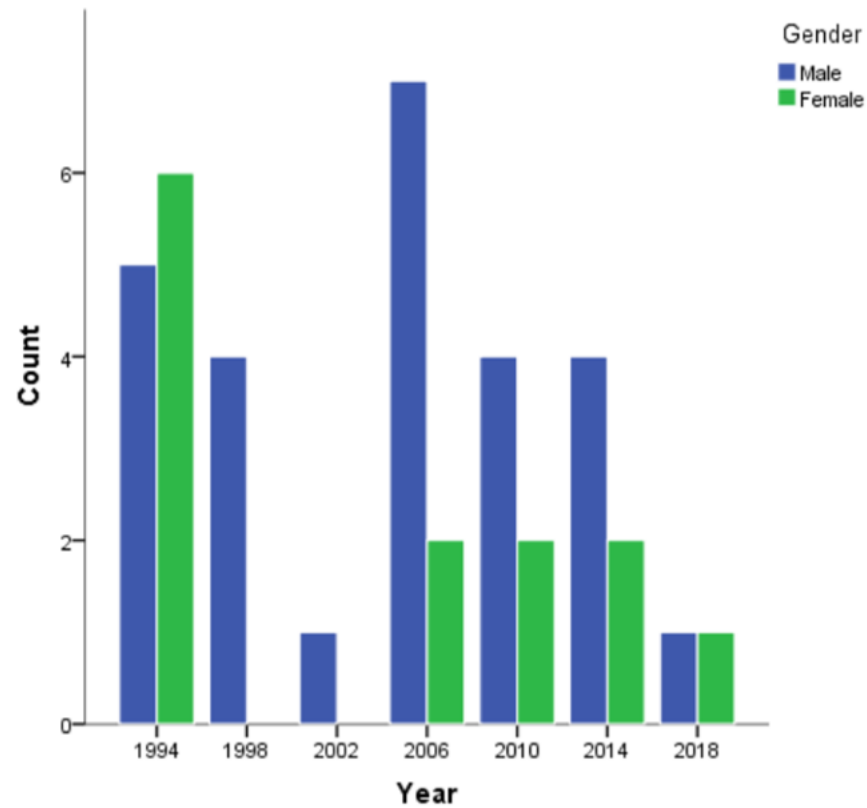




Table 8: Frequency of using Prohibited Substances

Substances			
		Frequency	Percent
Valid		3	7.7
	Cannabis	1	2.6
	Clenbuterol	1	2.6
	Dihydrotestoste	11	28.2
	Diuretic	1	2.6
	Ephedrine	2	5.1
	Etiocholanolone	1	2.6
	Furosemide	1	2.6
	Male hormone	1	2.6
	Metabolite	1	2.6
	Methylhexanamine	3	7.7
	Missed the test	1	2.6
	Nandrolone	4	10.3
	Nebido	1	2.6
	Norandrosterone	1	2.6
	Sibutramine	2	5.1
	Stanozolol	2	5.1
	Testosterone	1	2.6
	Triamterene	1	2.6
	Total	39	100.0

Source: Research data

## 5. FINDINGS

From the last seven Asian Games, athletes who were participated in Hiroshima games in 1994 have used the most of prohibited substances. Also when compare with the other sport events swimmers are the one who have taken the highest number of prohibited substances. The most used substance was DHIYDROTESTOSLE. Moreover men athletes have being used more prohibited substances than the women athletes. In year 2006 Asian Games, there were a tendency of taking prohibited substances in several countries such as India, Bahrain, Iraq, South Korea, United Arab Emirates, Myanmar, Uzbekistan.

## 6. CONCLUSION

Athletes who were participated in the past Asian games have being used various stimulants to increase their performance at their respective events. The WADA has changed the list of prohibited substance list time to time and they have wide up the range of tests to check weather the athletes have taken prohibited substances. However within the last seven Asian Games the usage of taking prohibited substance have come down. That is a positive tendency of the field of sports and from that athletes can take a responsible massage to the society as they are the role models of the world.



## 7. REFERENCES

- [1] ^"Oceania nations allowed small quota of athletes at 2022 Asian Games". *The Indian Express*. Indianexpress.com. Reuters. 21 September 2017. Archived from the original on 24 September 2017. Retrieved 24 September 2017.
- [2] ^"1st AG New Delhi 1951". OCA. Archived from the original on 11 September 2018. Retrieved 22 July 2010.
- [3] ^"2nd AG Manila 1954". OCA. Archived from the original on 11 September 2018. Retrieved 22 July 2010.
- [4] ^"3rd AG Tokyo 1958". OCA. Archived from the original on 11 September 2018. Retrieved 22 July 2010.
- [5] ^"4th AG Jakarta 1962". OCA. Archived from the original on 11 September 2018. Retrieved 22 July 2010.
- [6] ^"5th AG Bangkok 1966". OCA. Archived from the original on 11 September 2018. Retrieved 22 July 2010.
- [7] ^"6th AG Bangkok 1970". OCA. Archived from the original on 11 September 2018. Retrieved 22 July 2010.
- [8] ^"7th AG Tehran 1974". OCA. Archived from the original on 11 September 2018. Retrieved 22 July 2010.
- [9] ^"8th AG Bangkok 1978". OCA. Archived from the original on 11 September 2018. Retrieved 22 July 2010.
- [10] ^"9th AG New Delhi 1982". OCA. Archived from the original on 11 September 2018. Retrieved 22 July 2010.
- [11] ^"10th AG Seoul 1986". OCA. Archived from the original on 11 September 2018. Retrieved 22 July 2010.
- [12] ^"11th AG Beijing 1990". OCA. Archived from the original on 11 September 2018. Retrieved 22 July 2010.
- [13] ^"12th AG Hiroshima 1994". OCA. Archived from the original on 11 September 2018. Retrieved 22 July 2010.
- [14] ^"13th AG Bangkok 1998". OCA. Archived from the original on 11 September 2018. Retrieved 22 July 2010.
- [15] ^"14th AG Busan 2002". OCA. Archived from the original on 11 September 2018. Retrieved 29 September 2002.
- [16] ^"15th AG Doha 2006". OCA. Archived from the original on 11 September 2018. Retrieved 1 December 2006.
- [17] ^"16th AG Guangzhou 2010". OCA. Archived from the original on 11 September 2018. Retrieved 22 November 2010.
- [18] ^"17th AG Incheon 2014". OCA. Archived from the original on 11 September 2018. Retrieved 19 September 2014.
- [19] ^"18th AG Jakarta-Palembang 2018". OCA. Archived from the original on 11 September 2018. Retrieved 20 September 2014.
- [20] ^"19th AG Hangzhou 2022". OCA. Archived from the original on 11 September 2018. Retrieved 16 September 2015.
- [21] ^"Asian Summer Games Medal Count". Ocasia.org. Olympic Council of Asia. Archived from the original on 8 September 2018. Retrieved 26 August 2018.
- [22] ^ Jump up to:<sup>a</sup> <sup>b</sup> "Outstanding Japanese athletes in Asian Games". gz2010.cn. 21 January 2010. Archived from the original on 9 September 2017. Retrieved 8 May 2011.
- [23] Kumari J.A.P., Ferdous Azam S.M., Siti Khalidha (2019). *The Role of Borrowers' Living Area and its Moderation effect on Relationship between Microfinance and Poverty Alleviation in Sri Lanka*
- [24] Wickramaratne V.C., Kumari J.A.P. (2016) . *The Impact of Sports tourism on small scale business development in Sri Lanka: International Cricket match*
- [25] Asian Games website [https://en.wikipedia.org/wiki/Asian\\_Games](https://en.wikipedia.org/wiki/Asian_Games)