

2020
Anti-Doping
Testing Figures

Executive Summary

EXECUTIVE SUMMARY

This Executive Summary is intended to assist stakeholders in navigating the data outlined within the 2020 Testing Figures Report (2020 Report) and to highlight overall trends.

The 2020 Report summarizes the results of all the samples WADA-accredited Laboratories analyzed and reported into WADA's Anti-Doping Administration and Management System (ADAMS) in 2020. This is the sixth set of global testing under the version of the World Anti-Doping Code (Code) that came into effect in January 2015. The 2020 Report – which includes this Executive Summary and sub-reports by Laboratory, Sport, Testing Authority (TA) and Athlete Biological Passport (ABP) Blood Analysis – includes in- and out-of-competition urine samples; blood and ABP blood data; and, the resulting Adverse Analytical Findings (AAFs) and Atypical Findings (ATFs).

The 2020 Testing Figures Report only focuses on the Anti-Doping data that is reported into ADAMS and no longer includes data that is not reported into ADAMS but provided by certain Laboratories in aggregate.

REPORT HIGHLIGHTS

- A **46.1% decrease in the number of samples** (both urine and non-ABP blood samples) analyzed and reported into ADAMS: 278,047 in 2019 to 149,758 in 2020.
- A **decrease in the total percentage of AAFs**: 0.97% in 2019 (2,702 AAFs from 278,047 samples) to 0.67% in 2020 (1,009 AAFs from 149,758 samples).
- A **decrease in the total number of samples analyzed and reported** into ADAMS by WADA-accredited Laboratories and WADA-approved Laboratories.
- A **decrease in the total number and percentage of non-ABP blood samples** analyzed: 9.1% in 2019 (25,339 of 278,047) and 7.3% (10,940 of 149,758) in 2020.
- A **decrease of 38% in the number of ABP blood samples** analyzed: 36,401 in 2019 to 22,666 in 2020.

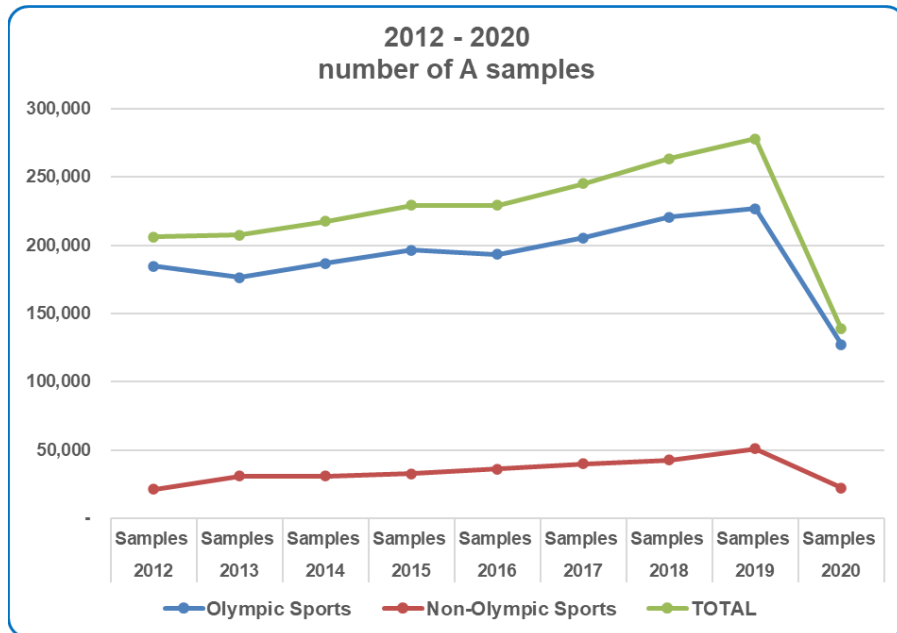
ADAMS USE

WADA's ADAMS System continues to be a critical data-gathering tool for the anti-doping community.

The figures of urine and blood samples (not including ABP samples) were compiled according to the 'Sample Collection Date' (and not the WADA-accredited Laboratory's 'Sample Reception Date'). This is a result of the efforts made by the WADA-accredited Laboratories to incorporate the collection date into their ADAMS reporting. The data was compiled using sample collection dates between 1 January and 31 December 2020.

OVERALL FINDINGS

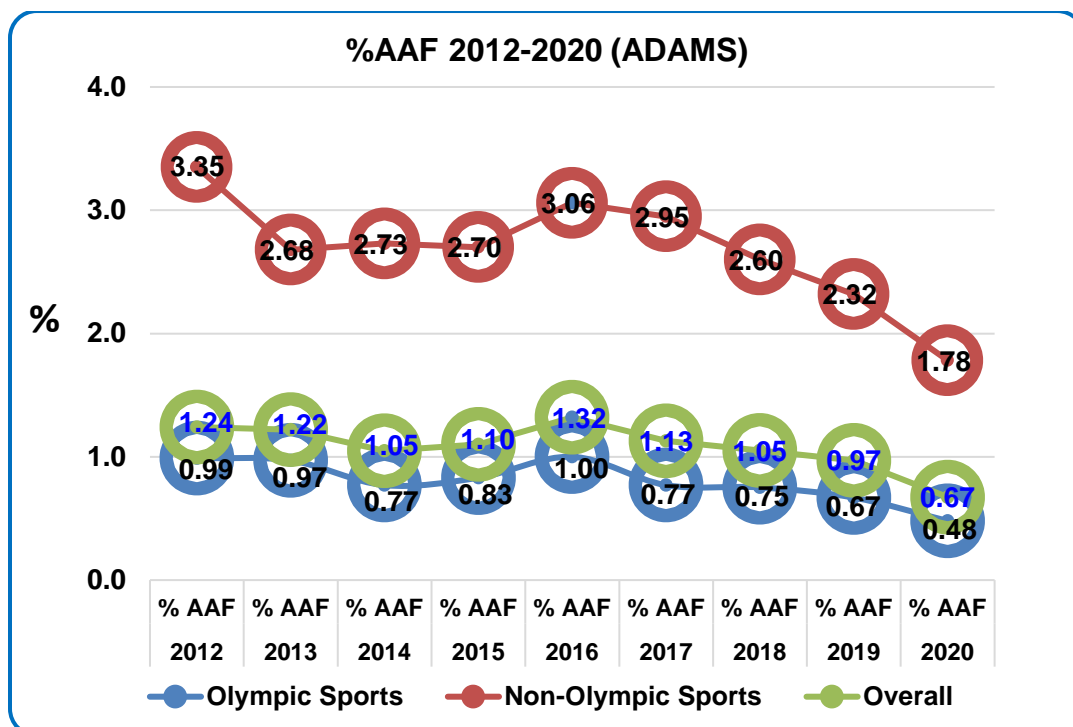
The 2020 data shows a decrease of 46.1% in the number of overall samples analyzed from 278,047 in 2019 to 149,758 in 2020.



There was a decrease in the percentage of total findings (AAFs and ATFs - combined) from 1.07% in 2019 to 0.82% in 2020.

In addition, the data shows a decrease in the percentage of AAFs – more commonly known as positive tests – from 0.97% in 2019 to 0.67% in 2020.

In 2020, the proportion of ATFs reported (217 ATFs in 149,758 samples) decreased relative to 2019 (394 ATFs in 278,047 samples).



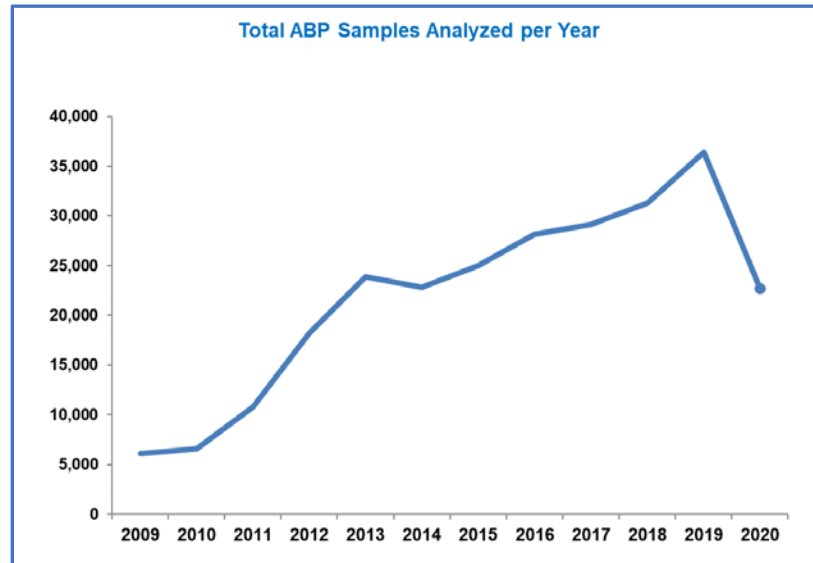
The results also show a decrease in the number of (non-ABP) blood samples analyzed from 25,339 in 2019 to 10,940 in 2020.

IMPLEMENTATION OF ABP

Blood ABP

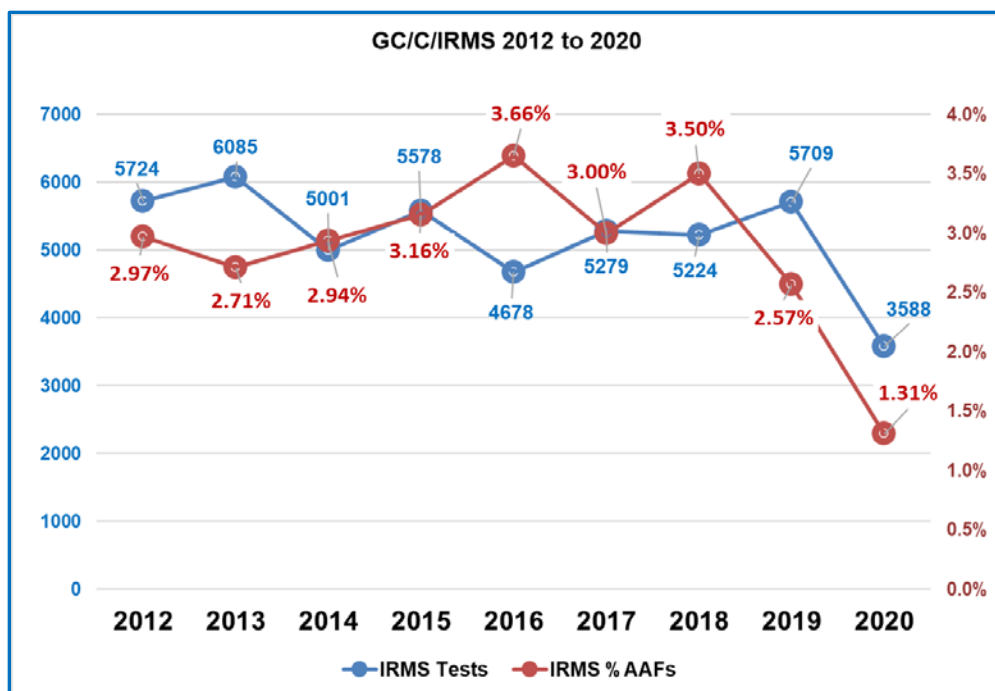
The number of International Federations (IFs) that included ABP blood testing was 24 in 2020 (compared to 25 in 2019) while the number of National Anti-Doping Organizations (NADOs) decreased from 68 in 2019 to 60 in 2020.

The total number of ABP samples decreased by 38% compared to 2019 (36,401 in 2019 to 22,666 in 2020).



Steroidal ABP

The gas chromatography combustion isotope ratio mass spectrometry (GC/C/IRMS) analytical method is an important test connected to the steroidal module of the ABP. IRMS can be triggered by the ABP or requested by the Testing Authority (TA) based on other information. The number of AAFs from the application of this method has decreased compared to 2019 (146 in 2019 and 47 in 2020) while the number of tests has decreased in 2020 by 37% (5,661 tests in 2019 versus 3,588 in 2020). Based on the relative percentage of AAFs in comparison to other methods, the application of the GC/C/IRMS test continues, at 1.31% AAF, to be the analytical method with the highest proportion of AAFs.



COMPLIANCE WITH THE TDSSA

The 2020 Report marks the sixth year that Anti-Doping Organizations (ADOs) were required to incorporate the Technical Document for Sport Specific Analysis (TDSSA) into their testing programs.

The TDSSA is intended to ensure that three groups of prohibited substances (Erythropoietin Stimulating Agents (ESAs), Growth Hormone (GH) and GH Releasing Factors (GHRFs)), which are deemed to be at risk of abuse in certain sports/disciplines, are subject to an appropriate and consistent Minimum Level of Analysis by all ADOs.

The findings of the 2020 Report highlight the impact of the COVID-19 pandemic on ADOs testing for these three groups of prohibited substances when compared to 2014 (the year prior to TDSSA implementation), 2015, 2016, 2017, 2018 and 2019, including:

- A decrease in the recording of TDSSA compliant sports/disciplines in ADAMS.
- An overall decrease in ESAs testing (31% decrease in urine and 51% decrease in blood between 2019 and 2020) and AAFs reported, including an increase in the percentage of ESA AAFs (0.15% in 2018 to 0.08% in urine tests and 0.37% versus 0.2% in blood tests in 2020).
- A decrease in GH testing between 2019 and 2020 (both Isoforms and Biomarkers tests) and an increase in the number of GH AAFs reported (1 AAF in 2020 versus 6 cases in 2019).
- A decrease in GHRFs testing of 31% between 2019 and 2020 and a 50% decrease in the number of GHRF AAFs reported.

Erythropoiesis Stimulating Agents (ESAs)

	ESAs Urine Tests	ESAs Blood Tests	AAFs Urine	AAFs Blood	AAFs Total	# of Sports	# of TAs
2020	35,963	1,845	29	3	32	102	197
2019	51,929	3,757	78	14	92	120	243
2018	47,955	4792	61	16	77	118	229
2017	44,322	4531	56	29	85	116	220
2016	43,246	3464	44	22	66	108	212
2015	32,999	3219	45	1	46	94	183

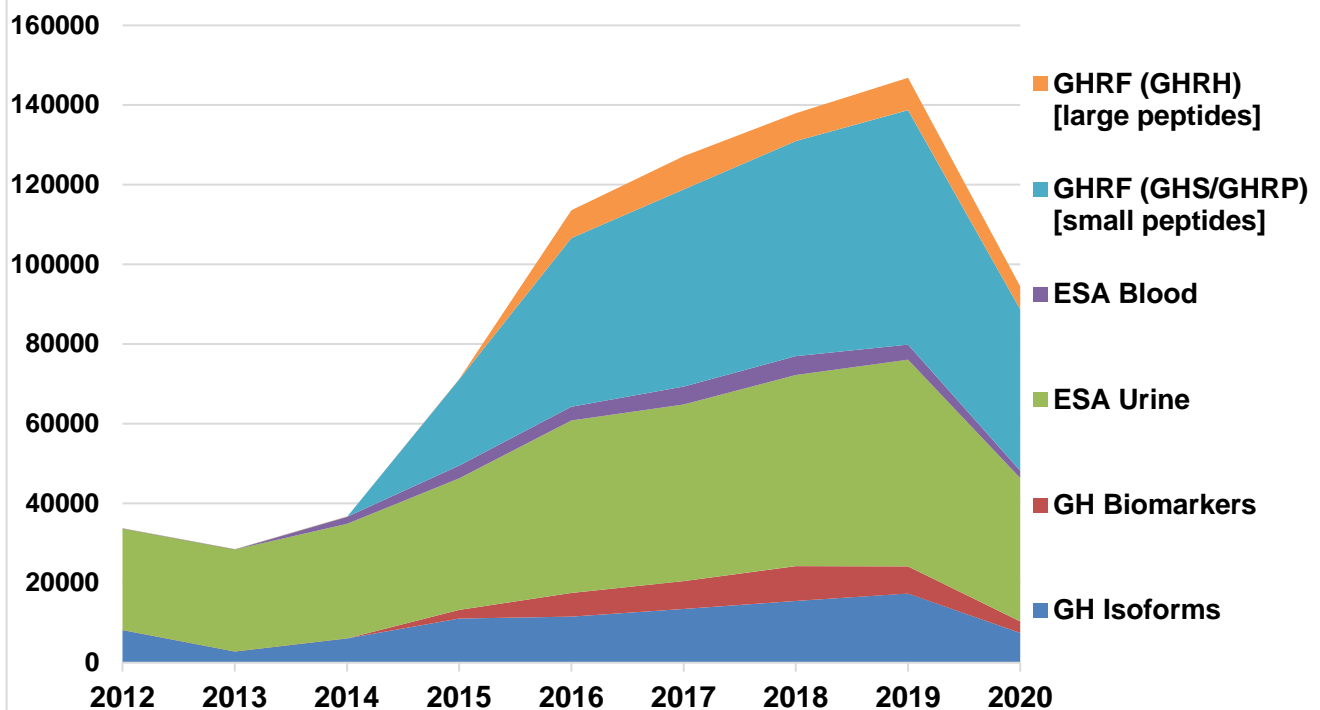
Growth Hormone (GH)

	GH Isoforms Tests	GH Biomarkers Tests	AAFs Total	# of Sports	# of TAs
2020	7,509	2,855	1	82	114
2019	17,393	6,790	6	103	156
2018	15,487	8755	2	99	137
2017	13,474	7008	0	90	124
2016	11,555	5983	6	68	111
2015	11,082	2182	4	74	103

Growth Hormone Releasing Factors (GHRFs)

	GHRFs Urine Tests	AAFs Total	# of Sports	# of TAs
2020	46,341	13	102	199
2019	66,990	26	126	234
2018	60,964	21	124	231
2017	57,869	19	119	218
2016	42,730	15	111	207
2015	21,654	14	88	145

Tests conducted 2012 - 2020



The Sport segment of the 2020 Report includes more samples in ADAMS that are assigned to specified sport disciplines than in 2019, which suggests that TAs continue to incorporate the TDSSA-defined sport disciplines into their sample collection procedures and documentation and thereby enhances the ability to analyze such figures accurately.

The 2020 Report does not detail statistics on Anti-Doping Rule Violations (ADRVs). These results are included in a separate ADRVs Report, which details analytical and non-analytical cases and the outcomes of results management. The 2020 ADRVs Report will be published in 2021.

The figures include all analyses conducted in 2020 by the WADA-accredited Laboratories and by the WADA-approved Laboratories (approved by WADA to conduct blood analysis exclusively for the purposes of the ABP blood module).

In reading the 2020 Report, it is important to note that:

- One single result does not necessarily correspond to one athlete. Results may correspond to multiple findings regarding the same athlete or measurements performed on the same athlete, such as in the case of longitudinal studies of testosterone.
- The number of AAFs in the Report may not correspond with the number of ADRVs reported by ADOs. This is because all results are subject to a results management process conducted by ADOs, which includes matching results with Therapeutic Use Exemptions (TUEs) and/or longitudinal studies, which can result in no sanction.
- To help with the interpretation of the 2020 Report, a comprehensive [Question and Answer document](#) is available on WADA's website.

Table 1: Total Samples Analyzed (All Sports) *

A Samples Analyzed

Sport	Analyzed	AAFs ¹	(%)	ATFs ²	(%)	Total Findings ³	(%)
Olympic Sports ⁴	127,483	612	0.48%	168	0.13%	780	0.61%
Non-Olympic Sports ⁵	22,275	397	1.78%	49	0.22%	446	2.0%
TOTAL	149,758	1,009	0.67%	217	0.14%	1,226	0.82%

¹ The Adverse Analytical Findings (AAFs) in this report are not to be confused with adjudicated or sanctioned Anti-Doping Rule Violations (ADRVs). "Adverse Analytical Finding" is defined in the World Anti-Doping Code as "A report from a WADA-accredited Laboratory or other WADA-approved Laboratory that, consistent with the International Standard for Laboratories 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." These figures may not be identical to sanctioned cases (number of ADRVs), as the figures given in this report may contain findings that underwent the Therapeutic Use Exemption (TUE) approval process for example.

² The Atypical Findings (ATFs) in this report are not to be confused with adjudicated or sanctioned Anti-Doping Rule Violations (ADRVs). "Atypical Finding" is defined in the World Anti-Doping Code as "A report from a WADA-accredited Laboratory or other WADA-approved Laboratory which requires further investigation as provided by the International Standard for Laboratories or related Technical Documents prior to the determination of an Adverse Analytical Finding." ATFs may correspond to multiple measurements performed on the same Athlete, such as in cases of longitudinal studies on testosterone.

³ Includes AAFs and ATFs.

⁴ Olympic sports in this table include sports reported into ADAMS and classified under ASOIF and AIOWF.

⁵ Non-Olympic sports in this table includes sports reported into ADAMS and classified as ARISF, AIMS, IPC, Sports for Athletes with an Impairment, other Sports from Code Signatories and Other Sports.

* These figures do not include blood samples taken for the ABP. Blood samples taken for the ABP can be found in the 2020 Anti-Doping Testing Figures - Athlete Biological Passport (ABP) Report - Blood Analysis.

Table 2: Comparison of Years 2015 to 2020 - Olympic and Non-Olympic Figures reported in ADAMS

	2015 A Samples Analyzed	2016 A Samples Analyzed	2017 A Samples Analyzed	2018 A Samples Analyzed	2019 A Samples Analyzed	2020 A Samples Analyzed	2020 vs 2019 % change
Olympic Sports*	196,581	193,345	205,405	220,659	227,032	127,483	-43.8%
Non-Olympic Sports**	32,831	36,169	39,827	42,860	51,015	22,275	-56.3%
TOTAL	229,412	229,514	245,232	263,519	278,047	149,758	-46.1%
	2015 AAFs ¹	2016 AAFs ¹	2017 AAFs ¹	2018 AAFs ¹	2019 AAFs ¹	2020 AAFs ¹	2020 vs 2019 % change
Olympic Sports*	1,634	1,927	1,575	1,659	1,519	612	-59.7%
Non-Olympic Sports**	888	1,105	1,174	1,115	1,183	397	-66.4%
TOTAL	2,522	3,032	2,749	2,774	2,702	1,009	-62.7%
	2015 % AAFs ¹	2016 % AAFs ¹	2017 % AAFs ¹	2018 % AAFs ¹	2019 % AAFs ¹	2020 % AAFs ¹	2020 vs 2019 % change
Olympic Sports*	0.83	1.00	0.77	0.75	0.67	0.48	-28.2%
Non-Olympic Sports**	2.70	3.06	2.95	2.60	2.32	1.78	-23.1%
Overall	1.10	1.32	1.12	1.05	0.97	0.67	-30.7%
	2015 % Total Findings ²	2016 % Total Findings ²	2017 % Total Findings ²	2018 % Total Findings ²	2019 % Total Findings ²	2020 % Total Findings ²	2020 vs 2019 % change
Olympic Sports*	1.64	1.26	0.82	0.82	0.79	0.61	-22.8%
Non-Olympic Sports**	3.68	3.29	3.02	2.74	2.53	2.00	-21%
Overall	1.93	1.58	1.18	1.13	1.07	0.82	-23.8%

Table 3: Summary - Total Samples Analyzed (ADAMS)

	Samples	ATF	AAF
ADAMS Urine Total	138,818	208	1,005
ADAMS Blood Total	10,940	9	4
ABP Total¹	22,666	-	-
	172,424	217	1,009

¹ ABP total in Table 3 also includes ABP samples analyzed by WADA-approved Laboratories in Nairobi (Kenya), Moscow (Russia) and Cairo (Egypt) - please refer to the ABP Report.