



Permanent Scheduling Action: Placement of Xylazine in Schedule III

Section 1: Summary

The State of Ohio Board of Pharmacy (Board), pursuant to section [3719.44](#) of the Ohio Revised Code, proposes the placement of xylazine into Schedule III.

Section 2: Background

Pursuant to section 3719.44 of the Revised Code, the Board may add or transfer a compound, mixture, preparation, or substance to schedule III when it appears that there is a potential for abuse less than the substances included in schedules I and II, that it has a currently accepted medical use in treatment in this state, and that its abuse may lead to moderate or low physical or psychological dependence.

In making a determination to add an unscheduled compound, the Board is required to consider the following 8 criteria:

- (1) The actual or relative potential for abuse;
- (2) The scientific evidence of the pharmacological effect of the substance;
- (3) The state of current scientific knowledge regarding the substance;
- (4) The history and current pattern of abuse;
- (5) The scope, duration, and significance of abuse;
- (6) The risk to the public health;
- (7) The potential of the substance to produce psychic or physiological dependence liability; and
- (8) Whether the substance is an immediate precursor.

Section 3: Evaluation Under the Scheduling Criteria

(1) The actual or relative potential for abuse.



Xylazine is a non-opioid sedative, analgesic, and muscle relaxant approved exclusively for veterinary use in the U.S.ⁱ The drug is marketed under several brand names including Rompun, Anased, Sedazine, and Chanazine and has no approved human use.ⁱⁱ Illicitly available xylazine is known as “Tranq” or “Tranq Dope” by some users, who can find it readily available online.ⁱⁱⁱ

Adulterants are frequently added to clandestine drugs to (1) increase or decrease a drug’s effects; or (2) to increase a drug’s resale value.^{iv} Following these trends, the earliest reports of xylazine indicate that it was desired to enhance the effects of heroin.^v Further, the founder of a Philadelphia-based harm reduction group indicated that, “heroin was edged out by. . . fentanyl. But fentanyl’s effects don’t last as long as heroin, and so xylazine was added to street fentanyl to ‘give it legs.’”^{vi} Finally, xylazine is cheap. As such, the DEA hypothesizes that its low cost contributes to its expanded presence in U.S. clandestine drugs.^{vii}

Despite a lack of approved human use, xylazine abuse potential is significant and growing. Sustained abuse of xylazine is documented in Puerto Rico dating back to the early 2000s.^{viii} Reports of xylazine present in Philadelphia’s illicit drug supply dates back to 2006.^{ix} Currently, the highest U.S. prevalence of xylazine is documented in Pennsylvania, Maryland, and Connecticut.^x Estimates from one Ohio crime lab indicate that xylazine may be in 25 to 30 percent of fentanyl evidence containing mixtures.^{xi} Even with incomplete prevalence data, records from the Ohio Department of Health indicate an increase in overdose deaths involving xylazine each year since 2019 (see [Table 1](#)).

Table 1: Number and Percentage of Unintentional Drug Overdose Deaths Involving Xylazine Among Ohio Residents Who Died in Ohio, Ohio, 2017-2022*

	Number of Unintentional Drug Overdose Deaths Involving Xylazine	Percentage of Unintentional Drug Overdose Deaths Involving Xylazine
2017	0	0.00%
2018	0	0.00%
2019	15	0.38%
2020	45	0.92%
2021	75	1.50%
2022*	113	2.52%

Source: Ohio Department of Health Bureau of Vital Statistics

Includes Ohio residents who died in Ohio due to unintentional drug poisoning (underlying cause of death International Classification of Diseases, Tenth Revision [ICD-10], codes X40-X44) with xylazine indicated in the death certificate literal fields.

Multiple drugs are usually involved in overdose deaths. Individual deaths may be reported in more than one category. **All of the xylazine-related unintentional drug overdose deaths included in this time period involved multiple substances. Of the 248 unintentional drug overdose deaths involving xylazine, 99.2% also involved fentanyl.**

***2022 mortality data is preliminary and incomplete. Data as of March 14, 2022.**

(2) The scientific evidence of the pharmacological effect of the substance.

Xylazine was originally synthesized by Bayer in 1962.^{xii} Hazardous side effects, including sedation, hypotension, and bradycardia prevented its approval for human use.^{xiii} Therefore, while the pharmacological effects of xylazine are well known for animals, less is documented on its effects on humans. Nonetheless, the rapid increase of xylazine in illicit drugs leads to growing evidence of its harmful effects on humans.

Reported doses of 40 mg to 2,400 mg of xylazine are known to produce toxicity in humans.^{xiv} Xylazine acts as a central alpha-2-adrenergic receptor agonist, causing a rapid decrease in the release of norepinephrine and dopamine in the central nervous system.^{xv} Synergistic effects of xylazine are suspected based on xylazine user reports and

presentation at emergency departments. This includes an increased risk of overdose death.^{xvi}

Ruiz-Colon and others (2014) document cases of concomitant consumption of xylazine with ketamine. This includes a report of a 36-year-old male who self-injected with ketamine for five years, eventually switching to a xylazine and ketamine combination due to a ketamine tolerance. Clinically, xylazine causes profound sedation and does not cause respiratory depression observed with opioid intoxication. “[P]rofound mental status depression may cause airway compromise leading to suffocation.”^{xvii}

On February 28, 2023, the Food and Drug Administration (FDA) took action to curb the growing prevalence of xylazine in the U.S. On that date, an import alert intended to, “safeguard against unsafe, non-veterinary use,” of xylazine was issued.^{xviii} The alert pertained to all drugs containing xylazine, “both finished product and [active pharmaceutical ingredients].”^{xix} Related to the import alert, FDA Commissioner Robert Califf stated:

The FDA remains concerned about the increasing prevalence of xylazine mixed with illicit drugs . . . [w]e will continue to use all tools at [the FDA’s] disposal and partner with the [DEA] . . . to stem these illicit activities and protect public health.^{xx}

(3) The state of current scientific knowledge regarding the substance.

Xylazine was originally synthesized by Bayer in 1962.^{xxi} Hazardous side effects, including sedation, hypotension, and bradycardia prevented its approval for human use.^{xxii} Therefore, while the pharmacological effects of xylazine are well known for animals, less is documented on its effects on humans. Nonetheless, the rapid increase of xylazine in illicit drugs leads to growing evidence of its harmful effects on humans.

Xylazine’s chemical structure is similar to phenothiazines, tricyclic antidepressants, and clonidine.^{xxiii} It acts as a central alpha-2-agonist on the brainstem and can cause bradycardia and transient hypertension followed by hypotension.^{xxiv} Alpha-2 stimulation decreases the release of norepinephrine and dopamine in the central nervous system, which results in sedation, muscle relaxation, and decreased perception of pain.^{xxv} Heroin and xylazine have some similar pharmacological effects, including bradycardia, hypotension, central nervous system depression, and respiratory depression.^{xxvi}

In cases of overdoses, patients present central nervous system symptoms, respiratory depression, cardiovascular effects, and endocrine symptoms among others.^{xxvii} The typical duration of effects in humans range from 8 to 72 hours.^{xxviii} Because xylazine is not an opioid, resulting overdoses cannot be reversed by naloxone.^{xxix} No known antidote exists

for a xylazine overdose in humans.^{xxx} Recommended treatment after exposure includes maintaining respiratory function and blood pressure.^{xxx1}

(4) The history and current pattern of abuse.

Xylazine was originally synthesized by Bayer in 1962.^{xxxii} Hazardous side effects, including sedation, hypotension, and bradycardia prevented its approval for human use.^{xxxiii} In 1972, the FDA approved xylazine as a sedative and analgesic for use in veterinary medicine.

Sustained abuse of xylazine is documented in Puerto Rico dating back to the early 2000s.^{xxxiv} Reports of xylazine present in Philadelphia’s illicit drug supply date back to 2006.^{xxxv} Currently, the highest U.S. prevalence of xylazine is documented in Pennsylvania, Maryland, and Connecticut.^{xxxvi}

Philadelphia is commonly identified as the epicenter for clandestine xylazine in the U.S. In Philadelphia alone, the number of fatal overdoses involving xylazine rose from 15 in 2015 to 434 in 2021.^{xxxvii} By 2021, xylazine was identified in 90% of illicit opioid samples.^{xxxviii} Health care professionals in Philadelphia are advised to “presume exposure among people using heroin and/or fentanyl.”^{xxxix}

Estimates from one Ohio crime lab indicate that xylazine may be in 25 to 30 percent of fentanyl evidence containing mixtures.^{xl} Even with incomplete prevalence data, records from the Ohio Department of Health indicate an increase in overdose deaths involving xylazine each year since 2019 (see [Table 1](#)).

According to the DEA:

The emergence of xylazine across the United States appears to be following the same path as fentanyl, beginning with white powder heroin markets in the Northeast before spreading to the South, and then working its way into drug markets westward. This pattern indicates that use of xylazine as an adulterant will likely increase and be commonly encountered in the illicit fentanyl supply. Xylazine use throughout the United States may also follow the pattern seen in Puerto Rico and emerge as a drug of abuse on its own in the future.^{xi}

(5) The scope, duration, and significance of abuse.

Estimates from one Ohio crime lab indicate that xylazine may be in 25 to 30 percent of fentanyl evidence containing mixtures.^{xlii} Even with incomplete

prevalence data, records from the Ohio Department of Health indicate an increase in overdose deaths involving xylazine each year since 2019 (see [Table 1](#)).

Sustained abuse of xylazine is documented in Puerto Rico dating back to the early 2000s.^{xliii} Reports of xylazine present in Philadelphia’s illicit drug supply dates back to 2006.^{xliiv} Currently, the highest U.S. prevalence of xylazine is documented in Pennsylvania, Maryland, and Connecticut.^{xliv} Philadelphia is commonly identified as the epicenter for clandestine xylazine in the U.S. In Philadelphia, alone, the number of fatal overdoses involving xylazine rose from 15 in 2015 to 434 in 2021.^{xlvi} By 2021, xylazine was identified in 90% of illicit opioid samples.^{xlvii}

Notably, xylazine is not currently included with the Centers for Disease Control and Prevention’s (CDC) reporting of national statistics on fatal overdoses. Not all jurisdictions conduct routine testing for xylazine in toxicology. Because it is not currently controlled, it is also not reported by all forensic laboratories. For these reasons, the prevalence of xylazine misuse is likely underreported.^{xlviii}

As a legitimate preparation, xylazine is available as a liquid in vials or preloaded syringes. Illicit xylazine is readily available online, often from suppliers overseas. One supplier advertises 99% pure xylazine. When used to adulterate opioid mixtures, “[c]ustomers believe . . . [it] is stronger than pure heroin . . . 10 to 20 percent xylazine mixed with pure heroin enhances similar to how benzos enhance opiates.”^{xlix}

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According to the June 2022 Ohio Substance Abuse Monitoring Network, law enforcement in the Cincinnati region reported moderate availability of xylazine. Reportedly, xylazine is shipped from China via the “dark web” (websites operated by criminal enterprises) and has been found during undercover street-level purchases, when executing search warrants, as well as at the scene of overdose deaths. Law enforcement shared: “Every other dealer that we buy [heroin/fentanyl] from, [xylazine is] in there somewhere; [Xylazine is] a newer one. It’s a non-controlled [substance] but it does have some pain relief qualities. We’ve been seeing a lot of that come in. We’ve seen customs and border

protection getting five pounds coming from China, being shipped out to locations here, and we've also seen it popping up from street-level buys and search warrants that we've been doing and [overdose] death scenes from substances recovered."^{li}

Xylazine is currently being used as an adulterant and is mixed in with other drugs as a potentiator to add to a user's high/create a desired effect. A member of law enforcement noted, "[Xylazine is] used as a 'cutting agent' (adulterant). It's usually combined with fentanyl. If you google it, it says [xylazine is] a masking agent for fentanyl...." When combined with fentanyl, xylazine reportedly adds to the opioid effect and prolongs a high, but because it is a potent non-opioid, it "masks," or renders the synthetic opioid, fentanyl, unresponsive to naloxone (opioid overdose reversal medication), making naloxone ineffective.^{lii}

(6) The risk to the public health.

The uncontrolled presence of xylazine presents a serious risk to public health. Xylazine was originally synthesized by Bayer in 1962.^{liii} Hazardous side effects, including sedation, hypotension, and bradycardia prevented its approval for human use.^{liv} As the presence of xylazine has proliferated the illicit drug supply, xylazine poisoning manifests as bradycardia, respiratory and central nervous system depression, hypotension as well as other changes in cardiac output. The use of xylazine in combination with other drugs can result in synergistic effects that can increase the risk of an overdose or death.^{lv}

Both isolated and in combination with other drugs, xylazine is implicated as a cause or contributing cause of death in the United States. This risk is further compounded because xylazine is not an opioid and therefore cannot be reversed using naloxone.^{lvi} Individuals who use illicit drugs may not be aware of the presence of xylazine in their drug supply.^{lvii}

In addition to the above-referenced risks, severe skin ulcers may accompany xylazine administration.^{lviii} The health consequences can include purulent wounds, necrosis, and bacterial infections.^{lix} Wounds are not limited to the injection site but may occur elsewhere on the body.^{lx} CNN reports on one xylazine user's experience with ulcers:

"You shoot and you miss, you get a sore. You don't care of your sore, you'll wind up on in a hospital with a hole," she said. It happened to her. It started out like a pimple, and then it got bigger, and then the skin came off and she had a half-dollar sized wound. "I could have lost my hand."^{lxi}



Xylazine-induced right leg cellulitis, wound infection and osteomyelitis in a person who injects drugs^{lxii}

Moreover, breadth of xylazine misuse is vast. More than a drug of abuse, xylazine is reported to be misused as a horse doping agent, a drug for attempted sexual assault, and as a source of accidental or intended poisonings.^{lxiii} Research by the Ohio Narcotics Intelligence Center indicates that xylazine is used to either manage withdrawal symptoms or for its reported opioid-like effects.^{lxiv}

(7) The potential of the substance to produce psychic or physiological dependence liability.

Chronic xylazine use can lead to physiological dependence and withdrawal syndrome that includes irritability, anxiety, and dysphoria.^{lxv} Rapidly growing to be the most common adulterant in clandestine opioid mixtures, xylazine is documented to have severe withdrawal symptoms.^{lxvi}

According to one emergency department physician:

Xylazine withdrawal can cause intense anxiety and dysphoria . . . and the medications used to treat opioid withdrawal don't work well for xylazine. That's making the public health crisis worse. "People are avoiding the hospital because they feel like withdrawal can't be well managed . . . They go longer, and the disease gets worse before they come in."^{lxvii}

According to the Philadelphia Department of Health, "[i]npatient treatment for opioid withdrawal may be more difficult than standard opioid withdrawal protocols and require additional pharmacological treatments if the patient is also withdrawing from xylazine."^{lxviii} Although efficacious withdrawal treatment options continue to emerge, addiction medicine and toxicology experts recommend the following be considered for management of xylazine withdrawal: dexmedetomidine, tizanidine, clonidine, guanfacine, ketamine, gabapentin, pentobarbital, and benzodiazepines.^{lxix}

(8) Whether the substance is an immediate precursor.

This substance is not known to be an immediate precursor.

Section 4: Finding of the Board

Pursuant to section 3719.44 of the Revised Code, the Board may add or transfer a compound, mixture, preparation, or substance to schedule III when it appears that there is a potential for abuse less than the substances included in schedules I and II, that it has a currently accepted medical use in treatment in this state, and that its abuse may lead to moderate or low physical or psychological dependence. After a review of all available data, the Board finds xylazine meets the standards for placement under Schedule III.

Section 5: Resolution of the Board

Based on these findings, the Board hereby requests the Governor issue an order in accordance with division (G)(1) of section 119.03 of the Revised Code for the immediate adoption of an amendment to rule 4729:9-1-03 of the Administrative Code to classify any material, compound, mixture, or preparation that contains xylazine as a schedule III depressant.

Further, the Board hereby authorizes the filing of an amendment to rule 4729:9-1-03 of the Administrative Code with the Common Sense Initiative and the Joint Committee on Agency Rule Review to classify as a schedule III depressant any material, compound, mixture, or preparation that contains xylazine.

ⁱ Drug Enforcement Administration. DEA joint intelligence report: the growing threat of xylazine and its mixture with illicit drugs. (Oct. 2022) available at <https://www.dea.gov/documents/2022/2022-12/2022-12-21/growing-threat-xylazine-and-its-mixture-illicit-drugs> (last visited Mar. 15, 2023).

- ⁱⁱ Ruiz-Colón K, Chavez-Arias C, Díaz-Alcalá JE, Martínez MA. Xylazine intoxication in humans and its importance as an emerging adulterant in abused drugs: A comprehensive review of the literature. *Forensic Sci Int.* 2014 Jul;240:1-8. doi: 10.1016/j.forsciint.2014.03.015. Epub 2014 Mar 26. PMID: 24769343.
- ⁱⁱⁱ DEA joint intelligence report, *supra* note i.
- ^{iv} Wong SC, Curtis JA, Wingert WE. Concurrent detection of heroin, fentanyl, and xylazine in seven drug-related deaths reported from the Philadelphia Medical Examiner's Office. *J Forensic Sci.* 2008 Mar;53(2):495-8. doi: 10.1111/j.1556-4029.2007.00648.x. Epub 2008 Feb 14. PMID: 18284526.
- ^v Friedman J, Montero F, Bourgois P, Wahbi R, Dye D, Goodman-Meza D, Shover C. Xylazine spreads across the US: a growing component of the increasingly synthetic and polysubstance overdose crisis. *Drug and Alcohol Dependence* 233 (2022) <https://doi.org/10.1016/j.drugalcdep.2022.109380>.
- ^{vi} Reeve, E, Guff S, Brunswick D. Tranq has become a bigger part of Philly's street fentanyl supply. The wounds left behind are killing people. CNN. available at <https://www.cnn.com/2023/03/07/health/philadelphia-xylazine-tranq-drug/index.html#:~:text=The%20need%20for%20help%20has,snort%20it%20or%20smoke%20it> (last visited Mar. 16, 2023).
- ^{vii} DEA joint report, *supra*, note i.
- ^{viii} Johnson J, Pizzicato L, Johnson C, Viner K. Increasing presence of xylazine in heroin and/or fentanyl deaths, Philadelphia, Pennsylvania, 2010–2019. *Inj Prev.* 2021 Aug; 27(5):395–398. DOI: 10.1136/injuryprev-2020-043968.
- ^{ix} *Id.*
- ^x Friedman, *supra*, note v.
- ^{xi} RecoveryOhio Monthly Drug Trends Meeting, Col. OH (Jan. 2023).
- ^{xii} Ruiz-Colon, *supra*, note ii.
- ^{xiii} Center for Forensic Science Research and Education. Public Health Alert. Xylazine: a toxic adulterant found in illicit street drugs (2020). (available at <https://www.cfsre.org/nps-discovery/public-alerts/xylazine-a-toxic-adulterant-found-in-illicit-street-drugs>)(last visited Mar. 15, 2023).
- ^{xiv} Shuda SA, Lam HY. CFSRE. Characterization of xylazine test strips for use in drug checking. (Oct. 2022).
- ^{xv} Ruiz-Colon, *supra*, note ii.
- ^{xvi} *Id.*; Philadelphia Department of Health. Health alert: risks of xylazine use and withdrawal in people who use drugs in Philadelphia (Mar. 16, 2022).
- ^{xvii} *Id.*
- ^{xviii} Food and Drug Administration. Import Alert # 68-20: Detention without physical examination of xylazine active pharmaceutical ingredient (API) and unapproved finished drug products containing xylazine. (Feb. 28, 2023) available at https://www.accessdata.fda.gov/cms_ia/importalert_1179.html (last visited Mar. 15, 2023).
- ^{xix} *Id.*
- ^{xx} <https://www.fda.gov/news-events/press-announcements/fda-takes-action-restrict-unlawful-import-xylazine>
- ^{xxi} Ruiz-Colon, *supra*, note ii.
- ^{xxii} Center for Forensic Science Research and Education. Public Health Alert. Xylazine: a toxic adulterant found in illicit street drugs (2020). (available at <https://www.cfsre.org/nps-discovery/public-alerts/xylazine-a-toxic-adulterant-found-in-illicit-street-drugs>)(last visited Mar. 15, 2023).
- ^{xxiii} Ruiz-Colon, *supra*, note ii.
- ^{xxiv} Wong, *supra*, note iv.
- ^{xxv} Ruiz-Colon, *supra*, note ii.
- ^{xxvi} *Id.* (but see Philadelphia Department of Health. Health alert: risks of xylazine use and withdrawal in people who use drugs in Philadelphia (Mar. 16, 2022), providing that respiratory depression observed with xylazine is less severe than that of heroin and profound mental status depression may cause airway compromise leading to suffocation.).
- ^{xxvii} *Id.*
- ^{xxviii} *Id.*
- ^{xxix} Philadelphia Department of Health. Health alert: risks of xylazine use and withdrawal in people who use drugs in Philadelphia (Mar. 16, 2022).
- ^{xxx} Ruiz-Colon, *supra*, note ii.
- ^{xxxi} *Id.*
- ^{xxxii} Ruiz-Colon, *supra*, note ii.
- ^{xxxiii} Center for Forensic Science Research and Education. Public Health Alert. Xylazine: a toxic adulterant found in illicit street drugs (2020). (available at <https://www.cfsre.org/nps-discovery/public-alerts/xylazine-a-toxic-adulterant-found-in-illicit-street-drugs>)(last visited Mar. 15, 2023).
- ^{xxxiv} Johnson, *supra*, note viii.
- ^{xxxv} *Id.*
- ^{xxxvi} Friedman, *supra*, note v.
- ^{xxxvii} Philadelphia Department of Health. Health update: xylazine (tranq) exposure among people who use substances in Philadelphia. (Dec. 8, 2022).
- ^{xxxviii} *Id.*
- ^{xxxix} Philadelphia Department of Health. Health alert: risks of xylazine use and withdrawal in people who use drugs in Philadelphia (Mar. 16, 2022).
- ^{xl} RecoveryOhio Monthly Drug Trends Meeting, Col. OH (Jan. 2023).
- ^{xli} DEA joint report, *supra*, note i.
- ^{xlii} RecoveryOhio Monthly Drug Trends Meeting, Col. OH (Jan. 2023).
- ^{xliii} Johnson, *supra*, note viii.

^{xliv} Id.

^{xlv} Friedman, *supra*, note v.

^{xlvi} Philadelphia Department of Health. Health update: xylazine (tranq) exposure among people who use substances in Philadelphia. (Dec. 8, 2022).

^{xlvii} Id.

^{xlviii} Id.

^{lix} Ohio Narcotics Intelligence Center. Dark Web Research. Completed Feb. 22, 2023 (documentation on file with ONIC).

ⁱ DEA joint report, *supra*, note i.

ⁱⁱ Ohio Department of Mental Health and Addiction Services [OhioMHAS] (2022). Ohio Substance Abuse Monitoring Network: Surveillance of Drug Abuse Trends in the State of Ohio: January - June 2022. Columbus, OH: State of Ohio.

ⁱⁱⁱ Ohio Department of Mental Health and Addiction Services [OhioMHAS] (2022). Ohio Substance Abuse Monitoring Network: Surveillance of Drug Abuse Trends in the State of Ohio: January - June 2022. Columbus, OH: State of Ohio.

ⁱⁱⁱⁱ Ruiz-Colon, *supra*, note ii.

^{lv} Center for Forensic Science Research and Education. Public Health Alert. Xylazine: a toxic adulterant found in illicit street drugs (2020). (available at <https://www.cfsre.org/nps-discovery/public-alerts/xylazine-a-toxic-adulterant-found-in-illicit-street-drugs>)(last visited Mar. 15, 2023).

^{lv} Id.

^{lvi} Johnson, *supra*, note viii.

^{lvii} FDA Import Alert # 68-20, *supra*, note xxvi.

^{lviii} See, e.g., Id.; Malayala SV, Papudesi BN, Bobb R, Wimbusch A. Xylazine-Induced Skin Ulcers in a Person Who Injects Drugs in Philadelphia, Pennsylvania, USA. *Cureus*. 2022 Aug 19;14(8):e28160. doi: 10.7759/cureus.28160. PMID: 36148197; PMCID: PMC9482722.

^{lix} Id.

^{lx} Philadelphia Department of Health, Health alert, *supra*, note lxxviii.

^{lxi} <https://www.cnn.com/2023/03/07/health/philadelphia-xylazine-tranq-drug/index.html#:~:text=The%20need%20for%20help%20has,snort%20it%20or%20smoke%20it>.

^{lxii} Malayala, *supra*, note lviii.

^{lxiii} Ruiz-Colon, *supra*, note ii.

^{lxiv} Ohio Narcotics Intelligence Center. Dark Web Research. Completed Feb. 22, 2023 (documentation on file with ONIC).

^{lxv} Philadelphia Department of Health. Health alert: risks of xylazine use and withdrawal in people who use drugs in Philadelphia (Mar. 16, 2022).

^{lxvi} Philadelphia Department of Health. Health update: xylazine (tranq) exposure among people who use substances in Philadelphia. (Dec. 8, 2022).

^{lxvii} Reeve, E, Guff S, Brunswick D. Tranq has become a bigger part of Philly's street fentanyl supply. The wounds left behind are killing people. CNN. available at <https://www.cnn.com/2023/03/07/health/philadelphia-xylazine-tranq-drug/index.html#:~:text=The%20need%20for%20help%20has,snort%20it%20or%20smoke%20it> (last visited Mar. 16, 2023).

^{lxviii} Philadelphia Department of Health. Health alert: risks of xylazine use and withdrawal in people who use drugs in Philadelphia (Mar. 16, 2022).

^{lxix} Id.

4729:9-1-03

Schedule III controlled substances.

Pursuant to section 3719.41 of the Revised Code, controlled substance schedule III is hereby established, which schedules include the following, subject to amendment pursuant to section 3719.43 or 3719.44 of the Revised Code.

(A) Stimulants

Unless specifically excepted under federal drug abuse control laws or unless listed in another schedule, any material, compound, mixture, or preparation that contains any quantity of the following substances having a stimulant effect on the central nervous system, including their salts, their optical isomers, position isomers, or geometric isomers, and salts of these isomers, whenever the existence of these salts, isomers, and salts of isomers is possible within the specific chemical designation:

- (1) All stimulant compounds, mixtures, and preparations included in schedule III pursuant to the federal drug abuse control laws and regulations adopted under those laws;
- (2) Benzphetamine;
- (3) Chlorphentermine;
- (4) Clortermine
- (5) Phendimetrazine.

(B) Depressants

Unless specifically excepted under federal drug abuse control laws or unless listed in another schedule, any material, compound, mixture, or preparation that contains any quantity of the following substances having a depressant effect on the central nervous system:

- (1) Any compound, mixture, or preparation containing amobarbital, secobarbital, pentobarbital, or any salt of any of these drugs, and one or more other active medicinal ingredients that are not listed in any schedule;
- (2) Any suppository dosage form containing amobarbital, secobarbital, pentobarbital, or any salt of any of these drugs and approved by the food and drug administration for marketing only as a suppository;
- (3) Any substance that contains any quantity of a derivative of barbituric acid or any salt of a derivative of barbituric acid;

- (4) Chlorhexadol;
- (5) Embutramide;
- (6) Any dangerous drug containing gamma hydroxybutyric acid, including its salts, isomers, and salts of isomers, for which an application is approved under section 505 of the Federal Food, Drug, and Cosmetic Act (8/20/2019);
- (7) Ketamine, its salts, isomers, and salts of isomers (some other names for ketamine: (+/-)-2-(2- chlorophenyl)-2-(methylamino)-cyclohexanone);
- (8) Lysergic acid;
- (9) Lysergic acid amide;
- (10) Methyprylon;
- (11) Sulfondiethylmethane;
- (12) Sulfonethylmethane;
- (13) Sulfonmethane;
- (14) Tiletamine, zolazepam, or any salt of tiletamine or zolazepam (some trade or other names for a tiletamine-zolazepam combination product: Telazol); (some trade or other names for tiletamine: 2-(ethylamino)-2-(2-thienyl)-cyclohexanone); (some trade or other names for zolazepam: 4-(2- fluorophenyl)-6,8- dihydro-1,3,8-trimethylpyrazolo-[3, 4-e] [1,4]-diazepin-7(1H)-one; flupyrzapon);
- (15) Xylazine.

(C) Narcotic antidotes

Nalorphine.

(D) Narcotics-narcotic preparations

Unless specifically excepted under federal drug abuse control laws or unless listed in another schedule, any material, compound, mixture, or preparation that contains any of the following narcotic drugs, or their salts calculated as the free anhydrous base or alkaloid, in limited quantities as set forth below:

- (1) Not more than 1.8 grams of codeine per one hundred milliliters or not more than ninety milligrams per dosage unit, with an equal or greater quantity of an isoquinoline alkaloid of opium;
- (2) Not more than 1.8 grams of codeine per one hundred milliliters or not more than ninety milligrams per dosage unit, with one or more active, nonnarcotic ingredients in recognized therapeutic amounts;
- (3) Not more than 1.8 grams of dihydrocodeine per one hundred milliliters or not more than ninety milligrams per dosage unit, with one or more active, nonnarcotic ingredients in recognized therapeutic amounts;
- (4) Not more than three hundred milligrams of ethylmorphine per one hundred milliliters or not more than fifteen milligrams per dosage unit, with one or more active, nonnarcotic ingredients in recognized therapeutic amounts;
- (5) Not more than five hundred milligrams of opium per one hundred milliliters or per one hundred grams or not more than twenty-five milligrams per dosage unit, with one or more active, nonnarcotic ingredients in recognized therapeutic amounts;
- (6) Not more than fifty milligrams of morphine per one hundred milliliters or per one hundred grams, with one or more active, nonnarcotic ingredients in recognized therapeutic amounts.
- (7) Any material, compound, mixture, or preparation containing any of the following narcotic drugs or their salts, set forth as follows:

Buprenorphine.

(E) Anabolic steroids

- (1) Unless specifically excepted under federal drug abuse control laws or unless listed in another schedule, any material, compound, mixture, or preparation that contains any quantity of the following substances, including their salts, esters, isomers, and salts of esters and isomers, whenever the existence of these salts, esters, and isomers is possible within the specific chemical designation.
- (2) Anabolic steroids. Except as otherwise provided in paragraph (E)(1) of this rule, "anabolic steroids" means any drug or hormonal substance that is chemically and pharmacologically related to testosterone (other than estrogens, progestins, and corticosteroids) and that promotes muscle growth. "Anabolic steroids" does not include an anabolic steroid that is expressly intended for administration through implants to cattle or other nonhuman species and that has been

approved by the United States secretary of health and human services for that administration, unless a person prescribes, dispenses, or distributes this type of anabolic steroid for human use. "Anabolic steroid" includes, but is not limited to, the following:

- (a) 3beta,17-dihydroxy-5a-androstane;
- (b) 3alpha,17beta-dihydroxy-5a-androstane;
- (c) 5alpha-androstan-3,17-dione;
- (d) 1-androstenediol (3beta,17beta-dihydroxy-5a-androst-1-ene);
- (e) 1-androstenediol (3alpha,17beta-dihydroxy-5a-androst-1-ene);
- (f) 4-androstenediol (3beta,17beta-dihydroxy-androst-4-ene);
- (g) 5-androstenediol (3beta,17beta-dihydroxy-androst-5-ene);
- (h) 1-androstenedione ([5alpha]-androst-1-en-3,17-dione);
- (i) 4-androstenedione (androst-4-en-3,17-dione);
- (j) 5-androstenedione (androst-5-en-3,17-dione);
- (k) Bolasterone (7alpha,17alpha-dimethyl-17beta-hydroxyandrost-4-en-3-one);
- (l) Boldenone (17beta-hydroxyandrost-1,4-diene-3-one);
- (m) Boldione (androsta-1,4-diene-3,17-dione);
- (n) Calusterone (7beta,17alpha-dimethyl-17beta-hydroxyandrost-4-en-3-one);
- (o) Clostebol (4-chloro-17beta-hydroxyandrost-4-en-3-one);
- (p) Dehydrochloromethyltestosterone (4-chloro-17beta-hydroxy-17alpha-methyl-androst-1,4-dien-3-one);
- (q) Desoxymethyltestosterone (17alpha-methyl-5alpha-androst-2-en-17beta-ol) (a.k.a. 'madol');
- (r) Delta 1-dihydrotestosterone (a.k.a.'1-testosterone') (17beta-hydroxy-5alpha-androst-1-en-3-one);

- (s) 4-dihydrotestosterone (17beta-hydroxy-androstan-3-one);
- (t) Drostanolone (17beta-hydroxy-2alpha-methyl-5alpha-androstan-3-one);
- (u) Ethylestrenol (17alpha-ethyl-17beta-hydroxyestr-4-ene);
- (v) Fluoxymesterone (9-fluoro-17alpha-methyl-11beta,17beta-dihydroxyandrost-4-en-3-one);
- (w) Formebolone (2-formyl-17alpha-methyl-11alpha,17beta-dihydroxyandrost-1,4-dien-3-one);
- (x) Furazabol (17alpha-methyl-17beta-hydroxyandrostano[2,3-c]-furazan);
- (y) 13beta-ethyl-17beta-hydroxygon-4-en-3-one;
- (z) 4-hydroxytestosterone (4,17beta-dihydroxy-androst-4-en-3-one);
- (aa) 4-hydroxy-19-nortestosterone (4,17beta-dihydroxy-estr-4-en-3-one);
- (bb) Mestanolone (17alpha-methyl-17beta-hydroxy-5-androstan-3-one);
- (cc) Mesterolone (1alpha-methyl-17beta-hydroxy-[5alpha]-androstan-3-one);
- (dd) Methandienone (17alpha-methyl-17beta-hydroxyandrost-1,4-dien-3-one);
- (ee) Methandriol (17alpha-methyl-3beta,17beta-dihydroxyandrost-5-ene);
- (ff) Methasterone (2alpha,17alpha-dimethyl-5alpha-androstan-17beta-ol-3-one);
- (gg) Methenolone (1-methyl-17beta-hydroxy-5alpha-androst-1-en-3-one);
- (hh) 17alpha-methyl-3beta,17beta-dihydroxy-5a-androstane;
- (ii) 17alpha-methyl-3alpha,17beta-dihydroxy-5a-androstane;
- (jj) 17alpha-methyl-3beta,17beta-dihydroxyandrost-4-ene;
- (kk) 17alpha-methyl-4-hydroxynandrolone (17alpha-methyl-4-hydroxy-17beta-hydroxyestr-4-en-3-one);
- (ll) Methyldienolone (17alpha-methyl-17beta-hydroxyestra-4,9(10)-dien-3-one);

- (mm) Methyltrienolone (17alpha-methyl-17beta-hydroxyestra-4,9,11-trien-3-one);
- (nn) Methyltestosterone (17alpha-methyl-17beta-hydroxyandrost-4-en-3-one);
- (oo) Mibolerone (7alpha,17alpha-dimethyl-17beta-hydroxyestr-4-en-3-one);
- (pp) 17alpha-methyl-delta1-dihydrotestosterone (17beta-hydroxy-17alpha-methyl-5alpha-androst-1-en-3-one) (a.k.a. '17-alpha-methyl-1-testosterone');
- (qq) Nandrolone (17beta-hydroxyestr-4-en-3-one);
- (rr) 19-nor-4-androstenediol (3beta, 17beta-dihydroxyestr-4-ene);
- (ss) 19-nor-4-androstenediol (3alpha, 17beta-dihydroxyestr-4-ene);
- (tt) 19-nor-5-androstenediol (3beta, 17beta-dihydroxyestr-5-ene);
- (uu) 19-nor-5-androstenediol (3alpha, 17beta-dihydroxyestr-5-ene);
- (vv) 19-nor-4,9(10)-androstadienedione (estra-4,9(10)-diene-3,17-dione);
- (ww) 19-nor-4-androstenedione (estr-4-en-3,17-dione);
- (xx) 19-nor-5-androstenedione (estr-5-en-3,17-dione);
- (yy) Norbolethone (13beta, 17alpha-diethyl-17beta-hydroxygon-4-en-3-one);
- (zz) Norclostebol (4-chloro-17beta-hydroxyestr-4-en-3-one);
- (aaa) Norethandrolone (17alpha-ethyl-17beta-hydroxyestr-4-en-3-one);
- (bbb) Normethandrolone (17alpha-methyl-17beta-hydroxyestr-4-en-3-one);
- (ccc) Oxandrolone (17alpha-methyl-17beta-hydroxy-2-oxa-[5alpha]-androstan-3-one);
- (ddd) Oxymesterone (17alpha-methyl-4,17beta-dihydroxyandrost-4-en-3-one);
- (eee) Oxymetholone (17alpha-methyl-2-hydroxymethylene-17beta-hydroxy-[5alpha]-androstan-3-one);
- (fff) Prostanazol (17beta-hydroxy-5alpha-androstano[3,2-c]pyrazole);

- (ggg) Stanozolol (17alpha-methyl-17beta-hydroxy-[5alpha]-androst-2-eno[3,2-c]-pyrazole);
- (hhh) Stenbolone (17beta-hydroxy-2-methyl-[5alpha]-androst-1-en-3-one);
- (iii) Testolactone (13-hydroxy-3-oxo-13,17-secoandrosta-1,4-dien-17-oic acid lactone);
- (jjj) Testosterone (17beta-hydroxyandrost-4-en-3-one);
- (kkk) Tetrahydrogestrinone (13beta, 17alpha-diethyl-17beta-hydroxygon-4,9,11-trien-3-one);
- (lll) Trenbolone (17beta-hydroxyestr-4,9,11-trien-3-one);
- (mmm) Methandranone;
- (nnn) Any salt, ester, isomer, or salt of an ester or isomer of a drug or hormonal substance described or listed in paragraph (E)(2) of this rule if the salt, ester, or isomer promotes muscle growth.

(F) Hallucinogenic substances

Dronabinol (synthetic) in sesame oil and encapsulated in a soft gelatin capsule in a United States food and drug administration approved drug product (some other names for dronabinol: (6aR-trans)- 6a,7,8,10a-tetrahydro- 6,6,9-trimethyl-3-pentyl-6H-dibenzo[b,d]pyran-1-ol, or (-)-delta-9-(trans)- tetrahydrocannabinol).

Effective: 3/29/2023

CERTIFIED ELECTRONICALLY

Certification

03/29/2023

Date

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