

CODEINE AND MORPHINE

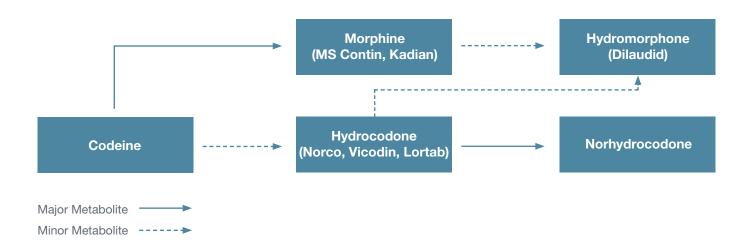
Codeine and morphine are 2 opiates derived from the opium poppy plant.¹ Both codeine and morphine act on the mu opioid receptor in the brain (to block the transmission of pain messages), but morphine has a stronger affinity for this pain receptor.¹

Morphine is the most abundant naturally occurring opiate.¹ Rapidly absorbed, morphine is predominantly excreted as itself, with the potential of a minor metabolite hydromorphone when consumed in large doses.²

Codeine is found in very small amounts in the opium poppy plant. Because these amounts are so small, codeine is commonly synthesized from morphine. Codeine is pharmaceutically available in pure form, and is also combined with other medications like acetaminophen.³ The presence of codeine, morphine and possibly the minor metabolite hydrocodone would indicate recent use of codeine.⁴

Due to the the manufacturing process of poppy seeds and illicit heroin, morphine and codeine may be detected after consumption of poppy seeds and use of heroin.^{5,6}

Generally, codeine and morphine are detected between 1-4 days in urine after last use, and 1-2 days after last use in oral fluid. 1,6,7



A Precision Diagnostics trained Clinical Support Specialist can assist with further review of your patient's results

(800) 635-6901 Option 2

References and Additional Literature:

- 1. Baselt, Randall C., Disposition of Toxic Drugs and Chemicals in Man, 10th ed. Biomedical Publications, Seal Beach, CA. 2014; 516-520.
- 2. Medical Review Officer Manual for Federal Workplace Drug Testing Programs. Effective October 1, 2010; 58,83. https://www.samhsa.gov/sites/default/files/workplace/mro-guidance-manual-oct2017_2.pdf
- 3. Oyler, J.M., Cone, E.J., Joseph, R. E Jr, Huestis, M.A., (2006) Identification of hydrocodone in human urine following controlled codeine administration to healthy subjects. British Journal of Clinical Pharmacology. 24(7):530-535.
- 4. Cone EJ, Heit HA, Caplan YH, Gourlay D., (2006) Evidence of Morphine Metabolism to Hydromorphone in Pain Patients Chronically Treated with Morphine. Journal of Analytical Toxicology. 30(1): 1-5.
- 5. Cone, E. J., Welch, P, Paul, B. D., Mitchell, J. M. (1991) Forensic Drug Testing for Opiates, III. Urinary Excretion Rates of Morphine and Codeine Following Codeine Administration. Journal of Analytical Toxicology. 15: 161-166.
- 6. Allen, Keith R. (2011) Screening for drugs of abuse: which matrix, oral fluid or urine? Annals of Clinical Biochemistry. 48: 531-541.
- 7. Verstraete, Alain G. (2004) Detection Times of Drugs of Abuse in Blood, Urine, and Oral Fluid. The Drug Monit. 26(2): 200-205.

Precision Diagnostics, a leader in clinical laboratory testing and medication adherence monitoring, is transforming healthcare through the delivery of comprehensive, insightful clinical data that can help improve patient outcomes and manage costs. Specializing in providing quantitative drug testing, Precision Diagnostics' innovative state-of-the art technology provides insurers, pharmacies, medical practitioners, and patients with new levels of visibility and transparency that allows doctors to better assess patients' medication adherence, ensure patient compliance, and improve outcomes.

Precision Diagnostics 4215 Sorrento Valley Blvd. San Diego, CA 92121 (800) 635-6901

info@precisiondxlab.com precisiondxlab.com







