



## Deaths related to drug poisoning in England and Wales, 2010

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**Coverage:** England and Wales **Theme:** Health and Care

This bulletin presents the latest figures from the Office for National Statistics (ONS) on deaths related to drug poisoning (involving both legal and illegal drugs) and drug misuse (involving illegal drugs) in England and Wales for the period 2006 to 2010. Figures are presented by cause of death, sex, age and substance(s) involved in the death.

### Key findings

- There were 2,747 drug poisoning deaths in 2010, a 5 per cent decrease since 2009
- The drug poisoning death rate fell significantly between 2009 and 2010 for males, but remained stable in females
- The total number of drug misuse deaths was 1,784 in 2010, down slightly from 1,876 in 2009
- The substance most commonly involved in drug poisoning deaths was heroin/morphine (791 deaths in 2010)
- Drug poisoning deaths involving cocaine dropped from 202 in 2009 to 144 in 2010 (a 29 per cent decrease)

**Table 1** Number of deaths from drug-related poisoning and drug misuse: by sex, 2006–10<sup>1,2</sup>

England and Wales <sup>3</sup>		Deaths				
		2006	2007	2008	2009	2010
<b>All drug poisoning</b>	Males	1,782	1,914	2,075	2,098	1,890
	Females	788	726	853	780	857
<b>Drug misuse</b>	Males	1,238	1,387	1,506	1,512	1,382
	Females	322	340	433	364	402

1 Drug-related poisoning and drug misuse as defined in [Boxes 1 and 3](#). Deaths from drug misuse are included in the figures for all drug poisoning.

2 Figures are for deaths registered in each calendar year.

3 Deaths in England and Wales include non-residents.

Source: Office for National Statistics

## Background

Drug use and drug dependence are known causes of premature mortality, with drug poisoning accounting for nearly one in seven deaths among people in their twenties in 2010 (see [Background Note 4](#)). Consequently, there is considerable political, media and public interest in these figures. Drug-related deaths occur in a variety of circumstances, each with different social and policy implications. This bulletin covers accidents and suicides involving drug poisonings, as well as deaths from drug abuse and drug dependence, but not other adverse effects of drugs (for example anaphylactic shock). Drug poisoning deaths involve a broad spectrum of substances, including legal and illegal drugs, prescription drugs (either prescribed to the deceased or obtained by other means) and over-the-counter medications. Some of these deaths may also be the result of complications of drug abuse, such as deep vein thrombosis or septicaemia resulting from intravenous drug use, or heart disease due to chronic cocaine use, rather than an acute drug overdose.

## Policy context

The previous government was in power during the majority of the period covered by this report. Therefore both current and previous policies are relevant to these data. The 2008 drug strategy of the previous government (Home Office, 2008) underpinned two Public Service Agreement (PSA) targets. PSA 25 aimed to reduce the harm caused by alcohol and drugs (including deaths) and PSA 14 aimed to increase the number of children and young people on the path to success.

In December 2010 the coalition government launched a new drug strategy entitled 'Reducing demand, restricting supply, building recovery: supporting people to live a drug-free life' (Home Office, 2010a). This strategy highlights preventing drug-related deaths as one of the key outcomes that services should be focused on.

Patterns of drug use change over time. For instance, in recent years people have been taking new psychoactive substances, including so-called 'legal highs' and precursor chemicals. In response to this, the 2010 drug strategy outlined the government's plan to introduce a system of temporary 12-month bans on newly emerging substances. The Advisory Council on the Misuse of Drugs (ACMD) can then evaluate the harm caused by the substance and advise whether it should be permanently banned.

## Uses made of this data

The figures contained in this statistical bulletin are used by a range of public bodies, such as the National Treatment Agency for Substance Misuse (NTA) and the Department of Health (DH), to evaluate the effectiveness of drug strategies. The ACMD could also use these figures to help evaluate the risk of death posed by new psychoactive substances. However, results should be treated with caution as it may not be possible to identify new substances during post-mortem investigations. It is also important to note that this statistical bulletin cannot shed any light on other types of short-term harm associated with drug use (for example, social or psychological) or the long-term damage that using such substances may cause.

The European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) combines data from the England and Wales drug poisoning database with data from Scotland and Northern Ireland to create UK figures which allow international comparisons with other European countries. The latest

EMCDDA report shows that the drug-related death rate in the UK was higher than most other European countries (EMCDDA, 2011). However, the authors advise caution when making international comparisons, because of differences in definitions and the quality of reporting.

Data from the drug poisoning database are also used by academics and other researchers. For example, researchers from Centre for Suicide Research at the University of Oxford analysed ONS drug-related deaths data and concluded that there was a major reduction in deaths involving co-proxamol following its withdrawal in 2005, with no evidence of an increase in deaths involving other analgesics (Hawton *et al*, 2009). Updated data on deaths involving co-proxamol are shown below in [Table 3](#).

## Results

### Number of deaths from drug-related poisoning

There were 2,747 deaths from drug poisoning (involving both legal and illegal drugs) in 2010, and as in previous years, the majority (nearly 70 per cent) of these deaths were in males. There were 1,890 male deaths from drug poisoning in 2010, a decrease of 10 per cent since 2009. The equivalent number of female deaths rose to 857, an increase of 10 per cent since 2009 and the highest number since 2005 (figures from 1993 onwards are available on the [ONS website](#)).

### By underlying cause

In line with previous years, in 2010 the largest proportion (48 per cent) of drug poisoning deaths in males were from 'accidental poisoning by drugs', but in females the largest proportion (46 per cent) were from 'intentional self-poisoning and poisoning of undetermined intent' (suicides). Over the past few years relatively fewer deaths have been assigned an underlying cause of mental and behavioural disorders (drug abuse and drug dependence) and an increasing number of deaths have been due to accidental poisonings. The reasons for this trend are not clear.

**Table 2** Number of deaths from drug-related poisoning: by sex and underlying cause, 2006–10<sup>1,2</sup>

England and Wales <sup>3</sup>		Deaths				
		2006	2007	2008	2009	2010
Mental and behavioural disorders due to drug use (excluding alcohol and tobacco) (F11–F16, F18–F19)	Males	639	662	705	586	504
	Females	100	119	139	101	96
Accidental poisoning by drugs, medicaments and biological substances (X40–X44)	Males	598	725	861	983	899
	Females	245	239	327	305	369
Intentional self-poisoning by drugs, medicaments and biological substances (X60–X64), and poisoning by drugs, medicaments and biological substances, undetermined intent (Y10–Y14)	Males	540	520	500	524	482
	Females	439	368	385	374	391
Assault by drugs, medicaments and biological substances (X85)	Males	5	7	9	5	5
	Females	4	0	2	0	1

1 Underlying cause of death was defined using the International Classification of Diseases, Tenth Revision (ICD-10) codes given in the table.

2 Figures are for deaths registered in each calendar year.

3 Deaths in England and Wales include non-residents.

Source: Office for National Statistics

### Number of deaths related to drug misuse

The definition of this indicator is '(a) deaths where the underlying cause is drug abuse or drug dependence or (b) deaths where the underlying cause is drug poisoning and where any of the substances controlled under the Misuse of Drugs Act 1971 are involved'. This definition has been adopted across the UK.

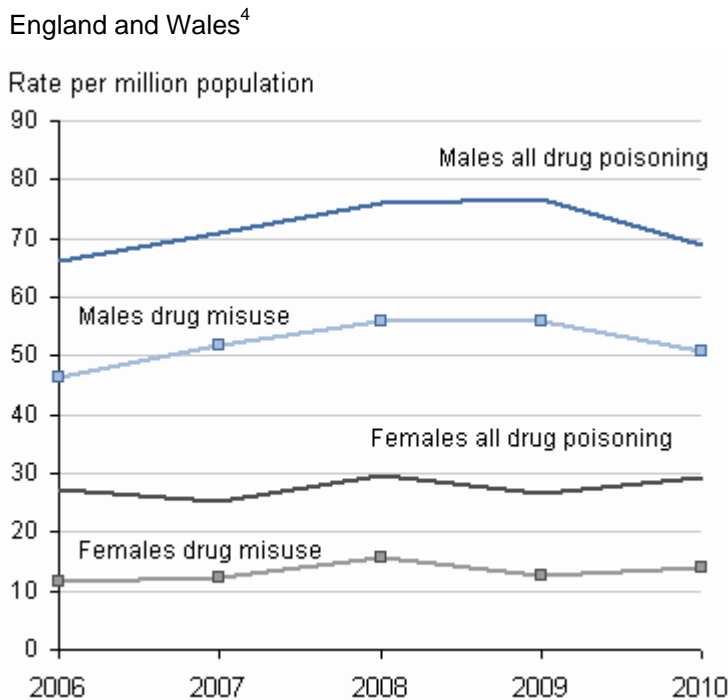
Overall in 2010, there were 1,784 drug misuse deaths. The number of male deaths decreased by 9 per cent from 1,512 in 2009 to 1,382 in 2010. However over the same period the number of female deaths rose by 10 per cent to 402 (Table 1).

Compared with 2006, in 2010 a higher proportion of drug poisoning deaths were related to drug misuse. However since 2007 this proportion has remained fairly static at 73 per cent for males and 47 per cent for females.

### Age-standardised death rates for all drug related poisonings and drug misuse

The male death rate for all drug related poisonings fell significantly between 2009 and 2010, from 76.7 to 68.8 deaths per million population (Figure 1). Over the same period the male rate for deaths related to drug misuse dropped slightly, but not significantly, to 50.8 deaths per million population. The female death rates for all drug related poisonings and for deaths from drug misuse both increased slightly, but not significantly, between 2009 and 2010 (29.2 and 14.0 deaths per million population respectively in 2010).

**Figure 1 Age-standardised mortality rates for deaths related to drug poisoning and drug misuse: by sex, 2006–10<sup>1,2,3</sup>**



1 Age-standardised mortality rates per million population, standardised to the European Standard Population. Age-standardised rates are used to allow comparison between populations which may contain different proportions of people of different ages.

2 Drug misuse as defined in [Box 3](#).

3 Figures are for deaths registered in each calendar year.

4 Deaths in England and Wales include non-residents.

Source: Office for National Statistics

## Age-specific mortality rates for deaths related to drug misuse

### Males

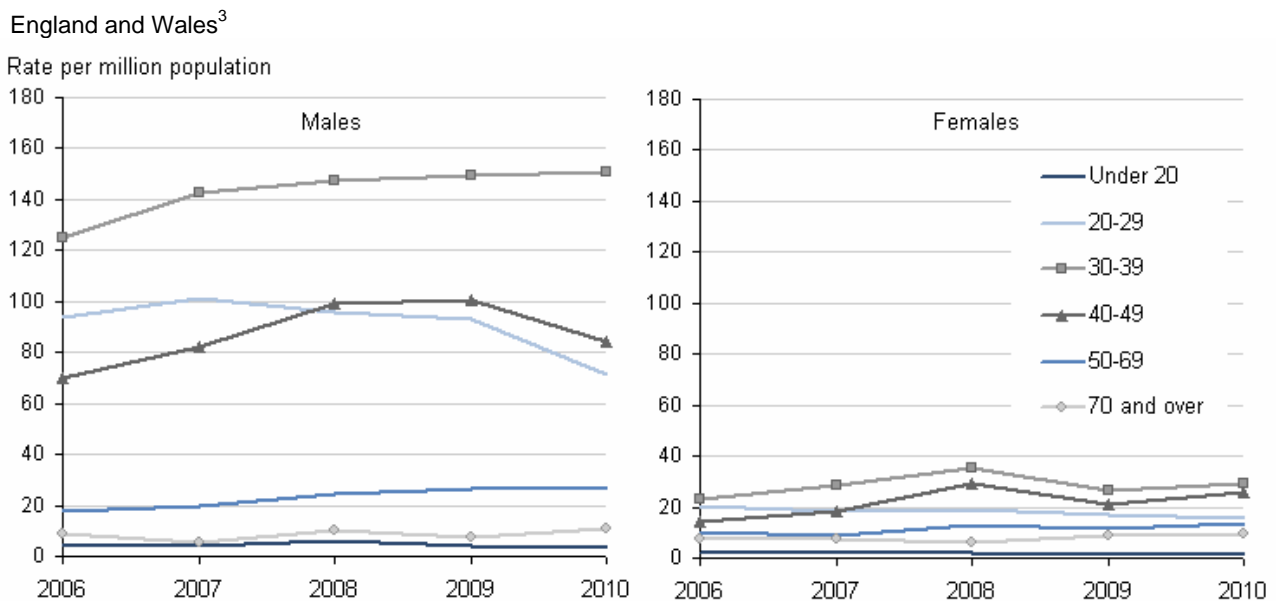
[Figure 2](#) shows that males aged 20 to 49 have the highest mortality rates from drug misuse, markedly higher than the rates for males in other age groups and much higher than females of any age. Within this broad age range the highest male mortality rate was among males aged 30 to 39, throughout the period 2006 to 2010. Moreover, these rates have been gradually increasing since 2006, and were significantly higher in 2010 compared with 2006 (150.8 deaths per million population in 2010). In contrast, rates among males aged 20 to 29 have declined significantly over this period.

Although mortality rates for deaths related to drug misuse in males aged 50 to 69 were comparatively lower, they increased significantly between 2006 and 2010. In 2010 the lowest rate for males was in the under 20 age group (3.6 deaths per million population); and rates were also low in males aged 70 and over. The mortality rates in the oldest and youngest age groups showed no significant trends between 2006 and 2010.

## Females

In 2010, mortality rates from drug misuse for females were lower than males in every age group. As with males, the highest rate was among those aged 30 to 39 (29.2 deaths per million population) and the lowest rate was in those under 20 (1.7 deaths per million population). Rates in younger females (under 30) have tended to decrease slightly over this period, whereas in females aged 30 and over, rates have increased slightly. However, the only significant trend was in females aged 40 to 49, where rates were significantly higher in 2010 compared with 2006 (but not as high as the peak in 2008).

**Figure 2 Age-specific mortality rates for deaths related to drug misuse: by sex, 2006–10<sup>1,2</sup>**



1 Drug misuse as defined in [Box 3](#).

2 Figures are for deaths registered in each calendar year.

3 Deaths in England and Wales include non-residents.

Source: Office for National Statistics

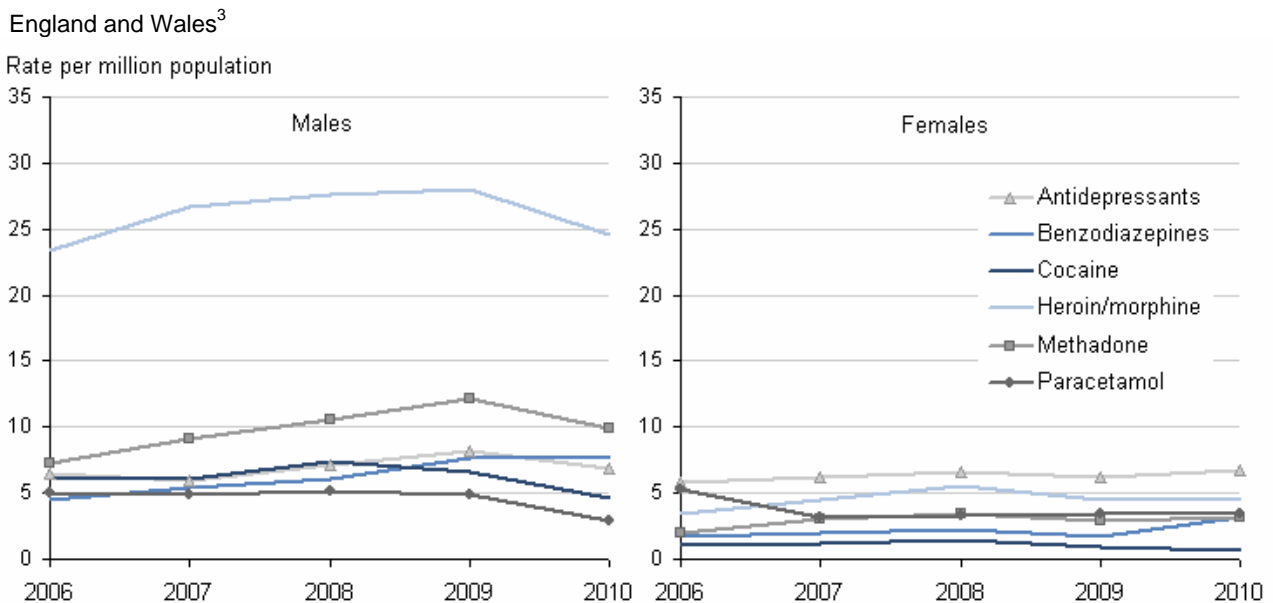
## Deaths from drug-related poisoning where selected substances were mentioned on the death certificate

[Figure 3](#) gives the age-standardised death rates where selected substances were mentioned on the death certificate for 2006 to 2010 and [Table 3](#) gives the number of deaths from a wide range of substances. These figures need to be interpreted with caution for the following reasons:

- These figures are based on information reported on the coroner's death certificate, and may not include all substances involved in the death
- In around 12 per cent of drug poisoning deaths only a general description is recorded on the coroner's certificate of death (such as drug overdose or multiple drug toxicity). These deaths do not contribute to the count of specific substances
- In an additional 30 per cent of all drug poisoning deaths, the death certificate mentions more than one specific drug. Where more than one drug is mentioned, it is not always possible to tell which of them was primarily responsible for the death

- Where more than one drug is mentioned on a death certificate the death will be counted in more than one category in [Table 3](#). For example, if both heroin and cannabis are mentioned, the death will be recorded once under heroin and once under cannabis. Therefore the numbers for different substances cannot be added together to give a total number of deaths
- Approximately a third of all drug-related poisoning deaths also contain a mention of alcohol or long-term alcohol abuse (for example cirrhosis) in addition to a drug

**Figure 3 Age-standardised death rates for selected substances: by sex, 2006–10<sup>1,2</sup>**



1 Age-standardised mortality rates per million population, standardised to the European Standard Population. Age-standardised rates are used to allow comparison between populations which may contain different proportions of people of different ages.

2 Figures are for deaths registered in each calendar year.

3 Deaths in England and Wales include non-residents.

Source: Office for National Statistics

### Heroin / Morphine

Over half (58 per cent) of all deaths related to drug poisoning involved an opiate drug. In 2010 there were 791 deaths involving the opiates heroin and/or morphine (see [Background Note 5](#)). For males, heroin/morphine was involved in far more deaths than any other substance. Between 2009 and 2010 there was a small, but non-significant, drop in the age-standardised mortality rate for males (24.6 deaths per million population). The corresponding rate in females was much lower at 4.5 deaths per million population, and has not changed significantly over the five-year period.

### Methadone

A large number of deaths involved the opiate methadone, a substance used to treat heroin addiction, but which is sometimes abused. In 2010 there were 355 deaths involving methadone. The male age-standardised rate for deaths involving methadone fell slightly to 9.9 deaths per million population in 2010, but it was still significantly higher than the rate in 2006 (7.2 deaths per million population). The equivalent rate for females remained stable in 2010 at 3.2 deaths per million population.

## Cocaine

There were 144 deaths involving cocaine in 2010. Between 2009 and 2010 male mortality rates for deaths involving cocaine decreased significantly from 6.6 to 4.6 deaths per million population (a 30 per cent fall). The equivalent rates for females were lower than for males, falling slightly from 0.9 in 2009 to 0.7 deaths per million population in 2010.

## Other recreational drugs

The number of deaths involving amphetamine fell to 56 in 2010. Most notably the number of deaths involving ecstasy has declined each year from 2006 to 2010, falling sharply to only eight deaths in 2010 (a fall of 70 per cent compared with 2009).

Over the past few years a number of new drugs have been controlled under the Misuse of Drugs Act 1971, including synthetic cannabinoid receptor agonists (for example, 'spice'), gamma-hydroxybutyrate (GHB) and its precursor gamma-butyrolactone (GBL), piperazines (benzyl piperazine – BZP and trifluoromethylphenylpiperazine – TFMPP) and most recently mephedrone. There were six deaths involving mephedrone in 2010, the first time this substance had been mentioned on death certificates in England and Wales. The number of deaths involving other so-called 'legal highs' have fallen slightly in 2010, and are low relative to the number of deaths from heroin/morphine.

According to results from the British Crime Survey the proportion of 16- to 59-year-olds reporting cocaine use in 2009/10 was significantly lower than 2008/09, but was similar to previous years (Home Office, 2010b). The Druglink Street Drug Trends Survey 2010 suggested that due to the current harsh economic climate people are only buying small amounts of cocaine (Daly, 2010). Moreover, there is evidence that the purity of cocaine is decreasing (Daly, 2009). It has also been reported that fewer people are taking ecstasy due to its poor quality (Daly, 2010). Academics from Cambridge University and other experts have suggested that people may have switched from using cocaine and ecstasy to using 'legal highs' such as mephedrone (Bird and Mercer, 2011 and Davies et al, 2010). This may partially explain the fall in deaths from cocaine and ecstasy, and the emergence of deaths involving mephedrone. It is interesting to note that the number of deaths from mephedrone is not as large as the corresponding fall in cocaine and ecstasy deaths.

## Benzodiazepines

There were 307 drug poisoning deaths involving benzodiazepines in 2010. Mortality rates were higher in males than in females and have increased in both sexes over the period from 2006 to 2010. In males the rate increased from 4.5 to 7.8 deaths per million population (a 73 per cent rise); and in females the rate rose from 1.7 to 3.1 deaths per million (an 82 per cent increase). The most common type of benzodiazepine involved in deaths was diazepam, with the number of deaths more than doubling from 89 in 2006 to 186 in 2010.

A recent survey suggests that 'black market' diazepam use continues to rise (Daly, 2010), which may explain the increase in deaths. However, the role of diazepam and other benzodiazepines in drug-related deaths is not clear, as 9 out of 10 deaths involving benzodiazepines also mention another drug.



### Antidepressants

There were 381 deaths involving antidepressants in 2010. Death rates were similar in males and females in 2010 (6.8 and 6.7 deaths per million population respectively), and have not changed significantly over the past five years. Compared with other types of antidepressants, more deaths involve tricyclic antidepressants (TCAs), but deaths involving TCAs are declining and reached a record low of 194 deaths in 2010. However, deaths involving Selective Serotonin Re-uptake Inhibitors (SSRIs) have been steadily increasing, and reached a record high of 136 deaths in 2010. In particular, deaths involving the SSRI citalopram have more than doubled in the last five years, from 46 deaths in 2006 to 96 deaths in 2010. Studies show that SSRIs are less toxic in overdose than TCAs (Hawton *et al*, 2010), hence the rise in SSRI-related deaths may be explained by increases in SSRI prescriptions. Hawton *et al* (2010) also suggests that citalopram is more toxic in overdose than other SSRIs, which has implications for prescribing practices.

### Paracetamol and other analgesics

Deaths involving paracetamol and its compounds continued to fall, with 199 deaths in 2010. The male mortality rate for these deaths fell by 39 per cent between 2009 and 2010, from 4.9 to 3.0 deaths per million population. In females, the equivalent rate went down between 2006 and 2007 and has remained relatively stable since then. In 2010 the female mortality rate was similar to that for males, at 3.4 deaths per million population.

The decline in deaths involving paracetamol is largely because of a fall in deaths mentioning co-proxamol (paracetamol and dextropropoxyphene), which fell by 87 per cent between 2006 and 2010. This can be explained by the withdrawal of co-proxamol in 2005 (Hawton *et al*, 2009). Despite the decrease in deaths involving co-proxamol Hawton *et al* (2009) suggested that there was no statistical evidence for an increase in deaths involving other analgesics. The latest data for deaths mentioning co-codamol (paracetamol and codeine), co-dydramol (paracetamol and dihydrocodeine), dihydrocodeine not from a compound and paracetamol not from a compound appear to support this, since the numbers of deaths have all either fallen or remained relatively stable over the past five years.

However, the number of deaths mentioning either codeine and/or tramadol (a synthetic opioid analgesic) have increased in recent years. The number of deaths involving tramadol have been steadily increasing since 1993 (when ONS records began), with deaths showing a marked rise from 87 in 2009 to 132 in 2010 (an increase of 52 per cent). At present, unlike most other opioid analgesics, tramadol is not controlled under the Misuse of Drugs Act 1971. The number of deaths mentioning codeine (not from a compound formulation) increased by 50 per cent between 2006 and 2009, and stabilised in 2010 when there were 91 deaths. It is not clear from these figures whether the increase in deaths from codeine and tramadol is in people who have been prescribed these drugs or in people who are using them recreationally.

### Emerging trends

In 2006 there were only two deaths involving helium, and in 2010 there were 33. Although the number of deaths involving helium is small compared with many other substances, this rise is the largest percentage increase in deaths mentioning a specific substance between 2006 and 2010. This may be of particular interest to suicide prevention researchers, as most deaths mentioning helium were suicides. See [Background Note 8](#) for further information on helium deaths.

**Table 3**      **Number of deaths where selected substances were mentioned on the death certificate, 2006–10<sup>1</sup>**

England and Wales <sup>1</sup>	Deaths				
	2006	2007	2008	2009	2010
All drug poisonings	2,570	2,640	2,928	2,878	2,747
Heroin / Morphine	713	829	897	880	791
Methadone	241	325	378	408	355
Cocaine	190	196	235	202	144
All amphetamines	92	97	99	76	56
MDMA/Ecstasy	48	47	44	27	8
Cannabis	17	12	19	22	11
Gamma-hydroxybutyrate (GHB) / Gamma-butyrolactone (GBL)	7	9	20	16	12
BZP / TFMPP	0	0	0	9	5
Mephedrone	0	0	0	0	6
All benzodiazepines	177	207	230	261	307
Diazepam	89	123	133	160	186
Zopiclone / Zolpidem	39	51	36	79	67
All antidepressants	336	335	381	405	381
Tricyclic antidepressants (BNF 4.3.1)	212	203	227	218	194
Amitriptyline	108	113	144	138	128
Selective serotonin re-uptake inhibitors (BNF 4.3.3)	76	80	116	113	136
Citalopram	42	41	78	79	96
Other antidepressants (BNF 4.3.2 and 4.3.4)	46	63	49	81	71
Antipsychotics (BNF 4.2.1)	78	82	87	83	87
Paracetamol (includes dextropropoxyphene mentioned without paracetamol) <sup>2</sup>	309	242	260	255	199
Paracetamol <sup>3</sup>	287	224	242	249	196
Paracetamol & dextropropoxyphene compound formulation <sup>2</sup>	97	72	48	32	13
Paracetamol & codeine compound formulation	42	49	57	53	43
Paracetamol & dihydrocodeine compound formulation	18	9	12	13	4
Paracetamol not from compound formulation	154	115	147	160	139
Codeine not from compound formulation <sup>4</sup>	60	60	70	90	91
Dihydrocodeine not from compound formulation	96	85	79	99	90
Tramadol	81	79	83	87	132
Helium	2	2	12	21	33

1 Figures are for deaths registered in each calendar year, and include deaths of non-residents.

2 Dextropropoxyphene is very rarely ingested except in combination with paracetamol, therefore figures include dextropropoxyphene mentioned without paracetamol.

3 Figures exclude dextropropoxyphene mentioned without paracetamol.

4 From 2010 onwards, when ibuprofen and codeine are both mentioned it is assumed they are from a compound formulation and these deaths have been excluded from the 'Codeine not from compound formation' row.

Source: Office for National Statistics

## Results on the Office for National Statistics website

A back series of data on deaths related to drug poisoning in England and Wales between 1993 and 2010 are available to download in a Microsoft Excel workbook from the [ONS website](#).

The workbook contains the following tables:

- Table 1 – Numbers of deaths from drug-related poisoning and drug misuse: by sex
- Table 2a – Numbers of deaths from drug-related poisoning: by sex and underlying cause of death
- Table 2b – Numbers of deaths from drug-related poisoning: by sex and age group
- Table 3a – Numbers of deaths from drug misuse: by sex and underlying cause of death
- Table 3b – Numbers of deaths from drug misuse: by sex and age group
- Table 4a,b,c – Numbers of deaths where selected substances were mentioned on the death certificate (total mentions, mentions alone and mentions with alcohol)
- Table 5 – Number of deaths related to drug misuse: by sex and country

## Background Notes

1. The figures presented in this bulletin have been produced using a special database of deaths related to drug poisoning, which has been developed to facilitate research into these deaths and to aid the identification of specific substances involved. The database is extracted from the national mortality database for England and Wales. Deaths are included if the underlying cause of death is regarded as drug-related, according to the National Statistics definition. More information on this definition and issues relating to the interpretation of drug-related deaths data can be found in Christophersen *et al* (1998). The International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10) codes used to define these deaths are listed in Box 1.

### Box 1 ICD-10 codes for deaths related to drug poisoning

ICD-10 underlying cause code	Description
F11–F16, F18–F19	Mental and behavioural disorders due to drug use (excluding alcohol and tobacco)
X40–X44	Accidental poisoning by drugs, medicaments and biological substances
X60–X64	Intentional self-poisoning by drugs, medicaments and biological substances
Y10–Y14	Poisoning by drugs, medicaments and biological substances, undetermined intent
X85	Assault by drugs, medicaments and biological substances

2. Almost all deaths on the drug poisoning database had a coroner's inquest. For each death the database includes information about the causes of death and substances involved in addition to other information about the deceased, as described in Box 2.

### Box 2 Information contained in the drug poisoning database

For each death the database of drug related poisonings includes:

- The ICD codes for underlying cause of death and other causes mentioned on the death certificate.
- Every mention of a substance recorded by the coroner in the cause of death section or elsewhere on the coroner's certificate after inquest (Form 99(REV)).
- An indicator to show if alcohol is mentioned. This includes a wide variety of scenarios ranging from evidence of alcohol consumption around the time of death (for example an empty vodka bottle found at the scene or alcohol found after toxicology tests) to long-term alcohol abuse and cirrhosis of the liver.
- Other information recorded at death registration such as age, sex, marital status, occupation and place of usual residence.

3. In 2000 the Advisory Council on the Misuse of Drugs published a report, *Reducing Drug Related Deaths* (The Advisory Council on the Misuse of Drugs, 2000). In response to this report's recommendations on improving the present system for collecting data on drug-related deaths, a technical working group was set up. This group, consisting of experts across government, the devolved administrations, coroners, toxicologists and drugs agencies, proposed a headline indicator for drug misuse deaths as part of the government's action plan (Department of Health, 2001) to reduce the number of these deaths. This indicator also takes into account the information needs of the European Monitoring Centre for Drugs and Drug Addiction. The baseline year for monitoring deaths related to drug misuse was set as 1999. The definition of the headline indicator using ICD-10 is shown in Box 3. The definition using ICD 9 was published in a previous annual report (Office for National Statistics, 2002).

### Box 3 Drug misuse indicator

Cause of death categories included in the headline indicator of drug misuse deaths (the relevant ICD-10 codes are given in brackets):

- a) Deaths where the underlying cause of death has been coded to the following categories of mental and behavioural disorders due to psychoactive substance use (excluding alcohol, tobacco and volatile solvents):
- opioids (F11)
  - cannabinoids (F12)
  - sedatives or hypnotics (F13)
  - cocaine (F14)
  - other stimulants, including caffeine (F15)
  - hallucinogens (F16)
  - multiple drug use and use of other psychoactive substances (F19)
- b) Deaths coded to the following categories and where a drug controlled under the Misuse of Drugs Act 1971 was mentioned on the death record:
- Accidental poisoning by drugs, medicaments and biological substances (X40–X44)
  - Intentional self-poisoning by drugs, medicaments and biological substances (X60–X64)
  - Poisoning by drugs, medicaments and biological substances, undetermined intent (Y10–Y14)
  - Assault by drugs, medicaments and biological substances (X85)
  - Mental and behavioural disorders due to use of volatile solvents (F18)

#### Notes

- i. Specific rules were adopted for dealing with compound analgesics which contain relatively small quantities of drugs listed under the Misuse of Drugs Act, the major ones being dextropropoxyphene, dihydrocodeine and codeine. Where these drugs are mentioned on a death record, they have been excluded from the drug misuse indicator if they are part of a compound analgesic (such as co-proxamol, co-dydramol or co-codamol) or cold remedy.

Dextropropoxyphene has been excluded on all occasions, whether or not paracetamol or a compound analgesic was mentioned. This is because dextropropoxyphene is rarely, if ever, available other than as part of a paracetamol compound. However, codeine or dihydrocodeine mentioned without paracetamol or ibuprofen were included in the indicator. This is because they are routinely available and known to be abused in this form. This approach is the same as that taken by National Records of Scotland (NRS).

ii. Drugs controlled under the Misuse of Drugs Act 1971 include class A, B and C drugs.

4. Nearly one in seven deaths among people in their twenties were drug-related. This [figure](#) has been calculated from the number of deaths from all drug poisonings of people aged 20-29, in England and Wales in 2010 (444 deaths) and the number of deaths from all causes in this age group in England and Wales in 2010 (3,281 deaths). The number of deaths from all causes, by sex and age is available on the ONS website at: [www.ons.gov.uk/ons/rel/vsob1/death-reg-sum-tables/2010/index.html](http://www.ons.gov.uk/ons/rel/vsob1/death-reg-sum-tables/2010/index.html)
5. As heroin (diamorphine) breaks down in the body into morphine, either heroin and/or morphine may be detected at post mortem and recorded on the death certificate. Therefore a combined figure for deaths where heroin or morphine was mentioned on the death certificate is included in [Table 3](#).
6. The figure for cocaine in [Table 3](#) includes deaths where cocaine was taken in the form of crack cocaine. It is not possible to separately identify crack cocaine from other forms of cocaine at post mortem. Other evidence to distinguish the form of cocaine taken is rarely provided on death certificates.
7. The figure for GHB (gamma-hydroxybutyrate) in [Table 3](#) includes deaths where GBL (gamma-butyrolactone) was taken. It is not possible to separately identify GBL and GHB at post mortem as GBL is rapidly converted to GHB when ingested into the human body.
8. The number of deaths mentioning helium reported in this statistical bulletin is likely to be an underestimate, as some deaths involving helium have an underlying cause of death of hanging, strangulation and suffocation (ICD-10 codes X70 and Y20), and are not included in the drug poisoning database.
9. Death rates are presented as deaths per million population, directly age-standardised to the European standard population.
10. Excel workbooks containing the data used to produce Figures 1 to 3 are available to download from the [ONS website](#). These tables contain both the mortality rate and the upper and lower confidence limits. These limits form a confidence interval, which is a measure of the statistical precision of an estimate and shows the range of uncertainty around the estimated figure. Calculations based on small numbers of events are often subject to random fluctuations. As a general rule, if the confidence interval around one figure overlaps with the interval around another, we cannot say with certainty that there is more than a chance difference between the two figures. Within this statistical bulletin, a difference which is described as 'significant', means 'statistically significant', assessed by examining the confidence intervals.
11. Special extracts and tabulations of drug poisoning deaths data are available to order for a charge (subject to legal frameworks, disclosure control and agreement of costs, where appropriate). Such requests or enquiries should be made to:

Mortality Analysis Team, Health and Life Events Division  
Office for National Statistics  
Government Buildings  
Cardiff Road  
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12. As a valued user of our statistics, we would welcome feedback on this release. In particular, the content, format and structure. This is in line with the Health and Life Events user engagement strategy, available to download from the ONS website at:  
[www.ons.gov.uk/ons/guide-method/method-quality/user-engagement/index.html](http://www.ons.gov.uk/ons/guide-method/method-quality/user-engagement/index.html)  
Please send feedback to the postal or e-mail address above.
13. Details of the policy governing the release of new data are available from the Media Relations Office.
14. National Statistics are produced to high professional standards set out in the Code of Practice for Official Statistics. They undergo regular quality assurance reviews to ensure that they meet customer needs. They are produced free from any political interference.

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