

Toxicology

What steps has your facility taken to address America's polysubstance use?

A convergence of factors during the pandemic exacerbated addiction and drug misuse

Economic Toll



- 2020: \$1.5 Trillion Economic Toll of Opioid Crisis¹
- 2.7 million people > 12 years old reportedly suffer from OUD (Opioid Use Disorder)¹

Cannabis Legalization



- More than 40% of Americans live in a jurisdiction where medical or recreational cannabis is legal²
- Increased drug testing can aid in identifying polysubstance

Opioid Epidemic



- Thirteen (13%) of Americans reported starting or increasing substance use to cope with stress related to the pandemic³
- Overdose deaths increased by 29% in 2020 and provisional 2021 data reveals a further 15% increase^{4,5}
- More than 40 states have experienced increases in opioid-related mortality during the pandemic⁶

Increased Designer Drugs



- Fentanyl and synthetic opioids – “fentalogs” (norfentanyl, acetylfentanyl, carfentanyl, etc.)
- THC and Delta-8, Delta-9, Delta-10
- Designer benzodiazepines – “benzo-dope” (alprazolam, clonazolam, etizolam, flualprazolam, clonazepam, and diclazepam)⁷
- AB-PINACA, Kratom (myrtraginine), Xylazine⁸, Benzamidazoles (“nitazenes”)

Polysubstance Use Commonplace



- In 2019 nearly 50% of all drug overdose deaths involved multiple drugs^{9,10}
- More than 250 American lives lost to drugs every day¹¹
- Polysubstance can also involve prescription (Rx) drugs¹¹

What is polysubstance use and what to screen for?

Mixing stimulants (methamphetamine, amphetamine, cocaine, MDMA, etc.) Stimulants (uppers) can increase your heart rate and blood pressure. Combining stimulants may even directly or indirectly increase your risk of: brain injury, liver damage, heart attack, stroke.¹¹

Mixing depressants (opioids, heroin, oxycodone, benzos, fentanyl, tramadol) can slow breathing and increase risk of several adverse health outcomes. Combining depressants can also directly or indirectly increase your risk of: damage to the brain and other organs, overdose, death.¹¹

Mixing stimulants & depressants doesn't balance or cancel them out. In fact, the results of combining drugs are unpredictable, often modifying or even masking the effects of one drug or both drugs. This may trick you into thinking that the drugs are not affecting you, making it easier to overdose.¹¹

Drinking alcohol (depressant) while using other drugs can increase risk of overdose and serious damage to the brain, heart and other organs.¹¹

Ask your Thermo Fisher Scientific representative which drug testing combinations you should consider

- THC + alcohol
- THC + CNS stimulant (methamphetamine)
- CNS stimulant + opioid (heroin/fentanyl+meth)
- CNS stimulant + benzodiazepine (alprazolam)
- Opioid + benzodiazepine
- CNS stimulant + Rx counter-acting
- Alcohol + OTCs (diphenhydramine, DXM)
- Tryptamines + THC

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References / sources

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11. https://www.cdc.gov/stopoverdose/polysubstance-use/pdf/Polysubstance-Use-Fact-Sheet_508.pdf

Other resources

https://www.cdc.gov/mmwr/volumes/69/wr/mm6935a1.htm?s_cid=mm6935a1_w
<https://www.cdc.gov/stopoverdose/polysubstance-use/index.html>

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