wada

2024 Anti-Doping Testing Figures

QUESTIONS AND ANSWERS

DEFINITIONS

1. What is an Adverse Analytical Finding (AAF)?

An AAF is a report from a WADA-accredited Laboratory or other WADA-approved Laboratory that, consistent with the International Standard for Laboratories (ISL) and related Technical Documents, identifies in a sample the presence of a Prohibited Substance or its metabolites or markers (including elevated quantities of endogenous substances) or evidence of the use of a Prohibited Method.

2. What is an Atypical Finding (ATF)?

An ATF is a report from a WADA-accredited Laboratory or other WADA-approved Laboratory, which requires further investigation, as provided by the ISL or related Technical Documents, prior to the determination of an AAF.

3. What is an Anti-Doping Organization (ADO)?

An ADO is a Signatory to the World Anti-Doping Code (Code) that is responsible for adopting rules for initiating, implementing or enforcing any part of the doping control process. This includes, for example, the International Olympic Committee (IOC), the International Paralympic Committee (IPC), other Major Event Organizations (MEOs) that conduct testing at their events, International Federations (IFs), and National Anti-Doping Organizations (NADOs).

4. What is a Testing Authority (TA)?

A Testing Authority (TA) is the organization that authorizes testing on athletes it has authority over.

Under the Code, only a Signatory can act as the TA. While ADOs can authorize a delegated third party to conduct testing on their behalf, the ADO authorizing testing retains the title and responsibility of a TA. This is to ensure that Code Signatories remain accountable for all aspects of their anti-doping program.

5. What is ADAMS?

ADAMS (Anti-Doping Administration and Management System) is a web-based database management tool for data entry, storage, sharing, and reporting designed to assist stakeholders and WADA in their anti-doping operations.

6. What is the Athlete Biological Passport (ABP)?

The fundamental principle of the ABP is to monitor selected variables (biomarkers of doping) over time that indirectly reveal the effect of doping, as opposed to the traditional direct detection of doping by analytical doping controls.

In 2024, the ABP was comprised of the Hematological Module, based blood passport samples (whole blood), the Steroidal Module, based on urine and blood (serum) samples and the Endocrine Module based on blood (serum) samples.

ABOUT THE REPORT

7. What does the 2024 Testing Figures Report represent?

The 2024 Testing Figures Report (2024 Report) is a summary of all doping control samples analyzed and reported by thirty (30) WADA-accredited Laboratories and three (3) WADA-approved Laboratories for the ABP in 2024. This includes all testing conducted worldwide by Signatories to the Code – in- and out-of- competition for urine; blood and ABP blood data; and the analytical results of such analysis – including AAFs and ATFs.

The 2024 Report offers a comprehensive reflection of global anti-doping testing figures, which allows organizations to observe patterns of doping control programs by sports, organizations, substances and Laboratories, and as a result, adapt their anti-doping strategies accordingly.

The 2024 Report represents the fourth set of global testing data since the 2021 Code came into effect on 1 January 2021.

8. What figures are included in the 2024 Report?

The 2024 Report includes all analyses reported into ADAMS by the WADA-accredited Laboratories and the Laboratories that were approved by WADA to conduct blood testing exclusively for the purposes of the ABP (Approved Laboratories).

The figures of urine and blood samples (not including ABP samples) are compiled according to the 'Sample Collection Date' (and not the sample 'Reception Date' by the Laboratory). This allows TAs to align the ADAMS data more closely with their annual testing programs. These figures are associated with specified sport categories. The figures of ABP samples are still compiled according to the 'Reception Date' by the Laboratory as the sample collection date is not a mandatory reporting parameter for the ABP for the Laboratories.

9. Did the implementation of the 2021 Code and 2021 International Standard for Testing and Investigations (ISTI) by ADOs (including the Technical Document for Sport Specific Analysis [TDSSA]) impact the results?

Yes.

The TDSSA is a mandatory, level two document that came into effect on 1 January 2015.

The TDSSA is intended to ensure that Prohibited Substances and/or Prohibited Methods within the scope of the TDSSA, which are deemed to be at risk of abuse in certain sports/disciplines, are subject to an appropriate and consistent Minimum Level of Analysis (MLA) by all ADOs. Under the TDSSA, ADOs are required to conduct MLA for the following three groups of Prohibited Substances: Erythropoietin Receptor Agonists (ERAs), Growth Hormone (GH) and GH Releasing Factors (GHRFs). The implementation of the hematological module of the ABP for sports or disciplines with an ESAs MLA of 30% or greater and where the athlete is part of a Registered Testing Pool remains a mandatory component of compliance with the TDSSA.

When compared to 2023, the findings of the 2024 Report highlight that there was:

- an increase in the levels of analysis for ERAs in urine and blood
- a slight decrease in the levels of analysis for GH Isoforms in blood
- a decrease in the levels of analysis for GH Biomarkers in blood
- an increase in the levels of analysis for GHRFs in urine.

For more details, please refer to the Executive Summary.

2024 REPORT VERSUS 2023 REPORT

10. How does the data from the 2024 Report compare to the 2023 Report?

The testing numbers continue to increase since the COVID-19 pandemic had significantly impacted sporting competitions in 2020.

In 2024, all measures of the Anti-Doping Testing Figures Reports showed improvement in the number of samples collected:

Based on the ADAMS results reported by the Laboratories, there was an increase in the number of overall urine and (non-ABP) blood doping control samples. The number of urine, blood and DBS samples analyzed increased between 2023 and 2024. The ABP blood (passport) samples analyzed in WADA-accredited and WADA- approved Laboratories increased between 2023 and 2024 (2024 Laboratory Report Executive Summary - Third Table).

In terms of AAFs, the percentage of AAFs reported in ADAMS remained roughly the same, with a slight decrease from 0.80% in 2023 to 0.78% in 2024.

The percentage of Total Findings (AAFs and ATFs - combined) was also steady, slightly decreasing from 0.96% in 2023 to 0.94% in 2024.

There was a slight decrease in the percentage of AAF findings from the gas chromatography combustion isotope ratio mass spectrometry (GC/C/IRMS) test applied to the markers of the steroid profile: 2.45% in 2023 (120 AAFs from 4,896 tests) to 2.37% in 2024 (128 AAFs from 5,392 tests).

In 2024, most drug classes saw an increase in the number of individual Prohibited Substances reported as AAFs compared to 2023.

There was a significant increase in the overall number of DBS samples analyzed: 4,242 in 2023 to 5,214 in 2024.

11. Was the 2024 data compiled differently than in 2023?

The 2024 data was collected using ADAMS, as has been the case since 2012.

The increased use of ADAMS by ADOs to record Doping Control Form (DCF) information into ADAMS has allowed more precise information to be compiled for these Reports. Data related to the tests, such as TA, sport, and discipline, were extracted from the DCF where the information was available.

Data from non-Code Signatories, which is not reported into ADAMS (predominantly from professional leagues), is no longer included in the report as in previous years. This reflects the increased focus on Signatory results for WADA, the Code and International Standards. Since 2012, the Laboratories have reported negative data in addition to the AAFs and ATFs reported. This has allowed all data - negatives as well as AAFs and ATFs - to be compiled from ADAMS. The details and structure of the data in ADAMS are the reason that the 2012 to 2024 Reports offer a much more thorough view of anti-doping data than the Reports prior to 2012.

As an example, the use of ADAMS has allowed the Testing Figures Reports to differentiate the testing figures by discipline, TA, and in- and out-of-competition testing to offer stakeholders a

more detailed view.

12. Are there any differences in format between the 2024 and 2023 Reports?

The two Reports are structurally similar.

The 2024 report continues to include testing information in relation to DBS (Dried Blood Spot), which is a new sample collection platform which has the potential to become a very valuable addition to a testing program. In addition, testing information on the analysis of blood steroidal markers, endocrine profile, and steroid esters in blood is also provided in these reports.

The 2024 Report, as the 2023 Report, includes testing data related to Gender (See TA Report).

Categorization of Sport Disciplines: In the 2024 Report, the sports are compiled in the following eight major categories:

1. ASOIF (Association of Summer Olympic International Sports Federations)
2. WOF (Winter Olympic Federations)
3. ARISF (Association of IOC Recognized International Sports Federations)
4. AIMS (Alliance of Independent Recognized Members of Sport)
5. IPC (International Paralympic Committee)
6. Sports for Athletes with an Impairment
7. Other Sports – Code Signatories (including ADO-Specific, University and Military sports)

The sports data is further differentiated based on the disciplines that are included within the associated IF's authority and the structure provided by the sport-discipline codes in ADAMS (as determined by the IF).

In addition, the sport figures can differentiate sports within the Olympic program that emanate from university sport disciplines, e.g., those disciplines that are not likely to be under the authority of the relevant IF. This provides more accurate data with respect to the relevant IFs.

RELATIONSHIP TO OTHER WADA REPORTS

13. How does this 2024 Report differ from the Anti-Doping Rule Violations (ADRV) Reports?

The 2024 Report highlights the results of analyses performed by WADA-accredited Laboratories on urine and blood samples for 2024, as reported in ADAMS. It does not illustrate statistics on whether the AAFs or ATFs reported became ADRVs.

The data in the 2024 Report may not correspond with the number of ADRVs reported by ADOs because all reported results are subject to the full results management process conducted by ADOs. This includes matching results with Therapeutic Use Exemptions (TUEs) – through which the use of a banned substance can be approved by an ADO for legitimate medical reasons – longitudinal studies and ensuring that sample collection and analysis were conducted in accordance with the relevant International Standards.

In simple terms, not all AAFs or ATFs lead to ADRVs.

Meanwhile, the ADRV Report illustrates the incidence of doping in global sport, including both analytical and non-analytical ADRVs. The Report breaks down ADRVs by sport, TA, and

nationality.

The reason the ADRV Report includes data from prior years compared to the current Testing Figures Report is because for ADRVs, the results management process can take a long time from the first signs of a potential violation through to the end of a case. Cases can take time to be resolved before they can be adequately prepared and published.

The 2024 Testing Figures Report, and the 2024 ADRV Report that will be released in the future, will provide powerful data, which will help ADOs gain a better understanding of global doping patterns. This will help them adapt their strategies to protect clean athletes further.

14. Is it mandatory for ADOs to record the details of ADRVs in ADAMS?

Yes.

From January 1, 2021, all ADOs are required to record *inter alia* the ADRVs under their jurisdiction into ADAMS in accordance with Article 14.5.3 of the Code.

THE DATA

15. How many TAs are included?

The 2024 Report includes data from 324 different TAs, an increase over the 318 from 2023 which is primarily due to an increase in the number of Code Signatories reporting data into ADAMS.

NADOs continue to be responsible for a significant portion of worldwide anti-doping efforts, having been the responsible TAs for 71% of the samples collected in 2024. IFs are mainly responsible for about 25% of samples collected and reported into ADAMS (comprising testing conducted by AIMS, ARISF, WOF and ASOIF-member organizations as well as other Code Signatories).

16. Which disciplines and sports organizations are included within the sports listed?

The sports and disciplines listed in the 2024 Report are reported by the TAs as they were designated on the DCF information entered into ADAMS (or, in the absence of a DCF in ADAMS, as designated on the DCF received and reported by the Laboratories into ADAMS) relating to the sample at the time of its collection. In addition, data from the DCFs entered into ADAMS was also utilized to confirm and assign the sport and disciplines. The sport codes (names) in ADAMS ensure that all Laboratories are reporting sports in a more standardized manner. The 2024 Report by sport shows improvements in the reporting of specified disciplines in each sport instead of simply the sport.

IFs are encouraged to report any corrections or updates in relation to sports and disciplines under their authority to the ADAMS team at the following address: adams@wada-ama.org.

In addition, while some NFs or Continental Sport Confederations conduct testing under the delegation of their relevant IFs, others initiate testing independently of their IF. In the latter case, the test does not appear in the IF statistics, but rather in the Confederation testing statistics, provided they were noted as the TA.

17. Do Laboratories have to analyze a minimum number of samples?

Yes.

The ISL requires that a WADA-accredited Laboratory perform analyses on a minimum of 3,000

(including urine, blood, DBS and ABP) samples per year. Any Laboratory which is accredited for the entire year and does not meet this figure is monitored closely by WADA. In some cases, Laboratory analytical testing restrictions or suspensions may have been the reason for the reduced total in sample analysis.

18. Why is there such a large gap between the number of AAFs for in-competition as opposed to out-of-competition?

By its very nature, the in-competition menu contains more drug classes, and therefore more Prohibited Substances are subject to detection compared to the out-of-competition menu. This is particularly the case with substances such as stimulants, cannabinoids and glucocorticoids, which are only prohibited in- competition and are typically reported in greater numbers.

OTHER QUESTIONS

19. Is the use of ADAMS mandatory to enter Doping Control Forms (DCFs) and Therapeutic Use Exemptions?

On 12 May 2016, WADA's Foundation Board made it a mandatory requirement for Code Signatory ADOs to enter all DCFs and TUEs into ADAMS. This was further supported by Article 14.5.1 of the 2021 World Anti-Doping Code and the 2021 ISTI (for DCFs) and the 2021 ISTUE (for TUEs) require that ADOs enter DCFs and TUEs into ADAMS no later than 21 days after sample collection or receipt of a TUE decision.

20. Does every single sample/result in the Anti-Doping Testing Figure Reports represent an individual athlete?

No.

One athlete may be associated with multiple samples. Several samples may be taken from one athlete during the same sample collection session. AAFs and ATFs in the Anti-Doping Testing Figure Reports may also correspond to multiple findings on the same athlete, or measurements performed on the same athlete, such as through the ABP hematological and steroidal modules, over a period of time.

21. How many TAs conducted ABP blood testing?

There were 131 unique TAs that contributed to the ABP testing figures reported into ADAMS in 2024 (compared to 124 TAs that contributed to the 2023 ABP figures). The number of IFs incorporating ABP blood testing has decreased slightly 2024 while the number of NADOs has increased in 2024 (46 in 2016 to 53 in 2017, 59 in 2018, 68 in 2019, 60 in 2020, 72 in 2021, 78 in 2022, 92 in 2023 and 102 in 2024). In 2024, there were three Laboratories approved by WADA to analyze blood samples uniquely for the ABP that analyzed and reported results into ADAMS. The total number of blood samples collected and analyzed for the ABP increased from 34,616 in 2023 to 35,740 in 2024 (a 3.2% increase).

22. Why are the ABP samples reported separately from other samples?

Blood samples are collected with the typical 'A' and 'B' samples to report AAFs (for GH, EPO, etc.) while ABP samples can be collected as single samples in order to measure an athlete's specified blood variables, which are then compared to his or her previous data over time. This establishes the athlete's biological profile and therefore offers an indirect method that can indicate doping or help target testing.