

Data Brief 491. Drug Overdose Deaths in the United States, 2002–2022

Data table for Figure 1. Age-adjusted rate of drug overdose deaths, by sex: United States, 2002–2022

Year	Total		Males		Females	
	Number of deaths	Deaths per 100,000	Number of deaths	Deaths per 100,000	Number of deaths	Deaths per 100,000
2002	23,518	8.2	15,028	10.6	8,490	5.8
2003	25,785	8.9	16,399	11.5	9,386	6.4
2004	27,424	9.4	17,120	11.8	10,304	6.9
2005	29,813	10.1	18,724	12.8	11,089	7.3
2006	34,425	11.5	21,893	14.8	12,532	8.2
2007	36,010	11.9	22,298	14.9	13,712	8.8
2008	36,450	11.9	22,468	14.9	13,982	8.9
2009	37,004	11.9	22,593	14.8	14,411	9.1
2010	38,329	12.3	23,006	15.0	15,323	9.6
2011	41,340	13.2	24,988	16.1	16,352	10.2
2012	41,502	13.1	25,112	16.1	16,390	10.2
2013	43,982	13.8	26,799	17.0	17,183	10.6
2014	47,055	14.7	28,812	18.3	18,243	11.1
2015	52,404	16.3	32,957	20.8	19,447	11.8
2016	63,632	19.8	41,558	26.2	22,074	13.4
2017	70,237	21.7	46,552	29.1	23,685	14.4
2018	67,367	20.7	44,941	27.9	22,426	13.6
2019	70,630	21.6	47,881	29.6	22,749	13.7
2020	91,799	28.3	63,728	39.5	28,071	17.1
2021	106,699	32.4	74,301	45.1	32,398	19.6
2022	107,941	32.6	75,814	45.6	32,127	19.4

NOTES: Drug overdose deaths were identified using *International Classification of Diseases, 10th Revision* underlying cause-of-death codes X40–X44, X60–X64, X85, and Y10–Y14. Age-adjusted death rates were calculated using the direct method and the 2000 U.S. standard population.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.



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Data table for Figure 2. Rate of drug overdose deaths, by selected age groups 15 and older: United States, 2021 and 2022

Age group	2021		2022	
	Number of deaths	Deaths per 100,000	Number of deaths	Deaths per 100,000
15–24.	7,426	17.2	6,696	15.1
25–34.	24,070	52.9	23,029	50.6
35–44.	26,908	62.0	27,583	63.1
45–54.	21,875	53.8	22,352	55.3
55–64.	19,399	45.3	20,252	48.1
65 and older.	6,702	12.0	7,605	13.2

NOTES: Drug overdose deaths were identified using *International Classification of Diseases, 10th Revision* underlying cause-of-death codes X40–X44, X60–X64, X85, and Y10–Y14.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

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Data table for Figure 3. Age-adjusted rate of drug overdose deaths, by race and Hispanic origin: United States, 2021 and 2022

Race and Hispanic origin	2021		2022	
	Number of deaths	Deaths per 100,000	Number of deaths	Deaths per 100,000
American Indian and Alaska Native, non-Hispanic	1,358	56.6	1,543	65.2
Black, non-Hispanic.	19,212	44.2	20,725	47.5
White, non-Hispanic	70,121	36.8	67,974	35.6
Hispanic ¹	12,986	21.1	14,131	22.7
Native Hawaiian or Other Pacific Islander, non-Hispanic.	127	20.1	125	18.8
Asian, non-Hispanic.	971	4.7	1,142	5.3

¹People of Hispanic origin may be of any race.

NOTES: Misclassification of race and Hispanic origin on death certificates results in the underestimation of death rates by as much as 34% for American Indian and Alaska Native non-Hispanic people and 3% for Asian non-Hispanic and Hispanic people. Drug overdose deaths were identified using *International Classification of Diseases, 10th Revision* underlying cause-of-death codes X40–X44, X60–X64, X85, and Y10–Y14. Age-adjusted death rates were calculated using the direct method and the 2000 U.S. standard population.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

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Data table for Figure 4. Age-adjusted rate of drug overdose deaths involving opioids, by type of opioid: United States, 2002–2022

Year	Any opioid		Heroin		Natural and semisynthetic opioids		Methadone		Synthetic opioids other than methadone	
	Number of deaths	Deaths per 100,000	Number of deaths	Deaths per 100,000	Number of deaths	Deaths per 100,000	Number of deaths	Deaths per 100,000	Number of deaths	Deaths per 100,000
2002.	11,920	4.1	2,089	0.7	4,416	1.5	2,358	0.8	1,295	0.4
2003.	12,940	4.5	2,080	0.7	4,867	1.7	2,972	1.0	1,400	0.5
2004.	13,756	4.7	1,878	0.6	5,231	1.8	3,845	1.3	1,664	0.6
2005.	14,918	5.1	2,009	0.7	5,774	1.9	4,460	1.5	1,742	0.6
2006.	17,545	5.9	2,088	0.7	7,017	2.3	5,406	1.8	2,707	0.9
2007.	18,516	6.1	2,399	0.8	8,158	2.7	5,518	1.8	2,213	0.7
2008.	19,582	6.4	3,041	1.0	9,119	3.0	4,924	1.6	2,306	0.8
2009.	20,422	6.6	3,278	1.1	9,735	3.1	4,696	1.5	2,946	1.0
2010.	21,089	6.8	3,036	1.0	10,943	3.5	4,577	1.5	3,007	1.0
2011.	22,784	7.3	4,397	1.4	11,693	3.7	4,418	1.4	2,666	0.8
2012.	23,166	7.4	5,925	1.9	11,140	3.5	3,932	1.2	2,628	0.8
2013.	25,052	7.9	8,257	2.7	11,346	3.5	3,591	1.1	3,105	1.0
2014.	28,647	9.0	10,574	3.4	12,159	3.8	3,400	1.1	5,544	1.8
2015.	33,091	10.4	12,989	4.1	12,727	3.9	3,301	1.0	9,580	3.1
2016.	42,249	13.3	15,469	4.9	14,487	4.4	3,373	1.0	19,413	6.2
2017.	47,600	14.9	15,482	4.9	14,495	4.4	3,194	1.0	28,466	9.0
2018.	46,802	14.6	14,996	4.7	12,552	3.8	3,023	0.9	31,335	9.9
2019.	49,860	15.5	14,019	4.4	11,886	3.6	2,740	0.8	36,359	11.4
2020.	68,630	21.4	13,165	4.1	13,471	4.0	3,543	1.1	56,516	17.8
2021.	80,411	24.7	9,173	2.8	13,618	4.0	3,678	1.1	70,601	21.8
2022.	81,806	25.0	5,871	1.8	11,871	3.5	3,334	1.0	73,838	22.7

NOTES: Drug overdose deaths were identified using *International Classification of Diseases, 10th Revision* underlying cause-of-death codes X40–X44, X60–X64, X85, and Y10–Y14. Drug overdose deaths involving selected drug categories were identified by multiple cause-of-death codes: T40.0–T40.4, T40.6 (any opioid); T40.1 (heroin); T40.2 (natural and semisynthetic opioids); T40.3 (methadone); and T40.4 (synthetic opioids other than methadone). Age-adjusted death rates were calculated using the direct method and the 2000 U.S. standard population. Deaths involving more than one opioid category (for example, a death involving both methadone and a natural and semisynthetic opioid) are counted in both categories. Natural and semisynthetic opioids include drugs such as morphine, oxycodone, and hydrocodone; and synthetic opioids other than methadone include drugs such as fentanyl, fentanyl analogs, and tramadol. Deaths may involve more than one drug. The percentage of drug overdose deaths that identified the specific drugs involved ranged from 75% to 79% from 2000 to 2013, then increased from 81% in 2014 to 96% in 2022.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

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Data table for Figure 5. Age-adjusted rate of drug overdose deaths involving stimulants, by type of stimulant: United States, 2002–2022

Year	Cocaine		Psychostimulants with abuse potential	
	Number of deaths	Deaths per 100,000	Number of deaths	Deaths per 100,000
2002	4,599	1.6	941	0.3
2003	5,199	1.8	1,179	0.4
2004	5,443	1.9	1,305	0.4
2005	6,208	2.1	1,608	0.5
2006	7,448	2.5	1,462	0.5
2007	6,512	2.2	1,378	0.4
2008	5,129	1.7	1,302	0.4
2009	4,350	1.4	1,632	0.5
2010	4,183	1.3	1,854	0.6
2011	4,681	1.5	2,266	0.7
2012	4,404	1.4	2,635	0.8
2013	4,944	1.6	3,627	1.2
2014	5,415	1.7	4,298	1.4
2015	6,784	2.1	5,716	1.8
2016	10,375	3.2	7,542	2.4
2017	13,942	4.3	10,333	3.2
2018	14,666	4.5	12,676	3.9
2019	15,883	4.9	16,167	5.0
2020	19,447	6.0	23,837	7.5
2021	24,486	7.3	32,537	10.0
2022	27,569	8.2	34,022	10.4

NOTES: Drug overdose deaths were identified using *International Classification of Diseases, 10th Revision* underlying cause-of-death codes X40–X44, X60–X64, X85, and Y10–Y14. Drug overdose deaths involving selected drug categories were identified by multiple cause-of-death codes: T43.6 (psychostimulants with abuse potential) and T40.5 (cocaine). Age-adjusted death rates were calculated using the direct method and the 2000 U.S. standard population. Psychostimulants with abuse potential include drugs such as methamphetamine, amphetamine, and methylphenidate. Deaths may involve more than one drug. The percentage of drug overdose deaths that identified the specific drugs involved ranged from 75% to 79% from 2000 to 2013, then increased from 81% in 2014 to 96% in 2022.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.