Annual Causes of Death in the United States

Published: 01/09/2008 - 16:51

Related Chapter:

Overdose

1.

(Annual Causes of Death, By Cause)

Cause of death (Data from 2009 unless otherwise noted)	**Number**
All Causes, 2009	2,437,163
Diseases of Heart	599,413
Malignant Neoplasms	567,628

Chronic Lower Respiratory Diseases
137,353

Cerebrovascular Diseases
128,842

Poisoning
41,592

Drug Overdose (2010) [2]
38,329

Intentional Self-Harm (Suicide)
36,909

Septicemia
35,639

Motor Vehicle Accidents
34,485

Firearm Injuries
31,347

Alcohol-Induced
24,518

Pharmaceutical Drug Overdose (2010)
22,134

All Illicit Drugs Combined (2000)
17,000 [3]

Opioid Analgesic Overdose (2010)
16,651

Homicide
16,799

Human Immunodeficiency Virus (HIV)
9,406

Viral hepatitis
7,694

Cannabis (Marijuana)
0

1 Based on the International Classification of Diseases, Tenth Revision, Second Edition, 2004, except for "cannabis"

2 "Drug" includes both legal and illegal drugs.

3 Mokdad, Ali H., PhD, James S. Marks, MD, MPH, Donna F. Stroup, PhD, MSc, Julie L. Gerberding, MD, MPH, "Actual Causes of Death in the United States, 2000," Journal of the American Medical Association, (March 10, 2004), G225 Vol. 291, No. 10, 1242.

Source:

Kenneth D. Kochanek, M.A.; Jiaquan Xu, M.D.; Sherry L. Murphy, B.S.; Arialdi M. Minino, M.P.H.; and Hsiang-Ching Kung, Ph.D., "Deaths: Final Data for 2009," Division of Vital Statistics (Atlanta, GA: Centers for Disease Control), Vol. 60,

Number 3, Dec. 29, 2011

http://www.cdc.gov/nchs/data/nvsr/nvsr60/nvsr60_03.pdf

Christopher M. Jones, PharmD, Karin A. Mack, PhD, and Leonard J. Paulozzi, MD, "Pharmaceutical Overdose Deaths, United States, 2010," Journal of the American Medical Association, February 20, 2013, Vol 309, No. 7, p. 658.

http://jama.jamanetwork.com/article.aspx?articleid=1653518

2.

(Drug Overdose Deaths and Pharmaceutical Drugs, 2010) "In 2010, there were 38,329 drug overdose deaths in the United States; most (22 134; 57.7%) involved pharmaceuticals; 9429 (24.6%) involved only unspecified drugs. Of the pharmaceutical-related overdose deaths, 16,451 (74.3%) were unintentional, 3780 (17.1%) were suicides, and 1868 (8.4%) were of undetermined intent. Opioids (16,651; 75.2%), benzodiazepines (6497; 29.4%), antidepressants (3889; 17.6%), and antiepileptic and antiparkinsonism drugs (1717; 7.8%) were the pharmaceuticals (alone or in combination with other drugs) most commonly involved in pharmaceutical overdose deaths. Among overdose deaths involving opioid analgesics, the pharmaceuticals most often also involved in these deaths were benzodiazepines (5017; 30.1%), antidepressants (2239; 13.4%), antiepileptic and antiparkinsonism drugs (1125; 6.8%), and antipsychotics and neuroleptics (783; 4.7%)."

Source:

Christopher M. Jones, PharmD, Karin A. Mack, PhD, and Leonard J. Paulozzi, MD, "Pharmaceutical Overdose Deaths, United States, 2010," Journal of the American Medical Association, February 20, 2013, Vol 309, No. 7, p. 658.

http://jama.jamanetwork.com/article.aspx?articleid=1653518

3.

(Polydrug Involvement in Pharmaceutical Overdose Deaths in the US, 2010) "Opioids were frequently implicated in overdose deaths involving other pharmaceuticals. They were involved in the majority of deaths involving benzodiazepines (77.2%), antiepileptic and antiparkinsonism drugs (65.5%), antipsychotic and neuroleptic drugs (58.0%), antidepressants (57.6%), other analgesics, antipyretics, and antirheumatics (56.5%), and other psychotropic drugs (54.2%). Among overdose deaths due to psychotherapeutic and central nervous system pharmaceuticals, the proportion involving only a single class of such drugs was highest for opioids (4903/16 651; 29.4%) and lowest for benzodiazepines (239/6497; 3.7%)."

Source:

Christopher M. Jones, PharmD, Karin A. Mack, PhD, and Leonard J. Paulozzi, MD, "Pharmaceutical Overdose Deaths, United

States, 2010," Journal of the American Medical Association, February 20, 2013, Vol 309, No. 7, p. 658.

http://jama.jamanetwork.com/article.aspx?articleid=1653518

4.

(Role of Psychopharmaceuticals in Overdose Deaths) "This analysis confirms the predominant role opioid analgesics play in pharmaceutical overdose deaths, either alone or in combination with other drugs. It also, however, highlights the frequent involvement of drugs typically prescribed for mental health conditions such as benzodiazepines, antidepressants, and antipsychotics in overdose deaths. People with mental health disorders are at increased risk for heavy therapeutic use, nonmedical use, and overdose of opioids. [4-6] Screening, identification, and appropriate management of such disorders is an important part of both behavioral health and chronic pain management."

Source:

Christopher M. Jones, PharmD, Karin A. Mack, PhD, and Leonard J. Paulozzi, MD, "Pharmaceutical Overdose Deaths, United States, 2010," Journal of the American Medical Association, February 20, 2013, Vol 309, No. 7, p. 659.

http://jama.jamanetwork.com/article.aspx?articleid=1653518

5.

(Opioid Deaths) "From 1999 to 2007, the number of U.S. poisoning deaths involving any opioid analgesic (e.g., oxycodone, methadone, or hydrocodone) more than tripled, from 4,041 to 14,459, or 36% of the 40,059 total poisoning deaths in 2007. In 1999, opioid analgesics were involved in 20% of the 19,741 poisoning deaths. During 1999–2007, the number of poisoning deaths involving specified drugs other than opioid analgesics increased from 9,262 to 12,790, and the number involving nonspecified drugs increased from 3,608 to 8,947."

Source:

"Number of Poisoning Deaths* Involving Opioid Analgesics and Other Drugs or Substances — United States, 1999–2007," Morbidity and Mortality Weekly Report, August 20, 2010, Vol. 59, No. 32 (Atlanta, GA: US Centers for Disease Control), p. 1026.

http://www.cdc.gov/mmwr/pdf/wk/mm5932.pdf

6.

(Opiate Pain Reliever OD Deaths) "During 1999–2008, overdose death rates, sales, and substance abuse treatment admissions related to OPR increased in parallel (Figure 2). The overdose death rate in 2008 was nearly four times the rate in 1999. Sales of OPR in 2010 were four times those in 1999."

Source:

Centers for Disease Control and Prevention, "Vital Signs: Overdoses of Prescription Opioid Pain Relievers — United States, 1999–2008," Morbidity and Mortality Weekly Report (Atlanta, GA: 2011), Vol. 60, No. 43, p. 1488.

http://www.cdc.gov/mmwr/pdf/wk/mm6043.pdf

7.

(Prescription Drug ODs) "In 2008, a total of 36,450 deaths were attributed to drug overdose, a rate of 11.9 per 100,000 population (Table 1), among which a drug was specified in 27,153 (74.5%) deaths. One or more prescription drugs were involved in 20,044 (73.8%) of the 27,153 deaths, and OPR were involved in 14,800 (73.8%) of the 20,044 prescription drug overdose deaths."

Source:

Centers for Disease Control and Prevention, "Vital Signs: Overdoses of Prescription Opioid Pain Relievers — United States, 1999–2008," Morbidity and Mortality Weekly Report (Atlanta, GA: 2011), Vol. 60, No. 43, p. 1488.

http://www.cdc.gov/mmwr/pdf/wk/mm6043.pdf

8.

(Mortality and IDU, Worldwide 2010) "It is also estimated that there were between 99,000 and 253,000 deaths globally in 2010 as a result of illicit drug use, with drug-related deaths accounting for between 0.5 and 1.3 per cent of all-cause mortality among those aged 15-64.1 Moreover, it was estimated that in 2008 there were 16 million injecting drug users worldwide and that 3 million (18.9 per cent) of them were living with HIV, though no new figures are available after 2008. Global prevalence of hepatitis C infection among injecting drug users in 2010 was 46.7 per cent, meaning that some 7.4 million injecting drug users worldwide are infected with hepatitis C. And some 2.3 million injecting drug users are infected with hepatitis B. Evidence is also emerging that non-injecting drug use is also associated with an increased risk of HIV infection, principally due to unprotected sex."

Source:

UN Office on Drugs and Crime, World Drug Report 2012 (United Nations publication, Sales No. E.12.XI.1), p. 7.

https://www.unodc.org/documents/data-and-analysis/WDR2012/WDR_2012_web_s...

9.

(Marijuana Mortality) "Indeed, epidemiological data indicate that in the general population marijuana use is not associated with increased mortality."

Source:

Janet E. Joy, Stanley J. Watson, Jr., and John A Benson, Jr., "Marijuana and Medicine: Assessing the Science Base," Division of Neuroscience and Behavioral Research, Institute of Medicine (Washington, DC: National Academy Press, 1999), p. 109.

http://www.nap.edu/openbook.php?isbn=0309071550&page=109

10.

(Alcohol Mortality) "Excessive alcohol use* accounted for an estimated average of 80,000 deaths and 2.3 million years of potential life lost (YPLL) in the United States each year during 2001–2005, and an estimated $223.5 billion in economic costs in 2006. Binge drinking accounted for more than half of those deaths, two thirds of the YPLL, and three quarters of the economic costs."

* Excessive alcohol use includes binge drinking (defined by CDC as consuming four or more drinks per occasion for women or five or more drinks per occasion for men), heavy drinking (defined as consuming more than one drink per day on average for women or more than two drinks per day on average for men), any alcohol consumption by pregnant women, and any alcohol consumption by youths aged less than 21 years.

Source:

Kanny, Dafna; Garvin, William S.; and Balluz, Lina, "ital Signs: Binge Drinking Prevalence, Frequency, and Intensity Among Adults — United States, 2010," Morbidity and Mortality Weekly Report (Atlanta, GA: Centers for Disease Control and Prevention, January 13, 2012) Vol. 61, No. 1, p. 14.

http://www.cdc.gov/mmwr/pdf/wk/mm6101.pdf

11.

(Alcohol-Attributable Cancer Deaths and Years of Potential Life Lost (YPLL) in the US) "Overall, we found that alcohol use accounted for approximately 3.5% of all cancer deaths, or about 19 500 persons, in 2009. It was a prominent cause of premature loss of life, with each alcohol-attributable cancer death resulting in about 18 years of potential life lost. Although cancer risks were greater and alcohol-attributable cancer deaths more common among persons who consumed an average of more than 40 grams of alcohol per day (‡ 3 drinks), approximately 30% of alcohol-attributable cancer deaths occurred among persons who consumed 20 grams or less of alcohol per day. About 15% of breast cancer deaths among women in the United States were attributable to alcohol consumption."

Source:

David E. Nelson, Dwayne W. Jarman, Jürgen Rehm, Thomas K. Greenfield, Grégoire Rey, William C. Kerr, Paige Miller, Kevin D. Shield, Yu Ye, and Timothy S. Naimi. (2013). Alcohol-Attributable Cancer Deaths and Years of Potential Life Lost in the United States. American Journal of Public Health. e-View Ahead of Print. doi: 10.2105/AJPH.2012.301199

Abstract at http://ajph.aphapublications.org/doi/abs/10.2105/AJPH.2012.301199

12.

(Alcohol-Attributable Cancer Deaths in the US) "Our estimate of 19,500 alcohol-related cancer deaths is greater than the total number of deaths from some types of cancer that receive much more prominent attention, such as melanoma or ovarian cancer, [36] and it amounted to more than two thirds of all prostate cancer deaths in 2009. [36] Reducing alcohol consumption is an important and underemphasized cancer prevention strategy, yet receives surprisingly little attention among public health, medical, cancer, advocacy, and other organizations in the United States, especially when compared with efforts related to other cancer prevention topics such as screening, genetics, tobacco, and obesity."

Source:

David E. Nelson, Dwayne W. Jarman, Jürgen Rehm, Thomas K. Greenfield, Grégoire Rey, William C. Kerr, Paige Miller, Kevin D. Shield, Yu Ye, and Timothy S. Naimi. (2013). Alcohol-Attributable Cancer Deaths and Years of Potential Life Lost in the United States. American Journal of Public Health. e-View Ahead of Print. doi: 10.2105/AJPH.2012.301199

Abstract at http://ajph.aphapublications.org/doi/abs/10.2105/AJPH.2012.301199

13.

(Alcohol-Induced Mortality 2009) "In 2009, a total of 24,518 persons died of alcohol-induced causes in the United States (Tables 10, 12, and 13). This category includes deaths from dependent and nondependent use of alcohol, and also includes accidental poisoning by alcohol. It excludes unintentional injuries, homicides, and other causes indirectly related to alcohol use, as well as deaths due to fetal alcohol syndrome (for a list of alcohol-induced causes, see 'Technical Notes').

"In 2009, the age-adjusted death rate for alcohol-induced causes for males was three times the rate for females. Compared with the rate for the white population, the rate for the black population was 19.5% lower.

"There was no change the age-adjusted death rate for alcohol-induced causes for the total population from 2008 to 2009. The age-adjusted death rate decreased 2.6% for non-Hispanic white males. The rate increased 7.9% for non-Hispanic white females."

Source:

Kenneth D. Kochanek, M.A.; Jiaquan Xu, M.D.; Sherry L. Murphy, B.S.; Arialdi M. Minino, M.P.H.; and Hsiang-Ching Kung, Ph.D., "Deaths: Final Data for 2009," Division of Vital Statistics (Atlanta, GA: Centers for Disease Control), Vol. 60, Number 3, Dec. 29, 2011, p. 11.

http://www.cdc.gov/nchs/data/nvsr/nvsr60/nvsr60_03.pdf

14.

(Suicide, 2009) The US Centers for Disease Control reports that in 2009, there were a total of 36,909 deaths from suicide in the US.

Source:

Kenneth D. Kochanek, M.A.; Jiaquan Xu, M.D.; Sherry L. Murphy, B.S.; Arialdi M. Minino, M.P.H.; and Hsiang-Ching Kung, Ph.D., "Deaths: Final Data for 2009," Division of Vital Statistics (Atlanta, GA: Centers for Disease Control), Vol. 60, Number 3, Dec. 29, 2011, Table B, p. 5.

http://www.cdc.gov/nchs/data/nvsr/nvsr60/nvsr60_03.pdf

15.

(Drug-Induced, 2009) "In 2009, a total of 39,147 persons died of drug-induced causes in the United States (Tables 10, 12, and 13). This category includes deaths from poisoning and medical conditions caused by dependent and nondependent use of

legal or illegal drugs, and also includes poisoning from medically prescribed and other drugs. It excludes unintentional injuries, homicides, and other causes indirectly related to drug use, as well as newborn deaths due to the mother's drug use. (For a list of drug-induced causes, see 'Technical Notes.' See also the discussion of poisoning mortality that uses the more narrow definition of poisoning as an injury in the section titled 'Injury mortality by mechanism and intent'.)

"For males in 2009, the age-adjusted death rate for drug-induced causes was 1.6 times the rate for females. The age-adjusted death rate for black females was 40.2% lower than the rate for white females, and the rate for black males was 24.7% lower than the rate for white males.

"In 2009, the age-adjusted death rate for drug-induced causes for the U.S. population remained unchanged from 2008 (12.6). Among the major race-sex and race-ethnicity-sex groups during the same period, the age-adjusted death rate for drug-induced causes increased only for API males 29.2%. All other major race-sex and race-ethnicity-sex groups showed no changes in 2009 from 2008."

Source:

Kenneth D. Kochanek, M.A.; Jiaquan Xu, M.D.; Sherry L. Murphy, B.S.; Arialdi M. Minino, M.P.H.; and Hsiang-Ching Kung, Ph.D., "Deaths: Final Data for 2009," Division of Vital Statistics (Atlanta, GA: Centers for Disease Control), Vol. 60, Number 3, Dec. 29, 2011, p. 11.

http://www.cdc.gov/nchs/data/nvsr/nvsr60/nvsr60_03.pdf

16.

(Homicides, 2009) The US Centers for Disease Control reports that in 2009, there were a total of 16,799 deaths from homicide in the US.

Source:

Kenneth D. Kochanek, M.A.; Jiaquan Xu, M.D.; Sherry L. Murphy, B.S.; Arialdi M. Minino, M.P.H.; and Hsiang-Ching Kung, Ph.D., "Deaths: Final Data for 2009," Division of Vital Statistics (Atlanta, GA: Centers for Disease Control), Vol. 60, Number 3, Dec. 29, 2011, Table B, p. 5.

http://www.cdc.gov/nchs/data/nvsr/nvsr60/nvsr60_03.pdf

17.

(Leading Causes of Death by Race/Ethnicity, 2008) The Centers for Disease Control reported that in 2008, HIV disease was the 25th leading cause of death in the US for non-Hispanic whites, the 10th leading cause of death for non-Hispanic

blacks, and the 17th leading cause of death for Hispanics.

Source:

Heron, Melonie P., PhD, "Deaths: Leading Causes for 2008," National Vital Statistics Reports, Vol. 60, No. 6 (Hyattsville, MD: National Center for Health Statistics, June 6, 2012), p. 12, Table E.

http://www.cdc.gov/nchs/data/nvsr/nvsr60/nvsr60_06.pdf

18.

(Deaths and Serious Patient Outcomes from FDA-Approved Drugs) "These data describe the outcome of the patient as defined in U.S. reporting regulations (21 CFR 310.305, 314.80, 314.98, 600.80) and Forms FDA 3500 and 3500A (the MedWatch forms). Serious means that one or more of the following outcomes were documented in the report: death, hospitalization, life-threatening, disability, congenital anomaly and/or other serious outcome. Documenting one or more of these outcomes in a report does not necessarily mean that the suspect product(s) named in the report was the cause of these outcomes."

AERS [1] Patient Outcomes by Year

Year	Death	Serious
2000	19,445	153,818
2001		

23,988
166,384

2002
28,181
159,000

2003
35,173
177,008

2004
34,928
199,510

2005
40,238
257,604

2006
37,465
265,130

2007
36,834
273,276

2008
49,958
319,741

2009
63,846

373,535

2010

82,724

471,291

Total 2000-2010

452,780

2,816,297

Total 2001-2005

162,508

959,506

Total 2006-2010

270,827

1,702,973

% Chg

+66.7%

+77.5%

1 AERS = Adverse Events Reporting System. This system managed by the US Food and Drug Administration (FDA) contains over four million reports of adverse events and reflects data from 1969 to the present. Data from AERS are presented as summary statistics. These summary statistics cover data received over the last ten years. These data are presented at the individual report level; some of the numbers may reflect duplicate reporting due to factors such as follow-up reports received on a case or different persons reporting on the same patient case.

Source:

"AERS Patient Outcomes by Year," Food and Drug Administration (Washington, DC: U.S. Department of Health and Human Services, March 31, 2010).

http://www.fda.gov/Drugs/GuidanceComplianceRegulatoryInformation/Surveil...

19.

(Illicit Drug Use) "Illicit drug use is associated with suicide, homicide, motor-vehicle injury, HIV infection, pneumonia, violence, mental illness, and hepatitis. An estimated 3 million individuals in the United States have serious drug problems. Several studies have reported an undercount of the number of deaths attributed to drugs by vital statistics; however, improved medical treatments have reduced mortality from many diseases associated with illicit drug use. In keeping with the report by McGinnis and Foege, we included deaths caused indirectly by illicit drug use in this category. We used attributable fractions to compute the number of deaths due to illicit drug use. Overall, we estimate that illicit drug use resulted in approximately 17000 deaths in 2000, a reduction of 3000 deaths from the 1990 report."

Source:

Mokdad, Ali H., PhD, James S. Marks, MD, MPH, Donna F. Stroup, PhD, MSc, Julie L. Gerberding, MD, MPH, "Actual Causes of Death in the United States, 2000," Journal of the American Medical Association, (March 10, 2004), G225 Vol. 291, No. 10, 1242.

http://www.csdp.org/research/1238.pdf

20.

(Homicide Rates - International Comparisons, 2010) "The homicide rate in the Americas is, at 15.6 per 100,000, more than double the world average (figure 1.3), while, at 17.4 per 100,000, Africa has the highest rate among all regions, although it also has the largest uncertainty range due to large discrepancies between criminal justice and public health data.4 Asia falls

between 2.4 and 4.3 per 100,000, and both Europe and Oceania also fall below the global average at 3.5 per 100,000, respectively."

Source:

UN Office on Drugs and Crime, "2011 Global Study on Homicide," 2011, p. 21.

http://www.unodc.org/documents/data-and-analysis/statistics/Homicide/Glo...

21.

(Leading Causes of Death 2000) "The leading causes of death in 2000 were tobacco (435,000 deaths; 18.1% of total US deaths), poor diet and physical inactivity (400,000 deaths; 16.6%), and alcohol consumption (85,000 deaths; 3.5%). Other actual causes of death were microbial agents (75,000), toxic agents (55,000), motor vehicle crashes (43,000), incidents involving firearms (29,000), sexual behaviors (20,000), and illicit use of drugs (17,000)."

Note: According to a correction published by the Journal on January 19, 2005, "On page 1240, in Table 2, '400,000 (16.6)' deaths for 'poor diet and physical inactivity' in 2000 should be '365,000 (15.2).' A dagger symbol should be added to 'alcohol consumption' in the body of the table and a dagger footnote should be added with 'in 1990 data, deaths from alcohol-related crashes are included in alcohol consumption deaths, but not in motor vehicle deaths. In 2000 data, 16,653 deaths from alcohol-related crashes are included in both alcohol consumption and motor vehicle death categories."

Source:

Mokdad, Ali H., PhD, James S. Marks, MD, MPH, Donna F. Stroup, PhD, MSc, Julie L. Gerberding, MD, MPH, "Actual Causes of Death in the United States, 2000," Journal of the American Medical Association, (March 10, 2004), G225 Vol. 291, No. 10, p. 1238, 1240.

http://proxy.baremetal.com/csdp.org/research/1238.pdf

Source for Correction: Journal of the American Medical Association, Jan. 19, 2005, Vol. 293, No. 3, p. 298.

22.

(Adverse Drug Reactions) "Adverse drug reactions are a significant public health problem in our health care system. For the 12,261,737 Medicare patients admitted to U.S. hospitals, ADRs were projected to cause the following increases: 2976 deaths,

118,200 patient-days, $516,034,829 in total charges, $37,611,868 in drug charges, and $9,456,698 in laboratory charges. If all Medicare patients were considered, these figures would be 3 times greater."

Source:

C. A. Bond, PharmD, FASHP, FCCP, and Cynthia L. Raehl, PharmD, FASHP, FCCP, Department of Pharmacy Practice, School of Pharmacy, Texas Tech University Health Sciences Center, Amarillo, Texas, "Adverse Drug Reactions in United States Hospitals" Pharmacotherapy, 2006;26(5):601-608.

http://www.ncbi.nlm.nih.gov/pubmed/16637789

23.

(Adverse Drug Reaction Deaths) "Our study revealed that experiencing an ADR [Adverse Drug Reaction] while hospitalized substantially increased the risk of death (1971 excess deaths, OR 1.208, 95% CI 1.184-1.234). This finding reflects about a 20% increase in mortality associated with an ADR in hospitalized patients. Extrapolating this finding to all patients suggests that 2976 Medicare patients/year and 8336 total patients/year die in U.S. hospitals as a direct result of ADRs; this translates to approximately 1.5 patients/hospital/year."

Source:

C. A. Bond, PharmD, FASHP, FCCP and Cynthia L. Raehl, PharmD, FASHP, FCCP, "Adverse Drug Reactions in United States Hospitals," Pharmacotherapy, 2006;26(5):601-608.

http://www.medscape.com/viewarticle/531809

24.

(Marijuana Safety - DEA Administrative Law Judge's Ruling)

"3. The most obvious concern when dealing with drug safety is the possibility of lethal effects. Can the drug cause death?

"4. Nearly all medicines have toxic, potentially lethal effects. But marijuana is not such a substance. There is no record in the extensive medical literature describing a proven, documented cannabis-induced fatality.

"5. This is a remarkable statement. First, the record on marijuana encompasses 5,000 years of human experience. Second, marijuana is now used daily by enormous numbers of people throughout the world. Estimates suggest that from twenty million to fifty million Americans routinely, albeit illegally, smoke marijuana without the benefit of direct medical supervision. Yet, despite this long history of use and the extraordinarily high numbers of social smokers, there are simply no credible medical

reports to suggest that consuming marijuana has caused a single death.

"6. By contrast aspirin, a commonly used, over-the-counter medicine, causes hundreds of deaths each year.

"7. Drugs used in medicine are routinely given what is called an LD-50. The LD-50 rating indicates at what dosage fifty percent of test animals receiving a drug will die as a result of drug induced toxicity. A number of researchers have attempted to determine marijuana's LD-50 rating in test animals, without success. Simply stated, researchers have been unable to give animals enough marijuana to induce death.

"8. At present it is estimated that marijuana's LD-50 is around 1:20,000 or 1:40,000. In layman terms this means that in order to induce death a marijuana smoker would have to consume 20,000 to 40,000 times as much marijuana as is contained in one marijuana cigarette. NIDA-supplied marijuana cigarettes weigh approximately .9 grams. A smoker would theoretically have to consume nearly 1,500 pounds of marijuana within about fifteen minutes to induce a lethal response.

"9. In practical terms, marijuana cannot induce a lethal response as a result of drug-related toxicity."

Source:

US Department of Justice, Drug Enforcement Administration, "In the Matter of Marijuana Rescheduling Petition" (Docket #86-22), September 6, 1988, p. 56-57.

http://druglibrary.net/olsen/MEDICAL/YOUNG/young4.html

25.

(Dangers of New Prescription Drugs) "Each year offers new examples of injuries and deaths caused by untoward dangers in prescription drugs. Prominent illustrations from recent years include Vioxx, a popular arthritis painkiller that more than doubled the risk of heart attacks and strokes, [6] a risk that lingered long after users stopped taking the drug; [7] 'Phen-fen,' a diet drug that caused heart damage; [8] and Propulsid, a drug that reduced gastric acid but also threatened patients' hearts. [9] Once information on these side-effects became known to the public, the manufacturers of each of these drugs stopped selling them and, eventually, paid millions or billions of dollars to settle claims for resulting injuries. [10] Merck, for example, having withdrawn the profitable Vioxx drug [11] from the market in 2004, settled nearly 50,000 Vioxx cases in late 2007 for $4.85 billion. [12] In 2009, Eli Lilly agreed to plead guilty and pay $1.415 billion in criminal and civil penalties for promoting its antipsychotic drug, Zyprexa, as suitable for uses not approved by the Food and Drug Administration ("FDA"). [13] These cases may be among the more prominent, but they represent just the tip of the iceberg of damage caused by prescription drugs."

Source:

Owen, David G., "Dangers in Prescription Drugs: Filling a Private Law Gap in the Healthcare Debate," Connecticut Law Review (Hartford, CT: University of Connecticut School of Law, February 2010) Volume 42, Number 3, p. 737.

http://uconn.lawreviewnetwork.com/files/documents/DavidG.Owen-DangersinP...

26.

(Acetaminophen-Related Liver Injury)

"... acetaminophen-related liver injury led to approximately

• 56,000 emergency department visits (1993–1999),

• 26,000 hospitalizations (1990–1999), and

• 458 deaths (1996–1998).

"Of these cases, unintentional acetaminophen overdose was associated with

• 13,000 emergency department visits (1993–1999),

• 2189 hospitalizations (1990–1999), and

• 100 deaths (1996–1998) (71 FR 77314 at 77318)."

Source:

Federal Register, "Organ-Specific Warnings; Internal Analgesic, Antipyretic, and Antirheumatic Drug Products for Over-the-Counter Human Use; Final Monograph," Vol. 74, No. 81, Wednesday, April 29, 2009, p. 19385.

http://www.gpo.gov/fdsys/pkg/FR-2009-04-29/pdf/E9-9684.pdf

27.

(NSAIDS) "Each year, use of NSAIDs Non-Steroidal Anti-Inflammatory Drugs! accounts for an estimated 7,600 deaths and 76,000 hospitalizations in the United States." NSAIDs include aspirin, ibuprofen, naproxen, diclofenac, ketoprofen, and tiaprofenic acid.!

Source:

Robyn Tamblyn, PhD; Laeora Berkson, MD, MHPE, FRCPC; W. Dale Jauphinee, MD, FRCPC; David Gayton, MD, PhD, FRCPC; Roland Grad, MD, MSc; Allen Huang, MD, FRCPC; Lisa Isaac, PhD; Peter McLeod, MD, FRCPC; and Linda Snell, MD, MHPE, FRCPC, "Unnecessary Prescribing of NSAIDs and the Management of NSAID-Related Gastropathy in Medical Practice," Annals of Internal Medicine (Washington, DC: American College of Physicians, 1997), September 15, 1997, 127:429-438.

http://annals.org/article.aspx?articleid=710808

Citing: Fries, JF, "Assessing and understanding patient risk," Scandinavian Journal of Rheumatology Supplement, 1992;92:21-4.

28.

(Lethal Dose by Substance) "The most toxic recreational drugs, such as GHB (gamma-hydroxybutyrate) and heroin, have a lethal dose less than 10 times their typical effective dose. The largest cluster of substances has a lethal dose that is 10 to 20 times the effective dose: These include cocaine, MDMA (methylenedioxymethamphetamine, often called 'ecstasy') and alcohol. A less toxic group of substances, requiring 20 to 80 times the effective dose to cause death, include Rohypnol (flunitrazepam or 'roofies') and mescaline (peyote cactus). The least physiologically toxic substances, those requiring 100 to 1,000 times the effective dose to cause death, include psilocybin mushrooms and marijuana, when ingested. I've found no published cases in the English language that document deaths from smoked marijuana, so the actual lethal dose is a mystery."

Source:

Gable, Robert S., "The Toxicity of Recreational Drugs," American Scientist (Research Triangle Park, NC: Sigma Xi, The Scientific Research Society, May-June 2006) Vol. 94, No. 3, p. 207.

http://www.americanscientist.org/libraries/documents/200645104835_307.pd...

Related Chapters:

- Overdose