Suicide is now the eleventh leading cause of death in the United States, accounting for 34,000 deaths per year. Community based surveys by the CDC reveal that approximately 5% of adults have made a serious suicide attempt.

At the same time, deaths from Substance Use Disorder (SUD) are skyrocketing. According to the Substance Abuse and Mental Health Service Administration (SAMHSA), opioid overdose deaths have increased 265% among men and 400% among women since 1999. At the same time, cannabis use has increased among adults and adolescents, in lock step with ongoing legalization efforts.

Although the correlation between Substance Use Disorder (SUD) and suicide risk has been established, the progression from sadness, depressed mood, anhedonia and major depression is not clear. The relationship between substances used, age of onset, cause and effect of drugs of abuse on suicidal ideation, as well as the onset cause and effect of suicidal ideation with the use and/or dependence upon intoxicants, is quite complicated and rarely, has not been adequately examined.

To shed light on this question, Agrawal and colleagues (2017) studied a prospective cohort (N=3277) of the Collaborative Study of the Genetics of Alcoholism (COGA), adjusting for covariates such as depression, family history of alcohol use disorder, other pathologies, and environmental factors and stressors. The analysis revealed that suicidal ideation was related (OR 0.71–0.77) to subsequent alcohol, nicotine and cannabis use. Suicide attempts were associated with (OR 1.44–1.61) later alcohol, nicotine and cannabis dependence, even after accounting for covariates. Interestingly, the evidence for early substance use as a risk factor for the onset of suicidal ideation or attempt was limited. I suspect this is likely due to limited availability of specific data regarding depression and other co-occurring mental illness, as well as the potential for survivor bias.

**Why Does This Matter?**

Those of us who have worked with addicts understand that there are levels of suicidality that do not fit into government statistical categories. For example, taking a handful of pain pills with a fifth of vodka to numb the feelings associated with addictive disease, all the while knowing there is chance of never waking up, is a common, albeit, more subtle form of suicide among addicts—but nonetheless grievous. In many ways, it is like the analysis we did on speeding and teens as part of a spectrum of gambling, risk taking and suicidality.

In addition, previous analysis from psychological autopsies reveal that 63% of all suicide completers suffer from SUD, primarily alcohol use disorder (Edwards, et al, 2012). Lastly, the concordance rate between SUD and depression is 45-60%, and the relationship is bi-directional.

**What To Do**

Persons hospitalized for overdose or in treatment for depression should be evaluated for SUD. Patients with a SUD should be evaluated for co-morbid psychiatric illness and active and passive suicidal thinking. Likewise, whether a patient is seen in an outpatient, detox or MAT program does not appear predictive of who has depression, anhedonia and suicidal ideation or behavior. Individuals seen for SUD should be evaluated for psychiatric illness, suicide ideation, family history of depression and suicide, and if necessary, treated aggressively because the cost of failure is simply unacceptable.

*Continued on page 3*
Is Ketamine Really an Effective Antidepressant?

Depression is the number one cause of disability in the U.S. and, according to the World Health Organization (WHO), is ranked fourth in the world in terms of “disease burden.” Current practice standards for depression consist of the use of one or more medications from the five classes of antidepressants, with serotonin reuptake inhibitors (SSRIs) being the most common. Yet nearly half of these patients discontinue their treatment prematurely. The delayed onset of relief, lack of efficacy, adverse reactions, fear of becoming dependent, and the inability of clinicians to encourage or enforce adherence are the reasons most cited in the literature for discontinuation. As a result, the outcome for untreated or undertreated depression is dismal. The mortality rate for these people is over 15%.

Ketamine – Hope or Hype?

The surprising results of a several small clinical trials demonstrating the efficacy of low dose (sub-anesthetic) infused ketamine for depressed and suicidal persons has ushered in the most significant advance in antidepressant therapies in decades. These studies have demonstrated that low, sub-anesthetic doses of infused ketamine can produce total remission of depressive symptoms among treatment-resistant patients and acutely suicidal patients in less than 24 hours. The other important finding was significant alleviation of chronic pain, which frequently co-occurs with depression.

As a result, more clinicians are using ketamine for their patients who have not responded to traditional therapeutic modalities. However, the limitations of small studies using a convenience sampling of depressed and suicidal patients has predictably invoked healthy skepticism among scientists and clinicians. To address these concerns Cohen, et al (2017) employed a novel, Inverse-Frequency Analysis of eight million reports from the FDA’s Adverse Effect Reporting System. The researchers found that the incidence of depression symptoms in patients who took ketamine for pain dropped by 50% (with an error margin less than 2%) compared to the patients who took any other drug or drug combination for pain. In addition, those patients who took ketamine for depression reported decreased pain and remediation of common opioid side effects, such as constipation and insomnia, when compared to patients who received other pain medications. The analysis also showed that other off-label drugs, when used for treating depression (Botolx, Minocycline and Diclofenac), were also effective in symptom reduction. As I have previously noted, the 50-year-old catecholamine hypothesis may in fact be a secondary system of depression. The robust acute results from the limited data on ketamine suggest we are getting closer to the neurobiological mechanism and control of mood states.

Why Does This Matter?

Depression and Chronic Pain are among the most debilitating conditions facing our aging population. Nearly 50 million American adults have chronic or severe pain, and over 16 million Americans experience a major depressive episode each year. (National Institutes of Health, 2015.) The good news is: we now have a new target for antidepressant drug development. Research at Yale and elsewhere is focused on understanding how ketamine interacts and modulates NMDA receptors, its pharmacokinetics, its chirality and the effect of its active metabolites. The fact that we have stumbled upon an old party drug/effective in anesthesia, that, when properly dosed and delivered offer symptom reduction for severely depressed patients, is good news. It may turn out that ketamine derivatives are superior to any previous antidepressant medications. Further safety and efficacy studies are necessary and part of the FDA process. And...as an added bonus, when opioids failed to offer significant relief worth the risk for non-malignant pain, ketamine and similar drugs may offer hope here as well. But, we should remember that ketamine is the number one club drug of abuse in many countries in Asia and the toxic and other effects report a cautionary tale. Still, once approved by the FDA with clearly defined risks and benefits, ketamine may become the biggest medical breakthrough in decades.

References


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Research You Can Use • SEPTEMBER 2017
Dental Disease Is a Common, Serious, but Seldom Discussed Comorbidity of SUD

A recent review published in the scientific journal Addiction has shed much needed light on an important but rarely discussed condition associated with Substance Use Disorders. Advanced dental disease, including tooth decay and periodontal conditions, are common comorbid conditions among persons with SUD.

To determine the prevalence, investigators conducted an exhaustive systematic search for studies from the past 35 years germane to oral health among substance abusers. Medline, PsychInfo, Ovid, Google Scholar, Embase and article bibliographies were reviewed and analyzed. The results were compared with the general population using controls. Parameters of oral health were defined in terms of tooth decay and periodontal disease by comparing the percent of decayed, missing and filled teeth (DMFT) or surfaces (DMFS) and probing gum pocket depth. In total, this review culled the results of 28 studies yielding comparative data on 4,086 dental patients with substance use disorder and 28,031 controls.

How Do Drugs Affect Dental Health?

Drug abuse affects oral health via direct physiological routes including dry mouth, craving and consumption of sugary sweets and processed carbohydrate snacks (munchies), and most recently processed cannabis sweets, such as gummy bears, candy, cookies and of course…brownies. Cocaine, methamphetamine and other drugs of abuse may interfere with the blood supply to teeth and gums. Teeth clenching and grinding (bruxism), is associated with the chronic use of stimulants and Ecstasy as well as anxiety and depression, which are common comorbidities of SUD. Chemical erosion resulting from excessive use of tobacco and Ecstasy as well as anxiety and depression, is associated with the chronic use of stimulants and other drugs of abuse. This erosion includes chemical attacks on the hard tissue of the tooth and bacterial and other aqueous attacks on the soft tissue. As the enamel and underlying dentin is compromised, the risk for tooth fracture and root exposure increases.

The addition of 2.8 million new drug users each year is unsustainable for our healthcare system. It is difficult to get many users primary medical or addiction care. It is almost impossible to get SUD patients to the dentist. Health disparities and access to care are ongoing public health crises. We will either need a lot more doctors and dentists or a lot fewer drug addicts.

Why Does This Matter?

As we age, oral health has increasingly significant consequences on our quality of life and overall health. At its best, persons with serious dental and periodontal disease suffer difficult masticating and observable aesthetic problems that negatively impact self-esteem. At its worse, dental and oral disease cause chronic inflammation and bacteiruria, which are risk factors for heart disease, stroke, diabetes and compromised respiratory function. The findings from this study are similar to the outcomes associated with severe mental illness and eating disorders.

In the clinical setting, we can make a difference. Clinicians who evaluate and treat people with substance use disorders should make certain to include a mouth, gum, and dental history and oral exam. We should routinely screen for oral health, arrange for dental care as needed, and educate patients of the oral health risks associated with SUDs, dry mouth and cravings for foods with high sugar content. In the United States, marijuana is the most used illicit drug during pregnancy and is a trend that is increasing. Recent estimates suggest that marijuana use complicates 2% to 5% of all pregnancies, and data from the Annual National Survey on Drug Use and Health revealed that since 2002, monthly marijuana use among pregnant women has increased by 62%. The actual number of marijuana-using mothers can only be determined by hair and other analyses, as we did to determine how many women smoked during their pregnancy.

As more medicinal claims are made without FDA study and approval, it should not surprise us that the number of women using marijuana during pregnancy or on a regular basis is increasing. Current data shows that 7.3% of Americans 12 or older regularly used marijuana in 2012, which is significantly higher than the 5.8% in 2007. Moreover, the majority of marijuana users are young and of reproductive age, and it is estimated that nearly half of female marijuana users continue to use the drug during their pregnancy. Even more troubling is that the prevalence of regular cannabis use among the youngest and most socioeconomically disadvantaged women is three to four times higher than the national average, which adds another layer of risk to a population that is already overwhelmed by high-risk pregnancies and numerous health disparities.

Why Does This Matter?

Due to its lipophilic nature, THC can easily cross the blood brain barrier and enter the placenta. In primate studies, THC was detectable in fetal blood 15 minutes after maternal administration. In the mother, THC can be detected in breast milk for 90 days post-infusion. THC is also efficiently matched maternal THC blood levels. Given the pharmacokinetic properties of THC, maternal blood can store THC for weeks, months or even years, which results in prolonged fetal exposure. As a result, occasional use of marijuana during pregnancy, as little as once per month, results in fetal exposure that persists throughout the pregnancy.

Most existing research regarding marijuana use during pregnancy is retrospective. It took hundreds of studies before we could prove, via scientific methods, the risk and danger of alcohol consumption during pregnancy. Because of the research, we discovered fetal alcohol syndrome and a quantifiable spectrum of behavioral and neurological abnormalities in children exposed to ethanol in utero.

Today the best available evidence has identified a causal relationship between marijuana use and decreased birth weight, increased spontaneous abortion, impaired neurodevelopment, and functional deficits among children and adults who were exposed in utero. In addition, THC, the major psychoactive constituent of cannabis, has been identified in the breast milk of lactating women who report only occasional cannabis use. Due to these adverse effects, the American College of Obstetricians and Gynecologists (ACOG) has alerted ob-gyns to “urge their patients who are pregnant to discontinue marijuana use” (2016).

What is known is how cannabis (THC), at the molecular level, effects fetal development. This excellent paper by Friedich, et al., offers new insights regarding the pharmacokinetics of THC and its impact on fetal environment and fetal development.

References


Researchers & NIDA Warn Marijuana Use Could Be Toxic and Is Contraindicated in Pregnancy

Researchers from the National Institute on Drug Abuse (NIDA) have released a comprehensive review of the latest research on marijuana use during pregnancy and have advised health care providers to urge pregnant women to avoid using marijuana.

The review is the latest in a series of reports on the effects of marijuana use during pregnancy and reflects the latest scientific evidence on the topic. The review is based on a systematic review of the scientific literature and includes a comprehensive analysis of the latest research on the effects of marijuana use during pregnancy.

The review highlights the potential risks associated with marijuana use during pregnancy, including increased risk of preterm birth, low birth weight, and other adverse outcomes for both the mother and the baby. The review also highlights the importance of providing pregnant women with accurate information about the risks of marijuana use during pregnancy and the benefits of avoiding marijuana use.

The review was conducted by a team of experts from NIDA and the National Institute of Child Health and Human Development (NICHD) and was led by John Compton, M.D., the director of the NICHD. The team reviewed more than 100 scientific studies on the effects of marijuana use during pregnancy and identified key findings that support the growing body of evidence on the risks of marijuana use during pregnancy.

The review was released in conjunction with the release of the latest edition of the NIDA's Pregnancy and Drug Use Factsheet, which provides information on the risks of marijuana use during pregnancy and the benefits of avoiding marijuana use.

The review also emphasized the importance of providing pregnant women with accurate information about the risks of marijuana use during pregnancy and the benefits of avoiding marijuana use. The review noted that while marijuana use during pregnancy is not a common occurrence, it is important to provide pregnant women with accurate information about the risks of marijuana use during pregnancy.

The review was part of a comprehensive strategy to improve the health of mothers and babies by providing accurate and timely information about the risks and benefits of marijuana use during pregnancy.

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The current storyline describing the national opioid epidemic is wrought with sensationalized, media-driven hype and a scarcity of facts. We have described in great detail the increasing number of physicians prescribing pain medications, the lack of limitations related to this practice, and the lack of continuing education regarding risk versus benefit of prescribing opioid medications. There are more opioids, more available pills to abuse, and then as the medications and doctor visits got too difficult and expensive, heroin was readily available, and the price doctor visits got too difficult and expensive, heroin became cheaper, and the drug became less and less relevant. Mostly, we have failed to appreciate the tangled web of multifactorial causation that is requisite for an epidemic.

In truth, epidemics are never caused by a single variable. For example, it wasn’t long ago that Institute of Medicine naively declared pain as the fifth vital sign, compelling all doctors to ask every patient, at every encounter, “What is your pain level today?” The rationale for this decision was not based on data but by a concern the patient and lack of understanding that every opioid drug exposure is associated with abuse and addiction risk. They considered a large and ageing population, longer life expectancy, and data revealing increased prevalence of chronic and intractable pain among middle-age Americans, but they did not spend much time asking addiction experts where their opioid patients came from.

This noble idea of pain identification of pain syndromes, real or imagined, did not consider the limitations of treatment, and without any viable therapeutic alternatives to opioids, the unintended consequence of these policy-based pain queries was a significant increase of prescribed opioids. Moreover, traditional social and cultural mores that once served to deter recreational drug use and the misuse of prescription pain medication had eroded for some time.

Thus, the jump to prescription opioids led very quickly to snorting opioids and then jumping the “needle barrier,” which ushered heroin to the mainstream. Unchecked, the seemingly endless supply of cheap heroin resulted in thousands of overdose deaths and addiction. This apparently looked health experts, politicians and media gurus by surprise. This dramatic shift in American values and behavior, plus easy access to addictive drugs, and other variables, known and unknown, all contributed to the dire circumstances we find ourselves in. What has also been overlooked is the fact that polysubstance abuse almost always occurs in accidental overdose deaths. Experimenting with opioids while binge drinking, or when using other sedative hypnotics such as Alprazolam, can cause death by shutting down the autonomic nervous system, reminding us that no amount of additive drug is safe when used for purposes other than those prescribed. Despite this, we rarely hear of the drug combinations responsible for overdose deaths. Pathologists and forensic experts will attest that drug overdose nearly always involves a combination of drugs, including over-the-counter preparations. But, by and large, it’s the disease of addiction that ruins lives and kills people. We must never lose sight of this fact. The specific intoxicants are just the means, and they become less and less relevant after detoxification.

So, have inexperienced doctors over-prescribed pain medication, manufactured by Big Pharma? Certainly. Do iatrogenic consequences share some blame for the resulting addiction and misery? You bet, but overdose, increased mortality, and the latest iteration of our drug epidemic is much more than the sum of these parts. This is how you make an epidemic.

Mortality
Since the dawn of the new millennium, the number of overdose deaths involving prescription and illicit opioids, including heroin and bootlegged or homemade fentanyl, has quadrupled. But why heroin and fentanyl? As prescription opioids became harder to attain, heroin became a cheaper alternative, especially when cut with cheap, homemade fentanyl. Still, not a single person who died from an overdose obtained heroin or fentanyl from their Primary Care Physician.

Dr. Robert DuPont, my dear friend, and the author of this fascinating analysis, writes: “The foundation of the nation’s opioid overdose crisis - and the totality of the nation’s drug epidemic - is widespread recreational pharmacology and the use of drugs for fun or “self-medication.”

I wholeheartedly agree, and, like Dr. DuPont, I hope this tragic epidemic can become an opportunity to make fundamental changes in the way substance use disorder and related conditions are perceived and managed. On the bright side, if there is one, earlier this year the Surgeon General Office released an unprecedented report on addiction in America, calling for systemic changes in our approach to both prevention and treatment. In an accompanying letter, Dr. Francis Collins, the Surgeon General himself, affirmed that SUD is a primary, chronic and life-threatening disease with genetic origins that are not well understood. He called for increased funding for basic science while concurrently refocusing our education and prevention efforts to encourage young people to embrace their health and grow up without using intoxicants.

Why Does This Matter?
In spite of being a chronic relapsing, lifelong illness that NIDA’s resident expert and director Dr. Nora Volkow describes as an “incurable brain disease,” most current treatment for SUD offers only acute, short-term, sub-therapeutic, or niche treatment where relapse is the norm, not the exception. In 2013, I was privileged to work with Dr. DuPont in bringing experts from medical, public policy and academia together for an unprecedented, one-day symposium titled: The New Paradigm for Recovery: Making Recovery – and Not Relapse – the Expected Outcome of Addiction Treatment.

Since that historic day, an increasing number of treatment centers have adopted the recommendations highlighted in “New Paradigm.”

What Can We Do?
Beefing up addiction training in medical schools and during residency and post-doctoral programs has yielded robust results in turning out real experts in Addiction Medicine. Yet given the shocking number of new and mostly young drug users (2.8 million per year), many of whom areliterally growing up stoned, only a sustained commitment of resources from within healthcare, plus robust government support, will make a dent in the problem. We have to save and preserve lives, reverse overdoses and treat addictions. But re-inventing prevention and community coalitions to prevent would help everyone. Prevention is the only safe and 100% successful form of treatment, and when it works, it really works.

Lessons Learned from the Opioid Epidemic: New Challenges and New Opportunities

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Heroin and its opioid cousins have wreaked havoc on humankind for centuries. On one hand, treatments such as methadone or other MATs have been developed, and on the other, detoxification, opioid blockade, and abstinence based therapies. New approaches and research are starting to gain traction and get attention. When faced with other plagues where there is no cure available, scientists look to the next best thing—vaccination. The problem with heroin and with most drugs of abuse is that they are very small and simple molecules, and, as such, undetected by the normal immune responses.

For the past eight years, investigators at the Scripps Institute have been looking for a workaround to this obstacle. They may have succeeded. By linking key fragments of heroin molecules to larger, immune-provoking protein conjugate, they were able to provoke a strong antibody response designed to breakdown molecules to larger, immune-provoking protein conjugate, they were able to provoke a strong antibody response designed to breakdown molecules to further neutralize this opioid. The vaccine produced an effective immune response and neutralized varying doses of heroin in addicted primates. This effect was predictably stronger in the first month post-vaccination but lasted for over eight months. This is, in fact, the first vaccination against heroin to succeed in primate trials. Because many of the conjugates have been FDA approved, moving forward to human trials could be sooner than later. Although the technology had opened the door ahead of print, the initial trials in rodents were successful in neutralizing the effects of heroin. But previous such approaches that showed promise in rodents were later unsuccessful in human trials.

To further test their hypothesis, the researchers tweaked their vaccine to more closely resemble heroin and gave it to rhesus monkeys with the goal of provoking a stronger immune response to further neutralize this opioid. The vaccine produced an effective immune response and neutralized varying doses of heroin in addicted primates. This effect was predictably stronger in the first month post-vaccination but lasted for over eight months. This is, in fact, the first vaccination against heroin to succeed in primate trials. Because many of the conjugates have been FDA approved, moving forward to human trials could be sooner than later. Although the technology had opened the door to more research, the vaccine for heroin will not produce an immune response against other opioids. But, that too could change as we learn more about the process at the molecular level.

Why Does This Matter?
Relapse for opioid addiction is common. Recent advances with partial agonists/antagonist and opioid replacement agents have been marginally successful. Baylor’s Tom Kosten and other NIDA-funded researchers are working smart and hard to develop vaccines. A viable vaccine could be administered and monitored as part of an overall continuing care model may be helpful in sustaining recovery.

Reference

The National Institute of Health reports that nearly 50 million adults in the U.S. have significant chronic pain. More specific data from the National Health Interview Survey estimates that within any three-month period, 25 million adults experience daily chronic pain, while an additional 23 million experience severe acute pain. Yet, the available treatment options have changed little in 60 years—that is, the use of opioid-based analgesics.

What We Know?
How we experience pain is a highly variable and subjective phenomenon. The variance in experience transcends most traditional etiological and pathophysiological models and differ to some degree between gender, race, age and ethnicity. Attempts to codify or generalize the known pain generators (illness or injury) have not produced reliable benchmarks of predictability or diagnosis. What we often called idiopathic is more likely a dynamic variance in genetic expression that underlies the somatic experience of pain. Our understanding that pain, or more precisely the vulnerability to pain, is highly heritable is primarily the result of non-zygotic twin studies, most recently reported by Vehof and colleagues in 2014. Using twin modeling analysis, their research suggests a common pathway model to explain the pattern of correlation of vulnerability among twins, with an estimated heritability of 66%—suggesting shared genetic factors underlie the conditions that result in chronic pain.

Data estimates of the general population reveal that heritability of specific pain conditions or pain perception resulting in persistent or chronic pain is between 25% and 60%. Environmental mechanisms underlying pain variability are nearly impossible to estimate. Depression and chronic pain are bidirectionally correlated, and numerous medical conditions are associated with both depression and chronic pain. Yet phenotypical paradigms demonstrate that environmental stressors and genetic expression account for a plethora of risk factors that contribute to pain perception and vulnerability. The specific mechanisms by which an individual’s genetic variance and environmental factors produce vulnerability are not known.

Why Does This Matter?
Chronic and intractable pain is a debilitating condition responsible for unfathomable suffering. The economic implication of 50 million ageing Americans with chronic pain is staggering and unsustainable. We desperately need a large commitment of resources and expertise fully focused and invested in translational pain-research, medical education and new treatment modalities.

References

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World Class, Physician-Led Treatment for Addiction

Heroin Vaccination Might Assist in Sustaining Recovery

The Preferred Choice for Professionals, Centrally Located in Chicago

The West Coast’s Leading Destination for Integrative, Gender-Specific Addiction Treatment

Comprehensive Addiction Treatment in Partnership with the Medical College of Georgia

Positive Sobriety Institute

Malibu Beach Recovery Centers

Bluff Plantation

Evidence-Based, Compassionate Outpatient Treatment in the Atlanta Area

POSITIVE SOBRIETY INSTITUTE

Malibu Beach Recovery Centers

Bluff Plantation

Evidence-Based, Compassionate Outpatient Treatment in the Atlanta Area
Feeling Blue, How About Yellow? Identifying Behavioral Risk Factors for Suicide Attempts in Primary Care

Carotenemia is a clinical condition characterized by yellow pigmentation of the skin (xanthoderma) often on the feet and palms of adults, and increased beta-carotene levels in the blood. In most cases, the condition follows excessive consumption of carotene-rich foods, such as carrots, oranges, sweet potatoes, squash and pumpkins. Many dieters, including anorexics, are using “juicers” and food processors as a way to consume larger amounts of healthy low-fat, high fiber whole foods, many of which are yellow or orange.

Yellow palms and soles are usually a result of 1.) excessive carotene intake, 2.) reduced biotransformation and 3.) hyperlipidemia.

Biologically, carotene is metabolized to vitamin A in the gut, then absorption into our tissue via the blood stream. Carotenemia is often confused with jaundice due to the abnormal pigmentation. In the case of jaundice, the cause is increased bilirubin from the liver, suggesting hepatic pathology. However, carotenemia is easily differentiated from jaundice by simply examining the patient’s sclera. I actually made this diagnosis on an adult with Anorexia Nervosa who asked me about her coloration at the gym. So, it can’t be all that difficult. Clear sclera will rule out jaundice. When the clinical exam is inconclusive, or when there is a history of liver disease, a simple lab test can measure both bilirubin and carotene levels in the blood to either confirm or rule out a diagnosis.

Other diseases, including hyperthyroidism, diabetes mellitus and renal diseases, may also cause carotenemia. Once organ disease has been ruled out, simply discontinuing food or nutritional supplements containing carotene will return the skin color to normal in a few weeks.

References

Meth Mouth: Your Smile Says a Lot About You

Chronic users of Methamphetamine (MA) are not hard to spot. They have been described as the “walking dead” due to their emaciated appearance, ashen skin color and severe dental disease, including the notable premature loss of teeth.

As a sympathomimetic amine, methamphetamine stimulates the sympathetic nervous system, acting on adrenergic receptors and causing decreased salivary flow, leading to xerostomia and increased propensity for tooth decay. Rampant caries associated with use of methamphetamine is colloquially known as “meth mouth” or “crank decay.” The American Dental Association (ADA) has described a distinct and often severe pattern of decay most notably on the buccal smooth surface of the teeth, as well as severe dental caries and bruxism commonly seen among MA addicts. Disorders of the temporomandibular joint, myofacial pain and tinnitus are less common but very debilitating conditions associated with the chronic use of MA.

Why Does This Matter?
Clearly, among the vast and varied manifestations of SUD, those chronically addicted to MA are too often viewed and treated as hopeless pariahs. Their distinctly gaunt and haggard appearance and telltale dental disease is reflective of how sick they are and devastating to their self-esteem. This is where a collaborative, interdisciplinary approach between dentists, addiction and mental health providers can improve outcomes. Moreover, dental professionals are in a unique position to identify MA users and facilitate referral to substance abuse treatment. Likewise, addiction and mental health providers should show more concern and haste for severe co-occurring dental disease and arrange for timely dental intervention. As the TV commercial says, your smile says a lot about you.

Why Does This Matter?
Screening of behavioral risks and social stressors that increased the risk for suicide in the absence of major depression are desperately needed. The U.S. Preventive Services Task Force recommends screening for suicidality in adults during primary care visits and providing professional care or timely referral to a mental health professional to assure accurate diagnosis, effective treatment and follow-up.

Suicide is a major public health crisis and an elusive and complex challenge for primary care physicians. To date, screening and early identification efforts have not been effective in identifying risk or predicting or preventing suicidal behavior. Moreover, little is known about the relationship between non-suicidal self-injury (cutting, self-stimulation), suicidal ideation or plan, and suicide attempts. The study enrolled 2,513 patients (aged 14-24 years) who completed a brief but thorough health questionnaire as part of a routine well visit to determine the behavioral risk factors most correlated and predictive of suicidal ideation and suicide attempts.

Analysis of these data identified a risk profile of the characteristics and behavior associated with suicidality. Substance abuse, sexual assault, same-sex attraction and behavior, and unsafe sexual practices were the factors most associated and predictive of suicidality. The number of endorsed risk factors plus the frequency of engaging in these behaviors constituted overall risk.

Stratifying the Risk
Individuals in the high-risk group were:
• 11 times more likely to have made a suicide attempt
• 5 times more likely to report a history of suicidal ideation and behavior
• 3 times more likely to report recent suicidal ideation and/or behavior

Why Does This Matter?
Screening of behavioral risks and social stressors that increased the risk for suicide in the absence of major depression are desperately needed. The U.S. Preventive Services Task Force recommends screening for suicidality in adults during primary care visits and providing professional care or timely referral to a mental health professional to assure accurate diagnosis, effective treatment and follow-up.

For clinicians, the skyrocketing suicide rate should be a clarion call to action. The following peer-reviewed recommendations provide a guideline for early identification, prevention and ongoing treatment.

1. Suicide prevention efforts need to start BEFORE the index attempt, as nearly two-thirds do not survive this attempt.
2. Self-inflicted injury from a firearm is the most lethal means associated with suicides, especially for males. Accordingly, a diagnosis of depression or identification of known risk factors, coupled with easy access to a firearm, is associated with increased lethality. Herculean efforts by mental health professionals may be necessary in these circumstances, particularly when familial support is weak or absent.
3. Follow-up appointments with a psychiatrist or highly trained mental health professional after a failed suicide attempt should be locked in place prior to discharge from the healthcare facility that provided emergency care.
4. Because the initial 12 months following a first suicide attempt are critical, aggressive psychiatric treatment and access to preventative resources are absolutely essential and must be put into motion ASAP.
5. Utilizing sensitive Behavioral Screening Instruments may assist primary care clinicians in identifying those patients at the highest risk and assist primary care providers to identify potential or active psychiatric and social stressors associated with suicide.

Resources for Clinicians
Adults
• Institute for Clinical Systems Improvement (ICSI) Healthcare Guideline: Adult Depression in Primary Care Guideline: https://www.icsi.org/_asset/thrmd3/Depr. pdf • Instructions for using PHQ
• Screeners: https://www.icsi.org/_guidelines_more/catalog_guidelines_and_more/catalog_guidelines_atalog_behavioral_health_guidelines/depression/

Adolescents
• TeenScreen Primary Care: Screening Questionnaire Overview from the National Center for Mental Health Checkups at Columbia University - http://www.nachc.org/client/TeeScreen%20Screening%20Questionnaire%20Overview%20102%2017%2011.pdf

Reference

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