Failure to Drug Test Marijuana Ignores Fast Gathering Evidence

A recent study released by the New York University School of Medicine and published in the American Journal of Addictions adds to a growing list of scientific investigations that clearly establish the serious consequences caused by mild, moderate and chronic smoking of marijuana. Elsewhere in this newsletter, the DARS program has illuminated on findings that aspects of brain anatomy shrink in the face of chronic marijuana smoking. This article looks further into the evidence and finds that a sequellae of pernicious effects occurs when marijuana is used in childhood and adolescence.

This particular study followed the experiences of a group of individuals from the mean age of 14 until the mean age of 27. This study exceeded the scopes of most other investigations where surveillance of marijuana users stopped in the early 20’s. The implications of this publication are that the deleterious effects of marijuana use may extend well into later adulthood. The serious effects of early marijuana use (childhood, adolescence through early twenties) includes chronic and often times serious respiratory problems, neurobehavioral and cognitive problems, general malaise and low academic achievement in the late twenties.¹

This study is maybe the first to document longitudinal effects of marijuana use on users overall states of health and achievement. The investigation reveals that marijuana use early in life, even modest use can lead to onerous impacts on job performance and overall satisfaction with life. Lost productivity and low achievement are clearly established as outcomes of marijuana use in this study. Maybe more worrisome is that this report tends to cast doubt on the unproven belief that marijuana’s degrading effects tend to dissipate with age. The information in this publication tends to indicate that marijuana’s side effects may in some ways become permanent consequences.

Some of the specific results of marijuana’s impact on early users include but are not limited to the following:

- Marijuana users have respiratory problems that are 1.44 times that of non-users.
- Marijuana users have neurocognitive problems that are 1.36 times that of non-users.
- Marijuana users suffer a general malaise 1.5 times more than those people who don’t use it; the symptoms include depression, inability to get started in the morning and staying home most or all of the day.
- Marijuana users exhibited lower levels of achievement and functioning that was 1.2 times more likely than those who don’t smoke or abuse marijuana.
These findings were compounded by the observation that more chronic users of the drug, those identified as two deviation points above the mean use level reported a doubling of adverse effects. It's evident that the impacts of marijuana are more severe as dosing levels increase.

The importance of this study and others like it are that light is being shone on drug testing policies of community corrections agencies in the United States. In many states and jurisdictions, marijuana is viewed as a benign drug that isn't worthy of or is not important enough to warrant testing and surveillance of suspect populations. Studies such as these make it abundantly clear that failure to test probation and parole populations for marijuana use is a serious shortcoming that harms program clients and the communities where they live.

Marijuana use should be aggressively combated and prevented, especially in populations of men and women who are trying to integrate back into their communities following periods of criminal or anti-social behavior. In as much as marijuana use is longitudinally connected to poorer outcomes in life achievement, it appears that public agency ignorance of marijuana use by community corrections clients is a regressive act that will more harm minority populations that are already disproportionately represented in those populations. Marijuana use and abuse should be aggressively treated by those public agencies with responsibility for community corrections populations. Indeed, marijuana is a larger problem than methamphetamine, cocaine or opiate abuse, but it can no longer be ignored or shirked as something that it isn’t.

Marijuana is a drug of abuse (THC is the active ingredient), it is addictive and it can lead to tricky cases of physical dependence and chemical withdrawal. Ironically, the long-term health effects of marijuana abuse are more serious than the consequences for opiate addiction; In America, opiate abuse is taken seriously and public agencies work diligently to prevent it and treat it. We should be doing the same with marijuana.

Readers who would like more information about marijuana and the information found in this newsletter article should contact the MEDTOX DARS Program at darsprogram@mac.com. Your MEDTOX government sales representative can also be contacted for assistance with getting the expert guidance that you need in dealing with marijuana abuse.

1 Brook, JS. Stimmel, MA. Zhang, C. Brook, DW. The association between earlier marijuana use and subsequent academic achievement and health problems: a longitudinal study. American Journal on Addictions: 2008; 17: 155-159
Campral (Acamprosate) Receives New Research Endorsement as an Effective Medication in the Treatment of Alcoholism

In a prior edition of this newsletter, Campral (acamprosate) was assessed as being no better than placebo as a factor in maintaining abstinence from drinking for alcoholics in recovery. Campral is a world-wide used drug in alcohol detoxification and treatment programs for men and women struggling with alcoholism. The drug is purported to reduce alcohol cravings and dull the cues associated with relapse to alcohol use. Used in Europe for many years, recent studies of Campral’s efficacy have been mixed. A well-regarded 2006 research study assessed Campral as relatively ineffective in the treatment of alcoholism and the maintenance of abstinence from drinking. A newer and more precise assessment tool was employed to evaluate Campral this year. This study from the Connecticut School of Medicine and published in the American Journal of Addiction paints a different picture of Campral, in this report Campral is notably helpful in helping alcoholics maintain free of drinking and relapse into chronic consumption.

Campral is a drug that affects the balance of stimulatory and inhibitory transmitters in the brain. Hyperactivity involving glutamate occurs in the brains of humans who stop using alcohol after a period(s) chronic abuse; the longer an individual abuses alcohol, the more glutamate system is upended. In essence, glutamate becomes imbalanced against the inhibitory brain transmitter gamma amino butyric acid (GABA). Normalizing and balancing the activity between the glutamergic system and its GABA counterpart is thought to be a means of reducing alcohol craving and diluting the forces that lead to relapse. It’s believed that Campral does exactly this; it leads to normalization of these two systems. Campral patients tend to find relief at dosage levels of 2000 mg per day. The drug is relatively expensive as it is still only available in the original brand format; it’s not yet produced in generic form in America.

Alcoholism is a chronic disease that is difficult to treat. Successful regimens are dependent upon the utilization of varied tools. In the United States, Alcoholics Anonymous (AA), cognitive behavioral therapy, individual counseling and use of the naltrexone all contribute to higher levels of abstinence when compared to placebo. Blending these treatment tools leads to somewhat higher levels of abstinence over utilization of any one method alone. Conventional wisdom tends to support combination therapy approaches such as A.A., psychotherapy and pharmacotherapy (Campral, naltrexone etc.). The research in this study referenced in this article tends to support the notion that Campral can help boost abstinence rates whether it is used alone or in combination therapy with some other treatment method. From inclusion as a medication to blunt the painful experiences in alcohol withdrawal to muting the insidious pangs of alcohol cravings once an alcoholic is sober, Campral has seemingly established itself as a worthy partner in treatment of alcoholism, patients using Campral were 1.8 to 3.0 times more likely to be abstinent at critical points in time in recovery when compared to those alcoholics who were assigned to take placebo. Campral’s performance in this study is statistically significant and cannot be dismissed.

Campral is a drug that deserves consideration as a medication to help alcoholics manage their sobriety and overall health. The safety profile of the drug is secure; its side effects are relatively minimal. Additional information about Campral can be obtained by visiting its website at www.campral.com. A physician must prescribe Campral before it can be used to treat the symptoms of alcoholism related craving.


2 Kranzer HR, Gage A. Acamprosate efficacy in alcohol-dependent patients: summary of results from three pivotal trials. Am J Addict 2008;
Quality Control Problems Afflict Marijuana Users

A recent letter sent to the New England Journal of Medicine (N ENGL J MED 358:15) alerted emergency room physicians to the potential of lead poisoning in marijuana users. The letter in question refers to incidents in Germany where patients began to arrive at hospital emergency rooms with serious symptoms of abdominal cramping, nausea, anemia, and fatigue. Some patients were hallucinating while others displayed palsies of varied types. There was a common thread that united all the patients who displayed this similar constellation of symptoms: they were all regular marijuana smokers.

The symptoms, although rather unconnected, were actually quickly recognized as symptoms of lead poisoning. The patients were all young men and women; many displayed a menagerie of body piercings and attendant items of “jewelry.” Following prodding and diligent investigation, doctors and health officials learned that each of these patients smoked marijuana in “joint” and water pipe form. Investigators were able to examine some of the bags of marijuana that were sold to the patients. As it turns out, visible clumps and shards of lead could be seen in the bag.

Elements of lead could be seen in $10 baggies (dime bags) of marijuana. The theory of the investigators is that dealers had added the lead to the baggies in order to increase weight. Since sales of marijuana are made according to weight, lead as additive makes some sense. The color of the shavings blends in well with debris from marijuana plants and the “buds” that are immensely popular. Lead when heated into a gas form is well absorbed by the lungs. Before long, more than enough lead is absorbed by a marijuana smoker to cause a severe case of lead poisoning. Chelation therapy is the most useful response to lead poisoning, but long-term irreversible neurological damage can occur from lead exposure.

Although the case in question here is one from Germany, American and Canadian marijuana dealers are capable of scheming just as well. For educators, this case is one that makes for entertaining discussion with teachers, students and parents.

The DAR Newsletter welcomes reader stories of unique facts and situations involving drug investigations or drug treatment experiences please email us your information at DARSProgam@mac.com, we’re interesting in publishing useful and entertaining information that benefits our readers.

- Basophilic Stippling is fine, medium or coarse blue granules with uniform distribution within the red cell and represents ribosomal RNA which is precipitated during staining. It is found in conditions such as thalassemia, hemoglobinopathies, sideroblastic anemia’s, heavy metal poisoning and pyrimidine-5’-nucleotidase deficiency.

> Burton’s line is a blue-purplish line on the gums seen in lead poisoning. See image of Basophilic Stippling and Burton’s line above.

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Lead Poisoning Due to Adulterated Marijuana, The New England Journal of Medicine, Volume 358:1641-1642, number 15, April 10 2008
Sure Gel Becomes Popular Method for Masking Drug Use in Urinalysis

Over the course of the last 12 months, the MEDTOX DAR Hotline has been peppered with inquiries about the use of the popular canning and preservative Sure Gel as a means of masking drug use in urine samples. Although the majority of these calls came from Midwest and Southwest clients of MEDTOX, recent months have ushered in calls from probation and social service agencies in the Southern California area. Most of the Hotline callers are trying to determine the validity of the claims about Sure Gel, specifically, can Sure Gel consumption mask very recent THC ingestion?

Sure Gel is a cheap foodstuff that’s easy to obtain, it’s relatively safe as a consumable substance. Although its efficacy is just rumor, it gets significant attention on the Internet. Drug test and drug user websites have numerous references to the attributes of Sure Gel as a means for beating a drug test. The bulk of Sure Gel references pertain to its role as a means of defeating tests for THC, the active ingredient in marijuana.

Although some recent conversations about Sure Gel’s ability to mask methamphetamine use, it seems Sure Gel’s supporters are near unanimous in their views of the concoction as a means to conceal marijuana abuse. Marijuana’s active ingredient (THC) is fat-soluble and it has a tendency to sequester itself in fatty tissues in a variety of organs. Sure Gel aficionados advance the notion that Sure Gel somehow stymies the process of THC movement from storage in fat to detection in urine. At MEDTOX, we are dubious of this claim, but we nonetheless put this information into the hands of our readers.

Instructions for use of Sure Gel vary. Most seem to involve the use of 12 ounces of the powder dissolved in two liters of water. The mixture of Sure Gel and water is supposed to be consumed over the course of 1-2 hours. This interesting beverage should be quaffed no more than 12 hours before an expected drug test. Users are urged to avoid over-hydrating after drinking the
Caffeine is chemically classified as a *xanthine*, it is a stimulant found in coffee, tea, chocolate, soft drinks, and some medications. *Xanthine* are a family of CNS stimulant drugs. Caffeine occurs naturally in the seeds, leaves, or fruits of more than sixty-three plant species throughout the world. The stimulant effect of caffeine is a result of its ability to block the effects of the inhibitory neurotransmitter *adenosine*. *Adenosine* binds to receptors on cells, and causes sleepiness and dilation of blood vessels. *Adenosine* also serves to protect the body against seizures, it lowers the heart rate, and it reduces blood pressure and body temperature.

Caffeine’s inhibitory power causes the opposite effects. Caffeine causes blood vessels in the head to become constricted. Dilated blood vessels in the head often cause headaches, and caffeine can be effective at reducing headache pain and is found in many over-the-counter pain medications. Caffeine has been successfully used to treat cluster headaches and migraine headaches. Caffeine also causes slightly elevated heart rate, and this response is dose-dependent, so very high doses of caffeine may cause a noticeably rapid heart rate (tachycardia).

Other direct and side effects of caffeine are to excite neural activity. Users tend to sense feelings of increased alertness and a decrease in fatigue. Caffeine generally increases alertness for persons involved in tasks, like driving, where persons may become easily bored. However, more complex tasks requiring decision making, divided attention, and motor coordination may show little effect or may even be disrupted by caffeine consumption. Consumption of caffeine for mental alertness may also be followed by periods of even greater fatigue and irritability after cessation of the drug. A sort of fatigue rebound effect can be experienced after consuming multiple doses of concentrated caffeine.

Like many drugs of abuse, repeated caffeine use can lead to tolerance and withdrawal symptoms. Research found that tolerance to caffeine is observed after approximately seventy-two hours of repeated doses that were equivalent to those amounts of caffeine typically found in the diet. Withdrawal from caffeine is a widely accepted phenomenon with sudden cessation from caffeine consumption; users report that sudden cessation of caffeine intake often results in headaches, impaired concentration, drowsiness, and irritability. Withdrawal symptoms are usually observed between 12-18 hours after the last dose of caffeine, and re-introduction of caffeine causes cessation of the withdrawal symptoms. Caffeine withdrawal symptoms may persist for several days following consumption of the last caffeine laced beverage or concentrated caffeine tablet (*No Doze* etc.)

Caffeine toxicity typically begins when peak plasma concentrations reach 1,000 mg (ten cups of coffee consumed in a short period of time). A condition referred to as *caffeinism* may result from ingestion of large sums of caffeine. These symptoms include agitation, extreme nervousness, muscle twitching, hyperactivity, insomnia, heart arrhythmias, GI tract problems, nausea, and diarrhea. The lethal dose (LD) is somewhere between 3,000 and 20,000 grams of caffeine taken orally.
Energy Drinks

Energy drinks first emerged in the US around 1985 with the introduction of Jolt Cola, which boasted “All the sugar and twice the caffeine”. PepsiCo launched sales of Josta in the US in 1995. Since then there has been a landslide introduction of trendy energy drinks, with none perhaps more recognizable than Red Bull. Goldman Sachs predicts that the sale of energy drinks in the US will reach $10 billion by the year 2010. The popularity of energy drinks has led to drink review websites such as www.screamingenergy.com and http://energy-drink-ratings.blogspot.com/ . The caffeine content of energy drinks averages about 150 mg per 16 ounces, however, some drinks like Burn (Coca Cola) contains 118 mg per 8-ounce can. Unlike coffee drinkers who sip hot liquid, energy drink consumers tend to drink their cold liquid faster and in larger quantities than coffee drinkers.

Energy drinks are also frequently used to mix with alcoholic beverages, for example Red Bull and vodka, leading to potentially toxic consumption of caffeine coupled with ingestion of ethanol. Researchers point out that the caffeine may make alcohol users feel less drunk than they are.

Deaths and seizures have been reported as adverse effects of energy drink consumption. Red Bull was banned in France after the death of eighteen-year-old athlete Ross Cooney. Cooney drank four cans of Red Bull and then died following his participation in a basketball game. Many people report consuming 400 + mg of caffeine (two or more 16 ounce energy drinks) in short time spans to get a “buzz.”
Brian Lutmer, a public health scientist with the Missouri Department of Health and Senior Services recently conducted research to determine the alcoholic content of non-alcoholic energy drinks. He found that of twenty seven energy drinks tested, twenty four had “background” levels of ethanol. Of those, 9 had more ethanol than ever previously found in soft drinks (<0.5%). Of note though, is that eleven beverages gave slight, but positive results on portable alcohol testing devices less than one minute after their consumption. Mr. Lutmer points out that this phenomenon of transient alcohol readings could have an unintentional effect by blocking the use of ignition interlock devices, essentially causing false positive screening results.

Other relevant criminal justice research links risk-taking, and violence with abuse of energy drinks. In March 2008, the Journal of American College Health published a report by Kathleen Miller, an addiction researcher at the University of Buffalo. Her work indicates that there is a correlation between the consumption of energy drinks and risky, aggressive behaviors such as unprotected sex, substance abuse, and violence. She suggests energy drink consumption should be a “red flag” to indicate that young people are likely to take greater physical and personal risks. In another related research project, Dr. Mary Claire O’Brien, an associate professor at Wake Forest University found that college students who drink energy drinks and alcohol together got drunk twice as often as those who consumed alcohol by itself. These students (energy drink + alcohol) were also more likely to be injured while drinking, or to become victims or perpetrators of aggressive sexual behavior.

Public safety experts warn that the trendy combination of energy drinks with other drugs, alcohol included is very popular. Concoctions like dextromethorphan containing cough syrup mixed with energy drinks are becoming more common. This newsletter has chronicled the growing and dangerous trend in abusive consumption of over the counter cough suppressants. Abuse of other OTC medications containing antihistamines may also lead to consumption of toxic doses of those sorts of drugs. High doses of antihistamines may cause an anti-cholnergic effect triggering visual, auditory and spatial hallucinations. Officials warn that poly-drug combinations of legal and/or OTC drugs may clearly affect behavioral and clinical signs of drug intoxication during psychophysical test results noted in a DAR.

While a “legal” drug, be cautious not to discount the potential toxic effects of caffeine abuse. Also keep in mind that combinations of energy drinks with alcoholic beverages, cough syrups containing DXM, and other “cocktails” may be likely. Users may appear impaired, agitated, nervous, and irritable. During the DAR examination you may expect:

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<td>Pupillary reaction to light</td>
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(Submitted by Mr. Doug Scott, Master D.A.R. Instructor and Criminal Justice Consultant for MEDTOX Laboratories. He can be reached at DARMM@earthlink.net)

1 Leventhal, Charles F., Drugs, Behavior, and Modern Society, fourth edition, Pearson Education Inc., Boston, 2005
Mounting Evidence of Brain Volume Loss in Marijuana

For years now, addiction specialists have railed about the long-term consequences of marijuana abuse. Laughingly dismissed as ‘reefer madness’ ideologues, marijuana opponents have warned abusers of painful side effects for chronic marijuana smokers. Over the intervening years, evidence has been mounting that indeed, marijuana use is associated with damaging developments in the anatomy of the brain and with the development of difficult to treat forms of depression. Despite the growing body of evidence that proves up marijuana’s dangers, the marijuana lobby has resisted all calls for temperance. In the world of public safety, officials have become lax in the enforcement of marijuana laws. In many cases, marijuana use and abuse is viewed as being less onerous than misuse of alcohol.

Researchers in Australia recently reported on their investigations of the brains of heavy cannabis users. In this case, heavy use meant daily consumption of THC at a level of 5-7 joints. An equal number of non-users were utilized as a control population. Mean duration of use for the smokers was 20 years. Marijuana was the main drug of abuse; people in the control group used alcohol at a level consistent with that of the study group. High resolution MRI was used to detail the inspection of the brain. ¹

The hippocampus was evaluated for anatomical differences between the user group and the control group.

The hippocampus is deeply involved with various forms of memory. The hippocampus also works in part as the brain’s braking mechanism, the hippocampus regulates and causes us to pull back from impulsive sorts of actions and causes us to think a second time. In the analysis of the hippocampus found in the brains of the marijuana users, researchers found a 12% reduction in volume. In essence, the hippocampus of those who chronically used marijuana had shrunk. This observation applied to both left and right hemispheres of the hippocampus.

In the analysis of the amygdala, there were significant differences between the marijuana users and those who are abstainers. The amygdala is also responsible for memory but it controls the all-critical process of emotional learning. As a memory gatekeeper, the amygdala sorts and filters critical experiences that humans experience and puts them in a proper perspective for keeping in memory. Ultimately, emotional arousal is regulated by the amygdala; defective actions in the amygdala can lead to a cascade of onerous effects. In the analysis done here, the amygdales of those who smoked marijuana was 6% smaller. The marijuana users reported many more episodes of depression over the course of their lives. Proof of deficits in auditory learning was also noticeable for the marijuana-using cohort.

Proof of marijuana’s long-term effects on mood, depression and overall mental health has been steady. Few will argue that chronic use of marijuana can lead to the development of physical dependence, amotivational syndrome and an uncomfortable and annoying withdrawal syndrome.
But evidence mounts of serious, potentially long-term damage done to the brains of users. In the instant study, none of the participants exhibited signs of mental illness. The deficits in the brains of the study patients were not gross enough to trigger treatment by mental health professionals. The likely effects were such that there were incremental declines in various aspects of mental acuity and emotional control that negatively affected their work, relationships and quality of life.

Marijuana’s method of action in the brain is via the psychoactive compound called THC (tetrahydrocannabinol); THC is chemically active at select cannabinoid receptor sites in the brain. Cannabinoid receptors exist in a number of different areas in the brain but they all seem to direct action based in the hippocampus and amygdala. In adapting to the presence of THC at these receptors, it is speculated that down-regulation processes are engaged and that these processes lead to volume loss in those areas that have been studied. There is voluminous work left to be done before any sort of scientific consensus can come about.

Marijuana use is a serious concern for public safety officials, it’s also very important for those working in community corrections and mental health circles; licensed clinical social workers supervising drug using parents need to take note of these developments as well. Drug testing programs that ignore screening for THC do so at serious risk for public safety. Marijuana is an addictive drug with far reaching effects; it should be rigorously sought out in all drug-testing programs associated with the maintenance of public safety. More information regarding marijuana and THC’s effects on human behavior can be obtained by contacting the MEDTOX DAR program at DARSProgram@mac.com.


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**DARS Hotline Call Review: Vicks Inhaler Alibi for Positive Amphetamine Test Result**

A pizza deliveryman recently tested positive for methamphetamine, he strongly and in no uncertain terms asserted his innocence to his doubting probation officer. By all other measurements, the client was working hard and abiding by all laws and conditions of his probation. In those years where he abused drugs, the client’s drug of choice was cocaine, a central nervous system stimulant that shares many pharmacological traits with methamphetamine. The client had regularly tested negative for cocaine during the 9 month run up to his positive methamphetamine test.

After pleading his innocence, it came time for the client to come up with a reasonable alibi. In doing so, the only drugs that the client had ingested were aspirin and some sniffs from a Vick’s nasal inhaler. The client admitted that he was using the nasal inhaler because it cleared his head and allowed him to go about his appointed rounds a little faster. The client didn’t know that Vick’s contains a version of methamphetamine (desoxyephedrine) that has very, very limited central acting stimulant properties. As it turns out, the positive urine test for methamphetamine in this individual was attributable to his chronic and concentrated use of the inhaler.

Methamphetamine, the drug known commonly as speed, crank, gak and tweak is a powerful stimulant of the central nervous system.
Among a list of chemical properties, methamphetamine promotes the release of critical chemical transmitters in the brain that cause a sense of exhilaration, accomplishment and boundless energy. Methamphetamine is capable of causing rapid tolerance and addiction. The drug is destructive to the chemical processes that it stimulates; methamphetamine use can lead to permanent damage to the anatomy of the brain. When ingested by humans, street methamphetamine will be detected in urine as the parent compound of methamphetamine along with smaller amounts of the metabolite amphetamine.

Of importance to this discussion is the fact that methamphetamine and amphetamine both exist and are medically applied in chemically similar forms we call stereoisomers. Think of a stereoisomer as the person (you) that looks back at you when you look in the mirror. The image is an exact depiction of you, but it displays you with all of your arms, legs etc., in an opposite orientation of where they’re positioned in the original you. Think of “you” in the mirror as one form of you; think of the “you” in the image as another. Many drugs and chemicals have similar sorts of mirror-image clones out there as medicines and tonics. In the case of methamphetamine and amphetamine, they have mirror clones that have legal and illegal uses.

In the case of methamphetamine and amphetamine, the mirror image clones have chemical applications as peripheral astringents and as decongestants. The clones have no real activity as stimulants in the central nervous system (they don’t activate receptors that prompt the release of stimulant neurotransmitters); only the original image version is capable of causing a classic stimulant effect in the brain. In chemistry speak, we call the active clone the “d” isomer, we call the inactive or peripherally acting clone (from the mirror looking back at you) the “l” isomer. In almost all North America, the “d” isomer is the drug controlled by law, the “l” isomer is only remotely restricted and it is frequently found as an over the counter drug in concoctions such as the Vick’s inhaler. Someone who consumes large amounts of the “l” isomer, the non-centrally acting variant, will test positive for only the “l” isomer.

Someone consuming Real Mc Coy methamphetamine ("d" isomer) will test positive for “d” isomer. In “dirty” methamphetamine, meth made in loosely controlled processes, “l” methamphetamine may be detected in small amounts. The “l” isomer in these situations represents contamination and sloppy chemistry executed in the manufacturing of the methamphetamine, aka: “speed.” In the laboratory at MEDTOX, a special examination can be undertaken to quantify the amount or ratio of “d” isomer from “l” isomer. This special procedure is called a chiral analysis. (MEDTOX provides special chiral analysis of amphetamine samples when requested by customers). People who are aficionados of Vick’s inhalers, especially those who use them chronically for stuffy noses, stand a decent chance of testing positive for methamphetamine—the “l” version that is. In this particular case, the pizza deliveryman produced very small amounts of the “l” version of methamphetamine and “l” amphetamine in his urine; no amount of “d” methamphetamine was detected. For once, the client followed his probation officer’s advice, he started drinking “Cuban Coffee” instead. Energy drinks and hyper-caffeinated beverages are addressed in a separate essay in this newsletter.
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