

GUIDE

URINE DRUG TESTING

Ordering and Interpretation

OPEN

Prevention. Treatment. Recovery.

URINE DRUG TESTING 101



Urine Drug Testing (UDT) can be helpful in the clinical setting but must be used with caution.

Patients should always be informed that a urine drug test is ordered and never performed without a patient's knowledge. Drug testing is not something we do to patients but rather with patients. There is very little research to guide how often urine drug testing should be performed. Consider the following per [American Society of Addiction Medicine*](https://www.asam.org/quality-care/clinical-guidelines/drug-testing):

- Frequency of testing will be determined by a number of factors including patient stability, treatment type, and setting
 - It is recommended that patients in early recovery be tested more often than those further out.
- There is insufficient evidence that more frequent testing leads to decreased substance use
- Clinical consensus favors unannounced drug testing over scheduled testing and random schedules over fixed schedules
- Use non-stigmatizing language when discussing results such as positive or negative instead of clean or dirty
- Results should never be used for punishment or the sole basis for treatment decisions

UDT ROADMAP

1

ASSESS INDIVIDUAL SITUATION

2

DISCUSS WITH PATIENT

3

SELECT A TEST

4

CONSIDER TEST OUTCOMES



ASSESS INDIVIDUAL SITUATION

Assessment and Diagnosis

- Helps to confirm the presence of opioids and other substances in the patient's system, which is helpful for diagnosing Opioid Use Disorder (OUD). It provides objective data (keeping in mind false positives and negatives) about a patient's drug use. Because of the unpredictable illicit drug supply, patients may think they are taking a stimulant in a pressed pill that's actually pressed with Fentanyl.
- Detect the use of other substances, such as benzodiazepines, cocaine, or alcohol, which can affect the choice of Medications for Opioid Use Disorder (MOUD), discussion of risks/benefits, and overall treatment plan.
- Assist the provider and patient confirm what the patient is consuming, and is a conversation starter between provider and patient to determine treatment goals and support patient safety and recovery.
- Contribute to an assessment of a patient's adherence to buprenorphine therapy (based on the presence of buprenorphine in urine).

Treatment Planning

- Inform the selection of the most appropriate MOUD (e.g., methadone, buprenorphine, or naltrexone). It can contribute to the clinical picture of the patient's substance use patterns and help avoid precipitated withdrawal.
- Identify substances that might interact negatively with MOUD medications, ensuring the safety and effectiveness of the treatment.

Monitoring Adherence and Efficacy

- Improve communication between provider and patient, especially when unexpected results happen.
- If a patient has returned to use, do not discharge them from your care but rather attempt to re-engage with the patient. Use this as an opportunity to re-evaluate a patient's care plan, increase the support you offer, explore other opportunities, and determine if a higher level of care may be appropriate.

2

DISCUSS WITH PATIENT

Build Trust and Encourage Open Communication

- Foster open communication between the patient and provider, building trust and encouraging honesty about substance use and destigmatize the drug testing process.
- Minimize patient's anxiety around testing and set patient expectations.
- Consider the following conversation starters:
 - "As part of your treatment, I will request urine drug tests. We will review the results together to help determine how well our treatments are working for you. This testing is never intended to make you feel nervous or ashamed, regardless of the results."
 - "I request urine drug tests on all my patients prescribed these medications."
 - "If I find something unexpected, we will talk about it and work together to address it."
 - "I will request urine drug tests as part of your treatment just like I would check your hemoglobin A1C or average blood sugar if you had diabetes."



3

SELECT A TEST

When choosing a test for urine drug screening, various options offer different advantages and limitations, ranging from the affordable and rapid Enzyme Linked Immunoassay (EIA) kits to the highly specific but costlier Gas Chromatography/Mass Spectroscopy (GCMS) and Liquid Chromatography/Time of Flight (LC-MS) methods. As a basic guide:

- Illicit Substance Use Check: EIA or LC-MS/Time of flight
- Confirmation of Prescribed Medication: GCMS (EIA is OK if lab runs the test for each med – they usually do not so ask the lab!)
- Non-Prescribed Medication Check: GCMS or LC-MS

Enzyme Linked Immunoassay (EIA) Kits or “Clinic Point of Care Tests”

- Inexpensive, fast, point of care or lab
- Detects class of substance, not always specific medication
- Tests for amphetamine/methamphetamine, marijuana, PCP, cocaine, morphine, codeine; may include oxycodone, methadone, buprenorphine
- Sensitive for diazepam but less for other benzodiazepines (0% for lorazepam)
- Test will often miss hydrocodone, hydromorphone, fentanyl, meperidine, oxycodone, oxymorphone, methadone, buprenorphine, tramadol
- Sensitive for diazepam but less sensitive for other benzodiazepines. Clonazepam and alprazolam are frequently negative. Lorazepam is always negative.
- Significant false positive rates caused by numerous prescribed or OTC medications
- False negatives possible especially when testing for benzodiazepines

Gas Chromatography/Mass Spectroscopy (GCMS)

- More expensive, labor intensive
- Identifies specific medications and their metabolites
- Can confirm the presence of prescribed and non-prescribed medication
- High sensitivity
- False positives possible

Liquid Chromatography/Time of Flight Testing (LC-MS)

- More expensive, labor intensive
- Screening and confirming test identifies specific substances and metabolites
- Very accurate with low false results
- Consider when testing for clonazepam or alprazolam

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CONSIDER TEST OUTCOMES

When interpreting urine drug test results, various factors can complicate the assessment, such as the presence of illicit substances, non-prescribed medications, or the absence of prescribed medications, each with their own potential for false positives or negatives. See chart on Page 7 for details.

Presence of Illicit Substance

- Used by patient
- False positive result related to prescribed or OTC medication exposure

Presence of Non-Prescribed Medication

- Used by patient
- False positive result related to cross-reaction or possible known metabolite (e.g., morphine or codeine may → hydromorphone)

Absence of Prescribed Medication

- Diversion or not using as prescribed and running out of medication early
- False negative (incorrect use of EIA rather than GCMS or LC-MS testing)
- Urine adulterated
- Cut-off problem (the threshold in workplace testing for reporting a positive is set high to avoid false positives that require a job action)



**Enzyme Linked
Immunoassay**

Consumption of these substances could give false test results.		POTENTIAL TEST RESULT
FALSE POSITIVE	FALSE NEGATIVE	
bupropion, tricyclic antidepressants, phenothiazines, propranolol, labetalol, OTC cold medications, ranitidine, metformin, selegiline, trazodone, aripiprazole, phentermine, Vicks Nasal Spray, zolpidem		Amphetamine or Methamphetamine
phenytoin		Barbiturates
sertraline, zolpidem, possibly NSAIDs	alprazolam, clonazepam, lorazepam	Benzodiazepines
pantoprazole, efavirenz, very high dose NSAIDs, promethazine, possibly zolpidem, baby wash products that include dronabinol		Cannabinoids
amitriptyline, doxepin, sertraline, fluoxetine, metoclopramide, haloperidol, risperidone, verapamil		LSD
quinolones, dextromethorphan, diphenhydramine, doxylamine, rifampin, verapamil, poppy seeds, possibly zolpidem		Opioids
dextromethorphan, diphenhydramine, doxylamine, NyQuil, tramadol, venlafaxine, NSAIDs, imipramine		PCP
methadone, cyclobenzaprine, Ny-Quil, diphenhydramine, imipramine		Propoxyphene

**Gas Chromatography/
Mass Spectroscopy**

codeine, heroin (for a few hours), poppy seeds (for 48 hours)	GCMS may miss it unless glucuronide hydrolyzed.	Morphine
Vicks Nasal Spray		Amphetamine
	alprazolam, clonazepam, lorazepam	Benzodiazepines
large amount of morphine		Buprenorphine
morphine, codeine, hydrocodone, heroin		Hydromorphone
hydrocodone		Oxycodone
hydrocodone		Codeine
quetiapine, diltiazem and verapamil (rare)		Methadone
venlafaxine		Tramadol

**QUESTIONS?
CONTACT US.**

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For More Information:

SAMHSA TIP 63 (pages 2-14 to 2-16)
offers more information about testing
and interpretations along with
treatment implications.