

Drugs and Driving Committee Literature (Based on ASB Standard 120)

Cannabinoids (Completed Re-Review in 2021)

- Arkell, T.R. et al. [Cannabidiol \(CBD\) content in vaporized cannabis does not prevent tetrahydrocannabinol \(THC\)-induced impairment of driving and cognition.](#) *Psychopharmacology (Berl)* 236:2713-2724 (2019)
- Bidwell, L.C. et al. [Association of naturalistic administration of cannabis flower and concentrates with intoxication and impairment.](#) *JAMA Psychiatry* 77:787-796 (2020)
- Bondallaz, P. et al. [Cannabis and its effects on driving skills.](#) *Forensic Sci Int* 268:92-102 (2016)
- Dubois, S. et al. [The combined effects of alcohol and cannabis on driving: Impact on crash risk.](#) *Forensic Sci Int* 248:94-100 (2015)
- Hartley, S. et al. [Effect of smoked cannabis on vigilance and accident risk using simulated driving in occasional and chronic users and the pharmacokinetic-pharmacodynamic relationship.](#) *Clin Chem* 65:684-693 (2019)
- Hartman, R.L. et al. [Cannabis effects on driving skills.](#) *Clin Chem* 59:478-492 (2013)
- Hartman, R.L. et al. [Cannabis effects on driving lateral control with and without alcohol.](#) *Drug Alcohol Depend* 154:25-37 (2015)
- Hartman, R.L. et al. [Cannabis effects on driving longitudinal control with and without alcohol.](#) *J Appl Toxicol* 36:1418-1429 (2016)
- Hartman, R.L. et al. [Effect of blood collection time on measured \$\Delta^9\$ -tetrahydrocannabinol concentrations: implications for driving interpretation and drug policy.](#) *Clin Chem* 62:367-377 (2016)
- **[NEW]** Høiseth, G. [Impairment due to alcohol, tetrahydrocannabinol, and benzodiazepines in impaired drivers compared to experimental studies.](#) *Traffic Inj Prev* 18:244-250 (2019)
- Huestis, M.A. et al. [Blood cannabinoids. I. Absorption of THC and formation of 11-OH-THC and THCCOOH during and after smoking marijuana.](#) *J Anal Toxicol* 16: 276-282 (1992)
- Huestis, MA. [Cannabis \(Marijuana\) – Effects on Human Behavior and Performance.](#) *Forensic Sci Rev* 14:15-60 (2002)
- Martin, J.L. et al. [Cannabis, alcohol and fatal road accidents.](#) *PLoS One* 12:e0187320 (2017)

- National Safety Council-Committee on Alcohol and Other Drugs. [Position on the Use of Cannabis \(Marijuana\) and Driving](#). *J Anal Toxicol* 37:47-49 (2013)
- Neavyn, M.J. et al. [Medical marijuana and driving: a review](#). *J Med Toxicol* 10:269-279 (2014)
- Newmeyer, M.N. et al. [Evaluation of divided attention psychophysical task performance and effects on pupil sizes following smoked, vaporized and oral cannabis administration](#). *J Appl Toxicol* 37:992-932 (2017)
- Ramaekers, J.G. et al. [Marijuana, alcohol and actual driving performance](#). *Hum Psychopharmacol* 15:551-558 (2000)
- Ramaekers, J.G. et al. [High-potency marijuana impairs executive function and inhibitory motor control](#). *Neuropsychopharmacology* 31:2296-2303 (2006)

CNS Stimulants (Completed Re-Review in 2022)

- Amphetamine/Methamphetamine
 - **[NEW]** Downey, L.A. et al. [Examining the effect of dl-3,4-methylenedioxymethamphetamine \(MDMA\) and methamphetamine on the Standardized Field Sobriety Tests](#). *Forensic Sci Int* 220:e33-36 (2012)
 - Jones, A.W. et al. [Driving under the influence of central stimulant amines: age and gender differences in concentrations of amphetamine, methamphetamine, and ecstasy in blood](#). *J Stud Alcohol Drugs* 69:202-208 (2008)
 - **[NEW]** Høiseth, G. [Impairment due to amphetamines and benzodiazepines, alone and in combination](#). *Drug Alcohol Depend* 145:174-9 (2014)
 - Logan, B.K. et al. [Methamphetamine and Driving Impairment](#). *J Forensic Sci* 41:457-464 (1996)
 - Logan, B.K. et al. [Amphetamines: An Update on Forensic Issues](#). *J Anal Toxicol* 25:400-404 (2001)
 - **[NEW]** Musshoff, F. and Madea, B. [Driving Under the Influence of Amphetamine-Like Drugs](#). *J Forensic Sci* 57:413-419 (2012)
- MDMA
 - **[NEW]** Bosker, W.M. et al. [MDMA \(ecstasy\) effects on actual driving performance before and after sleep deprivation, as a function of dose and concentration in blood and oral fluid](#). *Psychopharmacology (Berl)* 222:367-376 (2012)
 - **[NEW]** Downey, L.A. et al. [Examining the effect of dl-3,4-methylenedioxymethamphetamine \(MDMA\) and methamphetamine on the Standardized Field Sobriety Tests](#). *Forensic Sci Int* 220: e33-36 (2012)

- Kuypers, K.P. et al. [MDMA and alcohol effects, combined and alone, on objective and subjective measures of actual driving performance and psychomotor function.](#) *Psychopharmacology (Berl)* 187:467-475 (2006)
- Kuypers, K.P. et al. [Acute effects of nocturnal doses of MDMA on measures of impulsivity and psychomotor performance throughout the night.](#) *Psychopharmacology (Berl)* 192:111-119 (2007)
- Lamers, C.T. et al. [Dissociable effects of a single dose of ecstasy \(MDMA\) on psychomotor skills and attentional performance.](#) *J Psychopharmacol* 17:379-387 (2003)
- Logan, B.K. and Couper, F.J. [3,4-Methylenedioxymethamphetamine \(MDMA, ecstasy\) and driving impairment.](#) *J Forensic Sci* 46:1426 (2001)
- **[NEW]** Musshoff, F. and Madea, B. [Driving Under the Influence of Amphetamine-Like Drugs.](#) *J Forensic Sci* 57: 413-419 (2012)
- **[NEW]** Veldstra, J.L. et al. [Effects of alcohol and ecstasy \(MDMA 100 mg\) on simulated driving performance and traffic safety.](#) *Psychopharmacology (Berl)* 222:377-390 (2012)

- Cocaine
 - **[NEW]** Ellefsen K.N. et al. [Pharmacodynamic effects and relationships to plasma & oral fluid pharmacokinetics after intravenous cocaine administration.](#) *Drug Alcohol Depend* 163:116-125 (2016)
 - **[NEW]** Huertas T. et al. [Stability of Cocaine Compounds in Biological Fluids During Post-Analytical Sample Storage.](#) *J Anal Toxicol* 44:864-870 (2020)
 - Isenschmid, D.S. [Cocaine: effects on human performance and behavior.](#) *Forensic Sci Rev* 14:61-100 (2002)
 - **[NEW]** Jenkins A. J. et al. [Correlation Between Pharmacological Effects and Plasma Cocaine Concentrations after Smoked Administration.](#) *J Anal Toxicol* 26:382-392 (2002)
 - Jones, A.W. et al. [Concentrations of cocaine and its major metabolite benzoylecgonine in blood samples from apprehended drivers in Sweden.](#) *Forensic Sci Int* 177:133-139 (2008)
 - Jones, A.W. [Forensic Drug Profile: Cocaethylene.](#) *J Anal Toxicol* 43:155-160 (2019)

CNS Depressants (Completed Re-Review in 2024)

- Carisoprodol/Meprobamate
 - Bramness, J.G. et al. [Impairment due to intake of carisoprodol](#). *Drug Alcohol Depend* 74:311-318 (2004)
 - **[NEW]** Bramness, J.G. et al. [The Risk of Traffic Accidents After Prescription Carisoprodol](#) *Accid Anal Prev* 39:1050-1055 (2007)
 - Logan, B.K, et al. [Carisoprodol, meprobamate and driving impairment](#). *J Forensic Sci* 45:619-623 (2000)
 - Robertson, M.D. and Marinetti, L.J. [Carisoprodol – Effects on human performance and behavior](#). *Forensic Sci Rev*15:1-10 (2003)
 - Zacny, J.P. et al. [Characterizing the subjective and psychomotor effects of carisoprodol in healthy volunteers](#). *Pharmacol Biochem Behav* 100:138-143 (2011)
 - Zacny, J.P. et al. [Subjective and psychomotor effects of carisoprodol in combination with oxycodone in healthy volunteers](#). *Drug Alcohol Depend* 120:229-232 (2012)
- Zolpidem
 - Hindmarch, I. et al. [Residual effects of zaleplon and zolpidem following middle of the night administration five hours to one hour before awakening](#). *Hum Psychopharmacol* 16:159-167 (2001)
 - Logan, B.K. and Couper, F.J. [Zolpidem and driving impairment](#). *J Forensic Sci* 46:105-10 (2001)
 - **[NEW]** Rohrig, T.P. and Moore C.M. [Zolpidem: Forensic aspects for the toxicologist and pathologist](#). *Forensic Sci Med Pathol* 1: 81-90 (2005)
 - **[NEW]** Vermeeren, A. et al. [Residual effects of low-dose sublingual zolpidem on highway driving performance the morning after middle-of-the-night use](#). *Sleep* 37:489-96 (2014)
 - **[NEW]** Verster, J.C. et al. [Middle-of-the-night administration of sleep medication: a critical review of the effects on next morning driving ability](#). *Curr Drug Saf*9:205-11 (2014)
 - Verster, J. C. et al. [Residual effects of middle-of-the-night administration of zaleplon and zolpidem on driving ability, memory functions, and psychomotor performance](#). *J Clin Psychopharmacol* 22:576-583 (2002)
 - Verster, J.C. et al. [Zolpidem and traffic safety - the importance of treatment compliance](#). *Curr Drug Saf*2:220-226 (2007)

- Wilkinson, C.J. [The acute effects of zolpidem, administered alone and with alcohol, on cognitive and psychomotor function.](#) *J Clin Psychiatry* 56:309-318 (1995)
- Benzodiazepines
 - General Benzodiazepines
 - Bramness, J.G. et al. [Testing for benzodiazepine inebriation-relationship between benzodiazepine concentration and simple clinical tests for impairment in a sample of drugged drivers.](#) *Eur J Clin Pharmacol* 59:593-601 (2003)
 - Drummer, O.H. [Benzodiazepines – effects on human performance and behavior.](#) *Forensic Sci Rev* 14:1-14 (2002)
 - **[NEW]** Høiseth, G. [Impairment due to amphetamines and benzodiazepines, alone and in combination.](#) *Drug Alcohol Depend* 145:174-9 (2014)
 - **[NEW]** Høiseth, G. [Impairment due to alcohol, tetrahydrocannabinol, and benzodiazepines in impaired drivers compared to experimental studies.](#) *Traffic Inj Prev* 18:244-250 (2019)
 - van der Sluiszen, N.J.J.M. et al. [Driving performance and neurocognitive skills of long-term users of benzodiazepine anxiolytics and hypnotics.](#) *Hum Psychopharmacol* 34:e2715 (2019)
 - Verster, J.C. et al. [Blood drug concentrations of benzodiazepines correlate poorly with actual driving impairment.](#) *Sleep Med Rev* 17:153-159 (2013)
 - Alprazolam
 - Leufkens, T.R., et al. [Cognitive, psychomotor and actual driving performance in healthy volunteers after immediate and extended release formulations of alprazolam 1 mg.](#) *Psychopharmacology* 191:951-959 (2007)
 - Stone, B.T., et al. [Behavioral and neurophysiological signatures of benzodiazepine-related driving impairments.](#) *Front Psychol* 6:1799 (2015)
 - Verster, J.C. and Volkerts, E.R. [Clinical pharmacology, clinical efficacy, and behavioral toxicity of alprazolam: a review of the literature.](#) *CNS Drugs Rev* 10:45-76 (2004)
 - Clonazepam
 - Monteiro dos Santos, FM et al. [Pharmacokinetic/Pharmacodynamic Modeling of Psychomotor Impairment Induced by Oral Clonazepam in Healthy volunteers.](#) *Ther Drug Monit* 31:566-574 (2009)

- Wildin, J.D. et al. [Respiratory and sedative effects of clobazam and clonazepam in volunteers.](#) *Br J Clin Pharmac* 29:169-177 (1990)
- Diazepam
 - Boucart, M. et al. [Diazepam impairs temporal dynamics of visual attention.](#) *Exp Clin Psychopharmacol* 15:115-122 (2007)
 - Greenblatt, D.J. et al. [A large-sample study of diazepam pharmacokinetics.](#) *Ther Drug Monitor* 11:652-657 (1989)
 - Jones, A.W. et al. [High concentrations of diazepam and nordiazepam in blood of impaired drivers: association with age, gender and spectrum of other drugs present.](#) *Forensic Sci Int* 146:1-7 (2004)
 - Jongen, S. et al. [Comparing the effects of oxazepam and diazepam in actual highway driving and neurocognitive test performance: a validation study.](#) *Psychopharmacology (Berl)* 235:1283-1294 (2018)
- Lorazepam
 - Clarkson, J.E. et al. [Lorazepam and driving impairment.](#) *J Anal Toxicol* 28:475-480 (2004)
 - Daurat, A. et al. [Lorazepam impairs highway driving performance more than heavy alcohol consumption.](#) *Accid Anal Prev* 60:31-34 (2013)

Narcotic Analgesics

- **General Opioids (Completed Re-Review in 2024)**
 - **[NEW]** Cameron-Burr, K.T. et al. [Opioid Use and Driving Performance](#) *J Med Toxicol* 17:289-308 (2021)
 - Kress, H.G. and Kraft, B. [Opioid medication and driving ability.](#) *Eur J Pain* 9:141-144 (2005)
 - Stout, P.R. and Farrell, L.J. [Opioids: effects on human performance and behavior.](#) *Forensic Sci Rev* 15:29-59 (2003)
 - Willhelmi, B.G. and Cohen, S.P. [A framework for "driving under the influence of drugs" policy for the opioid using driver.](#) *Pain Physician* 15:ES215-230 (2012)
- Buprenorphine
 - Baewert, A. et al. [Influence of peak and trough levels of opioid maintenance therapy on driving aptitude.](#) *Eur Addict Res* 13:127-135 (2007)

- Chang, Y. and Moody, D.E. [Effect of benzodiazepines on the metabolism of buprenorphine in human liver microsomes.](#) *Eur J Clin Pharmacol* 60:875-881 (2005)
- Cicero, T. et al. [Use and misuse of buprenorphine in the management of opioid addiction.](#) *J. Opioid Manag* 3:6 (2007)
- Edwards, L.D. [Buprenorphine in Wisconsin drivers: concerns for impairment?](#) *J Anal Toxicol* 43:644-650 (2019)
- Elkader, A. and Sproule, B. [Buprenorphine: Clinical pharmacokinetics in the treatment of opioid dependence.](#) *Clin Pharmacokinet* 44:661-680 (2005)
- Kuhlman, J.J. et al. [Human pharmacokinetics of intravenous, sublingual, and buccal buprenorphine.](#) *J Anal Toxicol* 20:369-378 (1996)
- Lenné, M.G. et al. [The effects of the opioid pharmacotherapies methadone, LAAM and buprenorphine, alone and in combination with alcohol, on simulated driving.](#) *Drug Alcohol Depend* 72:271-278 (2003)
- Pérez de los Cobos, J.P. et al. [A controlled trial of daily versus thrice-weekly buprenorphine administration for the treatment of opioid dependence.](#) *Drug Alcohol Depend* 59: 223-233 (2000)
- Strand, M.C. et al. [A clinical trial on the acute effects of methadone and buprenorphine on actual driving and cognitive function of healthy volunteers.](#) *Br J Clin Pharmacol* 85:442-453 (2019)
- Codeine
 - Amato, J.N. et al. [Effects of three therapeutic doses of codeine/paracetamol on driving performance, a psychomotor vigilance test, and subjective feelings.](#) *Psychopharmacology (Berl)* 228:309-320 (2013)
 - Gasche, Y. et al. [Codeine intoxication associated with ultrarapid CYP2D6 metabolism.](#) *New Eng J Med* 351:2827-2831 (2004)
 - Gjerde, H. and Mørland, J. [A case of high opiate tolerance: implications for drug analyses and interpretations.](#) *Int J Leg Med* 351:2827-2831 (2004)
 - Guay, D.R. et al. [Pharmacokinetics of codeine after single- and multiple-oral-dose administration to normal volunteers.](#) *J Clin Pharm* 27:983-987 (1987)
 - Hobbs G.J. and Knaggs R.D. [Differential effects of morphine and codeine on pupil size: dosing issues.](#) *Anesth Analg* 100:598 (2005)
 - Kim, I. et al. [Plasma and oral fluid pharmacokinetics and pharmacodynamics after oral codeine administration.](#) *Clin Chem* 48:1486-1496 (2002)

- Kirchheiner, J. et al. [Pharmacokinetics of codeine and its metabolite morphine in ultra-rapid metabolizers due to CYP2D6 duplication.](#) *Pharmacogenomics J* 7:257-265 (2007)
- Oyler, J.M. et al. [Identification of hydrocodone in human urine following controlled codeine administration.](#) *J Anal Toxicol* 24:530-535 (2000)
- Knaggs, R.D. et al. [The pupillary effects of intravenous morphine, codeine, and tramadol in volunteers.](#) *Anesth Analg* 99:108-112 (2004)
- Linnoila, M. and Häkkinen, S. [Effects of diazepam and codeine, alone and in combination with alcohol, on simulated driving.](#) *Clin Pharmacol Ther* 15:368-373 (1974)
- Peacock, J.E. [Changes in pupil diameter after oral administration of codeine.](#) *Br J Anaesth* 61:598-600 (1988)
- Heroin/Morphine
 - Hobbs G.J. and Knaggs R.D. [Differential effects of morphine and codeine on pupil size: dosing issues.](#) *Anesth Analg* 100:598 (2005)
 - Jenkins, A.J. et al. [Pharmacokinetics and pharmacodynamics of smoked heroin.](#) *J Anal Toxicol* 18:317-330 (1994)
 - Jones, A.W. et al. [Driving under the influence of opiates: concentration relationships between morphine, codeine, 6-acetyl morphine, and ethyl morphine in blood.](#) *J Anal Toxicol* 32:265-272 (2008)
 - Jones, A.W. et al. [Concentrations of free-morphine in peripheral blood after recent use of heroin in overdose deaths and in apprehended drivers.](#) *Forensic Sci Int* 215:18-24 (2012)
 - Knaggs, R.D. et al. [The pupillary effects of intravenous morphine, codeine, and tramadol in volunteers.](#) *Anesth Analg* 99:108-112 (2004)
 - Lugo, R.A. and Kern, S.E. [Clinical pharmacokinetics of morphine.](#) *J Pain Palliat Care* 16:5-18 (2002)
 - Strand, M.C., et al. [Acute impairing effects of morphine related to driving: A systematic review of experimental studies to define blood morphine concentrations related to impairment in opioid-naïve subjects.](#) *Traffic Inj Prev* 18:788-794 (2017)
 - Tress, K.H. et al. [Degree of tolerance and the relationship between plasma morphine concentration and pupil diameter following intravenous heroin in man.](#) *Br J Clin Pharmacol* 5:299-303 (1978)
 - Tress, K.H. and El-Sobky, A.A. [Pupil responses to intravenous heroin \(diamorphine\) in dependent and non-dependent humans.](#) *Br J Clin Pharmacol* 7:213-217 (1979)

- Hydrocodone
 - Melhem, M.R. et al. [Population pharmacokinetics analysis for hydrocodone following the administration of hydrocodone bitartrate extended-release capsules.](#) *Clin Pharmacokinet* 52:907-917 (2013)
 - Molina, D.K. and Hargrove, V.M. [What is the lethal concentration of hydrocodone?: a comparison of postmortem hydrocodone concentrations in lethal and incidental intoxications.](#) *Am J Forensic Med Pathol* 32:108-111 (2011)
 - Zacny, J.P. et al. [Profiling the subjective, psychomotor, and physiological effects of a hydrocodone/acetaminophen product in recreational drug users.](#) *Drug Alcohol Depend* 78:243-252 (2005)
- Oxycodone
 - Jung, B.F. and Reidenberg, M.M. [Interpretation of opioid levels: comparison of levels during chronic pain therapy to levels from forensic autopsies.](#) *Clin Pharmacol Ther* 77:324-334 (2005)
 - Lalovik, B. et al. [Pharmacokinetics and pharmacodynamics of oral oxycodone in healthy human subjects: role of circulating active metabolites.](#) *Clin Pharmacol Ther* 79:461-479 (2006)
 - Leow, K.P. et al. [Pharmacokinetics and pharmacodynamics of oxycodone when given intravenously and rectally to adult patients with cancer pain.](#) *Anesth Anal* 80:296-302 (1995)
 - Pöyhiä, R. et al. [The pharmacokinetics and metabolism of oxycodone after intramuscular and oral administration to healthy subjects.](#) *Br J Clin Pharmacol* 33:617-621 (1992)
 - Takala, A. et al. [Pharmacokinetic comparison of intravenous and intranasal administration of oxycodone.](#) *ACTA Anaesthesiologica Scandinavica* 41:309-312 (1997)
 - Verster, J.C. et al. [Effects of an opioid \(oxycodone/paracetamol\) and an NSAID \(bromfenac\) on driving ability, memory functioning, psychomotor performance, pupil size, and mood.](#) *Clin J Pain* 22:499-504 (2006)
 - Zacny, J.P. and Gutierrez, S. [Characterizing the subjective, psychomotor, and physiological effects of oral oxycodone in non-drug-abusing volunteers.](#) *Psychopharmacology (Berl)* 170:242-254 (2003)
- Tramadol
 - Clarkson, J.E., et al. [Tramadol \(Ultram\) concentrations in death investigation and impaired driving cases and their significance.](#) *J Forensic Sci* 49:1101-1105 (2004)
 - Nakhaee, S., et al. [A review on tramadol toxicity: mechanism of action, clinical presentation, and treatment.](#) *Forensic Toxicol* 39:293-310 (2021)

- **Fentanyl (Completed Re-Review in 2024)**
 - **[NEW]** Chan-Hosokawa, A. and Bierly J.J. [11-Year study of fentanyl in driving under the influence of drugs casework](#) *J Anal Toxicol* 46:337-341 (2022)
 - **[NEW]** Harper, C.E. et al. [The impact of fentanyl on DUIs and traffic fatalities: blood and oral fluid data](#) 68:1686-1697 (2023)
 - Kiely, E. and Juhascik, M. [Fentanyl, Acetylfentanyl and Carfentanil in Impaired Driving Cases: A Review of 270 Cases.](#) *J Anal Toxicol* 45:913-917 (2021)
 - Rohrig, T.P. et al. [Fentanyl and driving impairment.](#) *J Anal Toxicol* 45:389-396 (2021)
- Methadone
 - Jones, A.W. [Blood methadone concentrations in living and deceased persons: variations over time, subject demographics, and relevance of coingested drugs.](#) *J Anal Toxicol* 36:12-18 (2012)
 - Strand, M.C. et al. [Can patients receiving opioid maintenance therapy safely drive? A systematic review of epidemiological and experimental studies on driving ability with a focus on concomitant methadone or buprenorphine administration.](#) *Traffic Inj Prev* 14:26-38 (2013)

General Drugged Driving References

- Augsburger, M. et al. [Concentration of drugs in blood of suspected impaired drivers.](#) *Forensic Sci Int* 153:11-15 (2005)
- Baselt, R.C. *Drug Effects on Psychomotor Performance*, Foster City, California:Biomedical Publications, 2001
- Baselt, R.C. *Disposition of Toxic Drugs and Chemicals in Man (12th ed.)*, Foster City, California: Biomedical Publications, 2020
- Moffat A.C., Osselton M.D., Widdop B., Watts J. eds. *Clarke's Analysis of Drugs and Poisons (4th ed.)*, Grayslake, IL:Pharmaceutical Press, 2011
- Dassanayake, T. et al. [Effects of benzodiazepines, antidepressants and opioids on driving: a systematic review and meta-analysis of epidemiological and experimental evidence.](#) *Drug Saf* 34:125-156 (2011)
- **[NEW]** [Drugs and Human Performance Fact Sheets](#), National Highway and Safety Administration, DOT HS 813 650 (2024)

- Gjerde, H. et al. [Driving under the influence of non-alcohol drugs - an update part 1: epidemiological studies.](#) *Forensic Sci Rev* 27:89-113 (2015)
- Jones, A.W. et al. [Concentrations of scheduled prescription drugs in blood of impaired drivers: considerations for interpreting the results.](#) *Ther Drug Monitor* 29:248-260 (2007)
- Kay, G.G. and Logan B.K., [Drugged driving expert panel report: a consensus protocol for assessing the potential of drugs to impair driving,](#) NHTSA, DOT HS 811 438 (2011)
- Leung, S.Y. [Benzodiazepines, opioids and driving: an overview of the experimental research.](#) *Drug Alcohol Rev* 30:281-286 (2011)
- Levine, B. and Kerrigan, S. eds. *Principles of Forensic Toxicology (5th ed.)*, Switzerland:Springer International Publishing, 2020
- Mills, K.C. et al. [The influence of stimulants, sedatives, and fatigue on tunnel vision: risk factors for driving and piloting.](#) *Hum Factors* 43:310-327 (2001)
- Penning, R. et al. [Drugs of abuse, driving and traffic safety.](#) *Curr Drug Abuse Rev* 3:23-32 (2010)
- Rapoport, M.J. and Baniña, M.C. [Impact of psychotropic medications on simulated driving: a critical review.](#) *CNS Drugs* 21:503-519 (2007)
- Schulz, M. et al. [Revisited: Therapeutic and toxic blood concentrations of more than 1100 drugs and other xenobiotics.](#) *Crit Care* 24:195 (2020)
- Verster, J.C. et al. [Residual effects of sleep medication on driving ability.](#) *Sleep Med Rev* 8:309-325 (2004)