

# Drug Screening for Cannabis Use

By Kevin Baiko, M.D.

As a physician specializing in cannabinoid medicine, I am often asked about drug testing. After over a half of a century of America's so-called "War on Drugs", testing for cannabis use has become embedded into our nation's sense of public safety and liability, becoming commonplace not only in hospitals and criminal investigations, but, even more unfortunately, at many a cannabis user's workplace. This is a big, complicated and evolving subject, and yet another example of individual liberties being subverted by fear and ignorance, without valid scientific justification. Here is a brief review of the subject, with some attention given to how cannabis is metabolized in the body, approaches to testing, and considerations in safely navigating this test crazy landscape.

There are several ways to test for cannabis use, though none of them accurately gauge impairment (the presumed rationale for testing in the first place.) Since THC is the primary mind-altering, and hence "impairing", compound present in cannabis products, it follows that THC levels in the body offer a theoretical measure of impairment. However, unlike blood alcohol levels, which do approximate predictable levels of impairment, no such correlation exists with THC or any of its metabolites, regardless of sample source. To better understand this, let us examine what happens to THC when cannabis products are used.

Whether smoked or consumed, the body breaks down THC into several metabolites before they are gradually excreted – 2/3 in the feces and 1/3 in the urine. Because cannabinoids and many of their metabolites are fat soluble, chronic use can lead to their accumulation in fatty tissues. Over time these compounds, some with medicinal and psychoactive properties, are released back into the bloodstream and excreted.\*

When smoked, THC passes directly into the bloodstream and is carried throughout the body and brain. THC blood concentration peaks quickly within the first ten minutes of smoking, abruptly falls within the first hour and then gradually tails off to undetectable levels at differing rates depending on frequency of use – 12 hours or so after single use and up to a week in chronic users.\*

When THC passes through the liver following consumption (and eventually after smoking), much THC is converted into the non-psychoactive metabolite THC-COOH and the psychoactive metabolite 11-OH-Hydroxy-THC (not appreciably present in blood when cannabis is smoked). Levels of THC and these metabolites slowly rise to detectable levels within the first hour following ingestion, continue to rise and then plateau for 4-6 hours and then slowly tail off to undetectable levels – the rate of taper being dependent on a number of variables – most notably including chronicity of use.\*

By far the most common approach to drug testing is urinalysis. While more sensitive urine drug screens exist, most are designed to detect the liver break-down metabolite THC-COOH, which lingers in the body long after the effects of THC have passed away.

THC-COOH levels remain detectable for days or even weeks after last administration in infrequent users and up to 2 months in chronic users. There is no correlation between presence of THC-COOH in urine and intoxication. In fact, the U.S. Dept. of Justice has even admitted, “a positive test, even when confirmed... does not indicate abuse or addiction, recency, frequency, amount of use or impairment.”\*

Of all tests presently available blood tests most accurately measure the actual presence of THC in the bloodstream. Because blood tests register positive for just a few hours after use, they provide the best gauge of recent impairment. Blood THC levels can, however, remain detectable in chronic users for up to 2 days after smoking, so positive tests don't necessarily reflect impairment. Most blood drug screens only screen for the presence of THC, but there are exceptions.\*

Cannabis users who are subject to drug screening have several options. The most upright approach is to abstain from use long enough to clear its tested metabolites out of the body. This timeframe ranges from 12 hours to 2 months, and the only way to know for certain is to test oneself beforehand. Large intake of fluids immediately prior to the test can often dilute one's urine enough to increase the odds of passing the test. Water is fluid of choice, and even if the testing lab invalidates the test owing to overdilution of urine, any follow up testing is further removed from last use. Another successful, if tricky, method used to foil urine tests is to use synthetic or otherwise clean urine, which must be at body temperature (90-98 deg F). Keep in mind, however, that medical cannabis is still illegal in Carolina, so weigh medicinal benefits against potential legal consequences.\*

Some users obtain a Marinol prescription for protection. Laboratories are legally required to report drug screens as “negative” when informed beforehand that the individual being tested is using a prescription for a medication prone to yield a positive result. Because Marinol is a synthetic isomer of THC, it is metabolized in the same way as its plant analog. Unless the laboratory is looking for cannabinoids (or their metabolites) other than THC, a Marinol prescription offers cannabis users even more lab testing safety than the medical cannabis cards available in states with such allowances. Many physicians are hesitant to prescribe Marinol, especially in a medical cannabis deprived state like North Carolina, because of its association with cannabis. In states friendly to medical cannabis, it can serve as a useful, albeit inferior, substitute for the herbal form – during airline travel, in smoke-free zones, at one's workplace and at times when a patient's medical cannabis supply is depleted. Cannabis and Marinol are both regarded with a double standard when compared to other medications, but this double standard also weighs in Marinol's favor (when compared to cannabis use), so the argument that cannabis works better for you than other prescription medications may prove useful when trying to convince a physician to prescribe Marinol.

In conclusion, tests aimed at detecting cannabis in the body reflect a severely flawed sense of justice, particularly when livelihoods are on the line. Reflecting neither ability to work safely nor lack of ability to perform one's job duties, these ignorant violations of privacy cannot always be avoided at the workplace. Ironically, because cannabis alleviates symptoms that render patients less able to live fully, many are MORE

functional after medicating with cannabis. Until Corporate America gets enlightened on the subject, cannabis users are wise to develop awareness themselves to best prepare for the possibility of being drug tested.

(\*Much of this information sourced from The Marijuana Medical Handbook by Gieringer, Rosenthal & Carter, Quick American, 2008.)

*Doctor Kevin Baiko is a Board Certified Diplomat of the American Academy of Cannabinoid Medicine.*