

### Medetomidine and Dexmedetomidine Submissions Increase Significantly

- Due to the similarities of medetomidine and dexmedetomidine to xylazine — medetomidine is used in a similar manner as xylazine in veterinary medicine, and dexmedetomidine in human practice and veterinary medicine — DEA assesses both drugs have the potential to be supplements to or replacements for xylazine in terms of mixing with illicit opioids.
- If xylazine is scheduled under the Controlled Substances Act, medetomidine and dexmedetomidine are readily accessible alternatives to xylazine.
- The 219 medetomidine and dexmedetomidine laboratory submissions are not nearly as significant when compared to the 17,332 xylazine submissions reported in the 2023 interim NFLIS-Drug data (as of June 7, 2024).
- Medetomidine and dexmedetomidine submissions first emerged during 2021 in the United States.
- Federal, state, and local law enforcement agencies, as well as the public health community, observed medetomidine and dexmedetomidine in larger quantities in 2022 compared to previous years.
- The rise of medetomidine and dexmedetomidine submissions may be due to a trafficker shift in the use of adulterants and/or the elevated testing focus by reporting laboratories.
- Medetomidine and dexmedetomidine have the same chemical structure. Data may be comingled in some laboratory analysis data totals.
- Medetomidine is offered in powder form by Chinese suppliers. If Medetomidine is found in liquid form, it needs to be dehydrated before mixing with binding or bulking agents to form pills, powders, or bricks.
- Medetomidine, a non-opioid analgesic with potency 200-300 times greater than xylazine, makes opioid overdoses more difficult to reverse with naloxone.
- Medetomidine and dexmedetomidine have been found mixed with other drugs in gel capsules, marijuana, drug packaging residue, drug paraphernalia, fake pills, and in white colored powder mixtures.

## MEDETOMIDINE AND XYLAZINE

MEDETOMIDINE AND XYLAZINE POWDERS  
HAVE A SIMILAR PRICE RANGE OF

# \$10-\$300

PER KILOGRAM.

### WHAT ARE THEY?

- Medetomidine is an analgesic used in veterinary medicine.
- Dexmedetomidine is an analgesic used in human and veterinary medicine.
- Both drugs have been diverted from their intended use.

### Similarities to Xylazine

Medetomidine, dexmedetomidine, and xylazine are available from China and India-based suppliers

Medetomidine and dexmedetomidine are similar to xylazine affecting the same neuron receptors

Medetomidine, xylazine and dexmedetomidine interact with non-opioid receptors

*The data used in this report is derived from dynamic databases. The date of information, June 7, 2024, is the date the databases were queried for the information reflected in each chart or graphic.*



2024 Medetomidine and Dexmedetomidine Shipments

**TOP 3 IMPORTERS OF  
MEDETOMIDINE AND  
DEXMEDETOMIDINE**

United States	813 shipments
India	684 shipments
Chile	228 shipments

**TOP 3 EXPORTERS OF  
MEDETOMIDINE AND  
DEXMEDETOMIDINE**

China
India
United States

**TOP 3 IMPORTERS OF  
XYLAZINE**

India	139 shipments
Turkey	55 shipments
Peru	50 shipments

**TOP 3 EXPORTERS OF  
XYLAZINE**

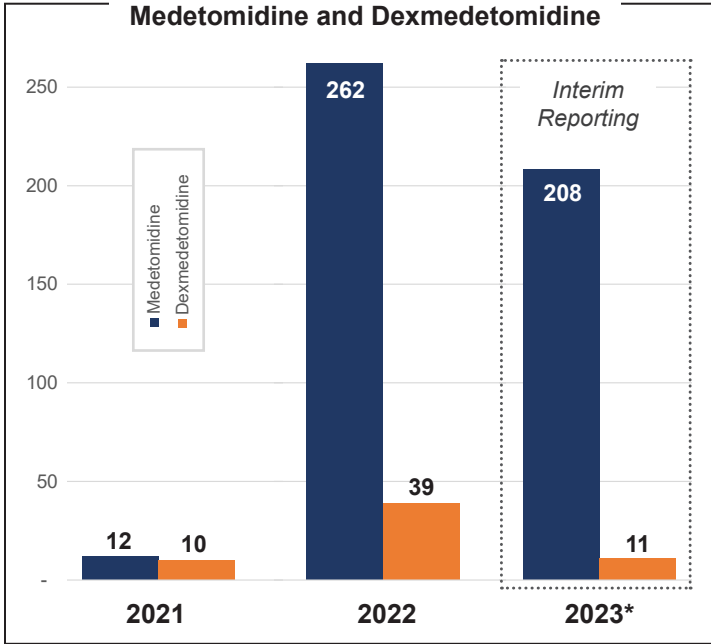
China
India
Germany

**NFLIS-Drug:  
2021-2024\* Co-Reported Drugs  
with Medetomidine and  
Dexmedetomidine**

Acetyl fentanyl
Caffeine
Cocaine
Fentanyl
Fluorofentanyl
Heroin
Isotonitazene
Ketamine
MDMB-5Br-INACA
Methamphetamine
Metonitazene
para-Fluorofentanyl
Phenacetin
Tramadol
Valeryl fentanyl
Xylazine

\*2023 data is interim reporting with final numbers likely to rise.  
Source: DEA NFLIS-Drug, June 7, 2024.

**NFLIS-Drug Submissions Including  
Medetomidine and Dexmedetomidine**



\*2023 data is interim reporting with final numbers likely to rise.  
Source: DEA NFLIS-Drug, June 7, 2024.

**NFLIS-Drug:  
2021-2024\* States with identified  
Medetomidine and  
Dexmedetomidine Submissions**

District of Columbia
Florida
Indiana
Maryland
New Jersey
Ohio
Pennsylvania
Virginia

\*2023 data is interim reporting with final numbers likely to rise.  
Source: DEA NFLIS-Drug, June 7, 2024.



DEA created the **One Pill Can Kill** campaign to encourage the use of social media to help raise public awareness of a significant nationwide surge in counterfeit pills that are mass-produced in labs, deceptively marketed as legitimate, and are killing Americans at an unprecedented rate.

[One Pill Can Kill | DEA.gov](https://www.dea.gov)

For more resources follow the QR code.

