

Chess WADA – Anti-Doping Policy, Nutrition and Health

Anti-Doping Information

The 2016 WADA Prohibited List and Monitoring Program can be found at:

<http://list.wada-ama.org/>

The most relevant banned substances for chess are:

- Amphetamines – e.g. Adderall, Ritalin
- Ephedrine and Methylephedrine – Prohibited by WADA when its concentration in urine is greater than 10 micrograms per milliliter
- Pseudoephedrine is prohibited when its concentration in urine is greater than 150 micrograms per milliliter
- Modafinil

Substances not present on the Prohibited List but represented in the Monitoring Program:

- Caffeine – Included in WADA Monitoring Program and relevant for in-competition testing only. Any (urine) test reading of less than 12 micrograms per milliliter poses no problem.
- Codeine – A common ingredient in, for example, preparations used to treat coughs and stomach upsets. Any dosage is highly unlikely to be significant when taken in normal therapeutic quantities.

Psychopharmacological Cognitive Enhancement

The notion of ‘cognitive enhancing’ drugs has gained periodic attention in the media and it is clear that such pharmacology has the potential to be of benefit in chess, an essentially cognitive sport. **Modafinil**, **Adderall** and **Ritalin** are potentially implicated.

Modafinil is primarily prescribed for the treatment of shift work sleep disorder and excessive daytime sleepiness – its main function is to improve wakefulness. However, it has been seen to produce apparent cognitive enhancement effects in healthy non-sleep-deprived people though it is unclear whether these effects are sufficient or durable enough to consider it to be a cognitive enhancer.

Whilst Modafinil has been shown to improve some aspects of working memory, such as digit manipulation and pattern recognition memory, the results related to spatial memory, executive function and attention are equivocal.

Adderal and **Ritalin** are primarily prescribed for the treatment of Attention Deficit Hyperactivity Disorder – Adderall is primarily a mixture of four amphetamine salts whilst Ritalin is a psychostimulant with some structural and pharmacological similarities to cocaine.

Sources:

Turner DC, Robbins TW, Clark L, Aron AR, Dowson J, Sahakian BJ (2003). "Cognitive enhancing effects of modafinil in healthy volunteers". *Psychopharmacology (Berl.)* **165** (3): 260–9

Randall DC, Viswanath A, Bharania P, Elsabagh SM, Hartley DE, Shneerson JM, File SE (2005). "Does modafinil enhance cognitive performance in young volunteers who are not sleep-deprived?". *J Clin Psychopharmacol* **25** (2): 175–9

Baranski JV, Pigeau R, Dinich P, Jacobs I (2004). "Effects of modafinil on cognitive and meta-cognitive performance". *Hum Psychopharmacol* **19** (5): 323–3

Baranski JV, Pigeau R, Dinich P, Jacobs I (2004). "Effects of modafinil on cognitive and meta-cognitive performance". *Hum Psychopharmacol* **19** (5): 323–32