VAULT HEALTH | WORKFORCE SCREENING

Hair Testing: State of the Science

The Substance Abuse and Mental Health Services Administration released proposed Guidelines for the use of hair testing in federal workplace testing programs in the September 10, 2020 Federal Register. These Guidelines have not become mandatory yet as they are still going through the extensive federal approval process.

At Vault Health, we use hair testing and believe in hair testing's benefits for both non regulated workplace testing and for recovery monitoring (RMS) applications. RMS programs have unique considerations that differ from those in workplace and should be considered when using results from hair testing. We do believe hair is a good adjunct to a strong forensic urine testing program, but current hair testing science leaves considerable interpretation gaps compared to existing data for confirmed urine testing results.

Hair shaft specimens (not hair follicles) are collected by cutting as close to the body as is possible according to laboratory instructions that specify the amount of hair needed for the requested hair testing panel to be completed. Upon arrival at the laboratory, if the specimen has not been trimmed by the collector, the laboratory accessioner does the trimming so that a 1 ½ inch (3 cm) length of the shaft is tested. For scalp hair, this represents approximately a 90-day detection window. The requirements for hair testing for federal workplace testing programs should include the ability to rule out positive results from passive exposure and not from actual use, but for recovery monitoring testing, this is even more important.

Hair testing: current complications in the science

- Body hair has different detection windows based upon different growth rates, growth cycles, and hair texture.
- Hair that contains higher amounts of melanin more easily binds certain drugs. (This is frequently but incorrectly referred to as a "racial bias.")
- There is no general agreement on the specific cocaine biomarker that is present after cocaine ingestion.
- There is no general agreement between laboratories about the proper way to prepare hair specimens for testing.
- It takes at least 7 to 10 days after drug use before hair becomes positive.
- Treated hair may not be accurately tested.
- A higher amount of drug ingestion is required before hair becomes positive as compared to urine. This means:
  - Hair testing can show a pattern of use rather than a single drug use episode.
  - Hair testing is not appropriate for post-accident or reasonable suspicion testing
  - A negative hair test does not invalidate a positive urine test.
- All hair collections are observed collections.
- Weaves may cause collection problems.
- Larger hair testing panels require more hair to be collected.

While we look forward to hair testing's inclusion in the federal testing programs once the science has achieved the "bulletproof" status of the current federal urine testing program. In the meantime we will continue to recommend its use as a valuable adjunct testing matrix for monitoring programs. For monitoring program result interpretation, we will continue to recommend:

- Continued evaluation of parent drug and metabolite concentrations in the attempt to differentiate ingestion from environmental contamination
- Continued use of multiple laboratories with similar testing and reporting standards.
- Split specimen testing procedures are required as they are for urine and all forensic specimens.

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