

# **“Adverse Analyzing”**

A European Study of Anti Doping Organization Reporting Practices  
and the Efficacy of Drug Testing Athletes

## **EXECUTIVE SUMMARY**





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of Drug Testing Athletes

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## Précis

Anti-doping in sport is a multi-million Euro industry employing thousands of people that impacts upon the day-to-day lives of every professional athlete. It relies upon cutting-edge biological, chemical and medical investigations. However there is a paucity of publicly available statistical evidence to support current policies and practices on drug testing programmes for athletes.

The lack of statistical evidence to support an effective, proportional and efficient drug testing regime raises serious questions about WADA's management of the World Anti-Doping Code.

It is hard to avoid the conclusion that the World Anti-Doping Agency has little or no evidence about the effectiveness of international drug testing for athletes. This has serious implications for its drug testing policies and procedures; if they are not based on hard statistical evidence then we must question how these policies are being developed and monitored.

WADA is already aware of the lack of statistical evidence on the efficacy of international drug testing yet has done little to address the shortcoming. There are clear and obvious failings in the limited statistics that WADA does publish. These omissions combined with the lack of detail renders them almost meaningless for any detailed analysis of anti-doping statistics.

The findings of this report strongly suggest that WADA is in breach of the World Anti-Doping Code with regards to Article 14.4. It is failing to collect and publish comprehensive national anti-doping statistics despite being required to do so by its own Code.

Of the 49 European NADOs listed as signatories of the WADA Code on its website, only 20 have produced some kind of report or summary of statistical findings for 2009 available online.

Using the best publicly available statistics from National Anti-Doping Organizations in Europe in 2009, the research within this report casts significant doubt on the efficacy of out-of-competition drug testing. Due to the problems with the publicly available data, which are well documented in the body of this report, the findings need to be treated with a degree of caution but the analysis of the statistics for the nine NADOs that published the relevant data found that:

- It takes at least 600 out-of-competition drug tests to catch one drug cheat.
- It takes 62 in-competition tests to catch one drug cheat
- The average rate of violations per test for the whole of Europe (both in and out of competition) is 1%

These findings raise serious questions, particularly given that WADA is insistent that no-notice, out-of-competition drug testing is essential for drug free sport. The available evidence casts significant doubt upon the current focus on out-of-competition testing as it is currently applied.

The report also found that anti-doping violations seem to be grouped around a limited number of specific sports and countries. The vast majority of sports and countries had very few positive drug findings in 2009.

Unfortunately it has not been possible to examine the effectiveness of the controversial Athlete Whereabouts Requirement directly, as there is hardly any public data available. This lack of direct evidence is simply not good enough and needs to be urgently addressed given athletes concerns about the system (i.e. German player protest December 2010).

WADA is starting its process of redrafting the World Anti-Doping Code. The findings of this report should be an urgent wake-up call for improved international statistics on drug testing. It suggests a radical overhaul is needed in anti-doping policy and procedures with a strong focus on statistical evidence to support policies that are effective, efficient and proportionate.

Athletes want and need a drug testing policy that works. This will require the collection and analysis of the statistical evidence to ensure that the World Anti-Doping Code is based on best practice to ensure that the available resources are properly targeted at catching cheats.

## **Conclusions**

The publicly available statistics on anti-doping fall short of what is required and expected to undertake a comprehensive and rigorous analysis of the efficiency, effectiveness and proportionality of anti-doping policy and practice for the whole of Europe.

Despite the fact that Article 14.4 of the World Anti-Doping Code requires all NADOs to publish annual reports, this is not implemented consistently.

WADA is not fulfilling its requirement under the Code publish unified testing statistics in a transparent and accountable manner.

It is a concern that no standardized system of public anti-doping reporting has been implemented in the ten years that WADA has been in existence. This situation is deeply unsatisfactory and seriously undermines the good work that WADA has achieved.

Based on WADA's 2009 "ADO Statistics" report and the research conducted for this report, only 11 out of a total of 49 European NADOs would appear to be in full compliance with Article 14.4 of the Code which requires all NADOs to publish and submit annual reports on testing statistics.

Nine NADOs have annual reports available online but are not listed in WADA's 2009 "ADO Statistics" Report. The reliability of WADA's published "ADO Statistics" therefore falls well short of what is expected and required.

The different NADO reporting regimes across Europe creates ambiguities and difficulties in comparing data on individual sports. Such a situation is far from satisfactory and threatens to undermine the basis for an effective, efficient and proportional evidence based drug testing policy.

It should be noted that the complaints about the lack of comparability between the individual reports prepared by the European NADOs should not necessarily be seen as a criticism of these NADOs which are of course primarily focussed on their own countries.

The difficulties encountered in attempting to compare annual reports and statistical summaries prevent any interested party being able to independently verify WADA's anti-doping statistics. The ability to independently verify these figures is fundamental to both "transparency" and "accountability" - ideals which WADA places at the heart of its operations according to the organisation's "Strategic Plan 2007-2012".

Proportionality is an important issue in anti-doping policy, particularly with regards to human rights. There is an ongoing debate about the legality of certain aspects of the WADA Code that will inevitably come down to a question of proportionality. However the lack of publicly available statistics means that it is now extremely hard to identify the proportionality of any human rights concerns.

The available public data from 2009 prevents any attempt to carry out any analysis of the effectiveness of the controversial Athlete Whereabouts Requirements contained within the new Code.

The difficulties with the data are well documented throughout the report. This has meant that the following findings need to come with a statistical health warning. Nevertheless they use the best European comparison data from the publicly available information.

There were at least 44,744 drug tests carried out on athletes by the 17 European NADOs within the dataset studied.

There were 445 violations found as a result of these tests, equivalent to a 1% rate of violations per test.

Interestingly Flemish and French Belgium were responsible for 207 violations in 2009. This is a disproportionately large number of violations and merits further detailed investigations.

On average it takes 100.6 tests to uncover one violation throughout Europe, and 1% of the combined tests throughout Europe resulted in a confirmed violation.

Only nine NADOs distinguish between in and out of competition testing in their reports. These nine NADOs conducted a total of 30,904<sup>1</sup> tests of which 13,738 were in competition and 17,166 were conducted out of competition. There were 222 violations in competition and 28 violations out of competition. 0.16% of out of competition tests resulted in a violation while 1.6% of in competition tests resulted in a violation. WADA repeatedly stresses the need for no-notice, out-of-competition drug testing if anti-doping policy is going to be effective. However the research, albeit with its limited data set, shows that the odds of catching drug cheats out-of-competition is significantly smaller than in-competition by a factor of almost 14 to 1.

On average, it takes approximately 619 out-of-competition tests to catch one drug cheat according to the data available.

The research in this report, albeit with its limited data set, casts a significant doubt of the efficacy of out of competition testing. The publicly available evidence strongly suggests that out of competition drug testing may be disproportionate and not the most efficient use of scarce resources in the campaign for a drug free sport.

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<sup>1</sup> The figure would be 31,272 if the "unspecified" 368 tests from the German NADO's statistics were counted

The vast majority of sports that were tested throughout Europe in 2009 experienced low levels of anti-doping violations. By contrast, five sports accounted for 49.7% of the 445 total violations: Power lifting (21), Weightlifting (21), Rugby (union and league combined) (25), Cycling (33), and Bodybuilding (121).

It should be noted that the number of positives is likely to be related to the number of tests carried out on each sport. Unfortunately the publicly available dataset did not provide sufficient information to effectively weight the findings according to the number of tests. As such list of sports above should be treated with a degree of caution.

20% of all doping violations reported in the dataset were for unspecified violations. This is far from ideal and needs to be addressed. The breakdown of substances responsible for doping violations from the dataset studied is as follows:

Cannabinoids	18.7%
Anabolic Agents	18.0%
Refusals	16.0%
Stimulants	11.0%
Multiple Code Violations	4.3%

The majority of violations due to the use of Anabolic Agents (65% (52/80)) were concentrated in five sports: Bodybuilding (25/80); Weightlifting (7/80); Fitness (7/80); Power lifting (7/80) and Rugby (union and league combined)(6/80). By contrast, Cannabis use was more widely spread than other substances. Violations for cannabis use occurred in 38 of all 64 sports categories. By comparison, Stimulants come second and are found in 26 sports while Anabolic Agents in just 21.

Concerning the number of violations only involving prohibited substances, the WADA laboratory statistics and our own analysis differ greatly, especially regarding the proportion of anabolic agent violations (64.9% compared to 30.0%) and Cannabis (7.8% vs. 32.0%). There may be a number of legitimate reasons for such a large difference, not least the different datasets, but it is certainly worth further investigation.

There is a wide variation in the efficacy of the testing done by different NADOs, ranging from 16.3 tests per violation in Walloon Belgium to 529.1 tests per violation in Germany.

WADA Annual Reporting for 2009 declares that, worldwide, 758 violations resulted from 277,928 tested samples, a rate of .27%. When the results of the 17 European NADOs with available data in this study (44,744 tested samples and 445 violations) are excluded from the WADA worldwide numbers, we find that the “success” rate drops to .13% (233,184 tested samples resulting in 313 violations). Thus, the rate of violations for athletes from the 17 NADOs in this study is 1% while the rate of violations from the rest of the world is .13%.

## **Recommendations**

**Standardized reporting:** There is an urgent need for WADA to produce a standardized reporting framework for all Anti Doping Organizations (ADOs) covering on the presentation of publicly available data. This should be developed in cooperation with stakeholders and independent outside experts. As a minimum it should include:

- A standardized list of sports categories,
- The number of tests conducted in each sport,
- The number of violations in each sport.
- The substances found

This should be broken down to include information on in-competition and out-of-competition as well as for athletes in Registered Testing Pools. Data is also needed on the number of missed tests for athletes within Registered Testing Pools.

**Independent research on effectiveness of out of competition testing:** As a matter of urgency WADA needs to commission detailed independent research into the effectiveness of out-of-competition drug testing. The results of this report show that out of competition testing to be less effective than in competition testing by a factor of ten.

**Guidelines for categorization of substances:** WADA should issue guidelines to make sure all ADOs follow the rules of categorization so that violations and substance abuse can be compared.

**Analysis of Anabolic Agents vs. Cannabinoid results:** The large difference between the published WADA laboratory statistics and this analysis with regards to the percentage of violations that are for anabolic agents and cannabinoids would benefit from further research.

**Whereabouts research:** There is an urgent need to provide publicly available, detailed statistics on the number of drug tests on athletes subject to the Athlete Whereabouts Requirements to enable independent monitoring of the effectiveness of this controversial policy.

**Links to annual reports:** Another recommendation would be not only to add links to the NADO websites as WADA already does, but for every NADO and IF listed as having submitted a report to WADA, the agency could also make every annual report it receives available to the public on its website. Such a feature would be invaluable both for the researcher and interested athlete and also show very clearly how and from where WADA obtained the statistics it includes in its “laboratory statistics” and “testing statistics”. This would make the system far more transparent than at present.

**Standardize reporting calendar:** some NADOs produce an annual report over the course of the financial year rather than the calendar year (such as Britain, Australia, New Zealand, Canada and South Africa) which throws up yet another obstacle if one wishes to compare statistics.

**Inclusion of third party testing statistics:** A standardized approach is also needed to ensure that all NADOs should publish a detailed breakdown of all the tests conducted and their subsequent results both for the national programme and on behalf of third parties. This is required to ensure that there is no “double counting”.

**Best practice:** The statistics published by the NADO in the Republic of Ireland represent a model of best practice in Europe, which should be enhanced and developed by WADA as an international standard.

**Balance between transparency and data protection:** Whilst respecting the principle of data protection WADA needs to work closely with ADOs to ensure that sufficient data is made publicly available to permit independent analysis of anti-



doping statistics. Data Protection and privacy legislation should not prevent the publication of anonymized statistics for monitoring purposes.

**Review of “Code Compliance”:** The notion of Code Compliance needs to be reviewed. It is questionable as to whether countries judged to be Code Compliant by WADA are fully implementing the Code. This fits in with a general feeling that WADA needs to do more to monitor the implementation (as opposed to adoption) of the Code.

**Standardize sport categories:** A key recommendation would be to standardize the sport categories; currently too many NADOs use different groupings, different terms, or do not indicate which sports were tested in each group even if the test results are given. This makes it difficult to compare annual reports from across Europe.

There is a need for greater research into the proportion of anti-doping violations per sport weighted according to the number of tests per sport. Such data would enhance the allocation of anti-doping resources to those sports where it is most needed and would enhance a more standardized approach to international drug testing.