

## **Doping and the Latest Prohibited List of the World Anti-Doping Agency (WADA)**

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Doping is defined as the occurrence of one or more of the anti-doping rule encroachments. According to the world anti-doping agency code, athletes or other persons shall be responsible for knowing what constitutes an anti-doping rule encroachment and the substances and methods which have been placed on the prohibited list. It is each athlete's personal task to be sure that no prohibited substance enters his or her body. Athletes must be responsible for any forbidden substance or its metabolites or markers found to be present in their samples. Therefore, it is not necessary that any attempt, mistake, neglect or understanding of use on the athlete's part be demonstrated in order to establish an anti-doping rule encroachment (1). So knowing the latest (2013) prohibited list of the world anti-doping agency (2) is legally important for athletes, coaches and sports and legal doctors.

The prohibited list contains substances and methods which are prohibited at all times (in- and out- of- competition) and those which are prohibited in competitions. The first group briefly include **non-approved substances** (any pharmacological substance with no current

approval by any governmental regulatory health authority for human therapeutic use), **anabolic agents** (androgenic or non androgenic), **peptide hormones, growth factors and related substances** ( such as growth hormone, erythropoietin and in males Chorionic Gonadotrophin and Luteinizing hormone ),**beta 2 agonists** (such as inhaled salbutamol when its urine concentration is greater than 1000 ng/ml), **hormones and metabolic modulators** (such as insulin, tamoxifen and clomiphene), **diuretics and other masking agents** (such as plasma expanders e.g. glycerol, intravenous albumin and mannitol), **manipulation of blood and blood components** (blood doping such as the introduction or reintroduction of autologous, homologous or heterologous blood or red blood cell products of any origin into the circulatory system), **chemical and physical manipulation** (such as tampering or attempting to tamper to make changes in the integrity and validity of samples collected during doping control), and **gene doping** (includes use of normal or genetically modified cells and

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transportation of polymers of nucleic acids or nucleic acid analogues) (2) .

The second group (those substances and methods which are prohibited in competitions) briefly include **substances and methods mentioned in the first group** and **stimulants** (such as ephedrine and pseudoephedrin when their concentrations in the urine are greater than defined levels), **narcotics** (such as pethidine and pentazocine), **cannabinoids** (such as marijuana and hashish), **glucocorticosteroids** (all glucocorticosteroids when used by oral, intravenous, intramuscular or rectal routes), **alcohol** (in certain sports such as *Karate and Archery*) and **beta-blockers** (in certain sports such as *Skiing, Billiards and Darts*) (2).

The latest (2013) prohibited list is valid as of January 1, 2013 .Compared to the 2012 version of the list, the following noteworthy changes have been made to the 2013 list:

\*Rewording of section on manipulation of blood and blood components to include all kinds of this forbidden method.

\*Gene doping has been reworded to provide a more precise definition of this forbidden method.

\*Aeronotic, Boules, Bridge, Ninepin and Tenpin Bowling and Powerboating are removed from the list of sports in which beta-blockers are forbidden.

\*All optical isomers of the mentioned stimulants are prohibited where relevant.

\*Tapentadol has been added to the monitoring program under in-competition narcotics (3).

### References

1. World Anti-Doping Agency. World Anti-Doping Code. Montreal, Quebec: World Anti-Doping Agency publisher; 2009;18-19.
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3. World Anti-Doping Agency. Questions and Answers on 2013 prohibited list [internet]. 2012 Spt [cited 2013 Jan 9]; Available from: <http://www.wada-ama.org/en/Resources/Q-and-A/2013-Prohibited-List>.