Tianeptine "Zaza"

- What is it? A chemical compound marketed in France stating in 1988 for its rapid antidepressant properties (Fromenty et al., 1989). It is not approved by the FDA due to several health risks. In some states, like AL, TN, NY & OH it's a DEA schedule II drug like heroin, methamphetamine, cocaine, hydrocodone, PCP, and fentanyl.
- <u>US Marketing:</u> The current US marketing lists it as a supplement sold at gas stations, vape shops and online sold in the form of salt, powder, powder-filled capsules, and pressed pills that look like hydrocodone. It is sold at gas stations and vape shops (aka: "head shops") in many states. Packaging and marketing claim it helps with anxiety, depression, opioid addiction, and even claiming it's a "nootropic" (fancy term broadly used to described improved brain functioning).
- **Brand names & street names:** Zaza, Tia, Tiana Green, Tianna Red, Tianna White, TD red, and Pegasus. A common street name for it is "gas-station dope," and "gas-station heroin." It is sometimes referred to as tianeptine sodium and is manufactured under the brand name *Coaxil*, *Tatinol*, and *Stablon*.
- Pharmacotherapy & Pharmacokinetics: Time to effect 30-60 min., Half-life of 2.5 hrs. It is eliminated in kidneys and metabolized in β oxidase liver pathway. Tianeptine has been prescribed by health care providers in Europe, Asia, and Latin America at 25-50mg as an atypical tricyclic antidepressant. It was soon realized the drug has unique effects on the brain to help with depression, but also acts a FULL agonist at μ ("mu") opioid receptors of brain. These receptors are responsible for opiate/opioid response. and dependence develops. Examples of full agonists that act on μ receptor are heroin, oxycodone, methadone, hydrocodone, morphine, and opium.
- Research: There is ongoing research on low dose Tianeptine. It appears to work as a fast-acting antidepressant on several pathways in the brain and can be used in a combination pharmacotherapy (Samuels et at., 2017, Kasper & Olié, 2002 & Rozov et al., 2021). It shows promise as to being as effective as existing serotonin medications in treating depression (Kasper & Olié, 2002). All of this is research only at this point. It is <u>not</u> approved in the US.
- Misuse & Abuse Potential: It is available at gas stations and online as an unregulated product (meaning you don't know what/how much is in a capsule/measure of powder), and the development of dependence is widely reported. This means higher doses are needed to get the same effect and withdrawals are being experienced when it is stopped. There are reports of people needing 120 capsules per day. Cost: \$25-\$45 per bottle, for 15 capsules (Tianeptine Addiction & Abuse Addiction Center, n.d.).
- <u>Desired Effects:</u> high doses achieve a sense of euphoric, opioid-like effects and feelings of sedation. Chronic use creates tolerance (Allain et al., 2023) and withdrawal-like effects (CDC, 2019). There is abuse potential and US reports of adverse reactions and harmful effects (*Tianeptine: 5+ Dangers & Why The Zaza Drug Isn't FDA Approved*, n.d., & CDC, 2019).
- <u>Epidemiology of Exposure:</u> Data shows most calls to poison control about Tianeptine are from healthcare providers of patients with exposure or withdrawals (CDC, 2019)
 - o When age was reported, most calls were about men with median age of 35 years.
 - o Reported Calls to Poison Control from about Tianeptine 2000-2017
 - 2000-2013 11 calls received for exposure.
 - 2014-2017 statistically significant increase related to exposure, intentional abuse or misuse went from 5 in 2014, to 38 in 2015, 83 in 2016, and 81 in 2017.
 - From 2000-2017
 - 218 calls about Tianeptine exposure
 - 92.7% were in the southern U.S., 1 outside US
 - 114 (52.3%) were Tianeptine only poisonings (not in withdrawal)

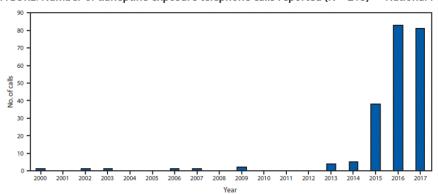
- 29 withdrawal-associated calls
 - o 72.4% of those calls: Tianeptine was the only substance reported.
- o Toxicity and withdrawal (signs and symptoms reported)
 - Agitation (33.3%),
 - Nausea (33.3%)
 - Vomiting (19%)
 - Tachycardia (19.1%)

- Hypertension (14.3%)
- Diarrhea (9.5%)
- Tremor (9.5%)
- Sweating (9.5%)



 $\underline{https://www.cdc.gov/mmwr/volumes/67/wr/mm6730a2.htm\#T1\ down}$

FIGURE. Number of tianeptine exposure telephone calls reported (N = 218) — National Poison Data System, United States, 2000–2017



The figure above shows the number of telephone calls related to tianeptine exposure reported by U.S. poison control centers to the National Poison Data System during 2000–2017.

https://www.cdc.gov/mmwr/volumes/67/wr/pdfs/mm6730a2-H.pdf



 $\frac{https://www.cspinet.org/news/fda-urged-protect-consumers-illegal-salestianeptine-20200825}{tianeptine-20200825}$



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Category: Dietary Supplements

https://supernovasmokeshop.com/product/pegasus-red-tianeptine/



https://www.mississippifreepress.org/30028/addiction-to-over-the-counter-tianeptine-lands-corinth-businessman-in-rehab





https://purerawz.co/product/tianeptine-ultimate/

Resources:

Allain, F., Ehrlich, A. T., McNicholas, M., Gross, F., Ma, W., Kieffer, B. L., & Darcq, E. (2023). Chronic tianeptine induces tolerance in analgesia and hyperlocomotion via mu-opioid receptor activation in mice. *Frontiers in Psychiatry*, *14*, 1186397.

https://www.frontiersin.org/articles/10.3389/fpsyt.2023.1186397/full

El Zahran, T., Schier, J., Glidden, E., Kieszak, S., Law, R., Bottei, E., Aaron, C., King, A., & Chang, A. (2018).

Characteristics of Tianeptine Exposures Reported to the National Poison Data System - United States,

- 2000-2017. *MMWR*. *Morbidity and Mortality Weekly Report*, *67*(30), 815–818. https://doi.org/10.15585/mmwr.mm6730a2
- Fromenty, B., Freneaux, E., Labbe, G., Deschamps, D., Larrey, D., Letteron, P., & Pessayre, D. (1989).

 Tianeptine, a new tricyclic antidepressant metabolized by beta-oxidation of its heptanoic side chain, inhibits the mitochondrial oxidation of medium and short chain fatty acids in mice. Biochemical Pharmacology, 38(21), 3743–3751. https://doi.org/10.1016/0006-2952(89)90580-7
- Kasper, S., & Olié, J. P. (2002). A meta-analysis of randomized controlled trials of tianeptine versus SSRI in the short-term treatment of depression. *European Psychiatry*, *17 Suppl 3*, 331–340. https://doi.org/10.1016/S0924-9338(02)00651-X
- McEwen, B. S., Chattarji, S., Diamond, D. M., Jay, T. M., Reagan, L. P., Svenningsson, P., & Fuchs, E. (2010). The neurobiological properties of tianeptine (Stablon): from monoamine hypothesis to glutamatergic modulation. *Molecular Psychiatry*, 15(3), 237–249. https://doi.org/10.1038/mp.2009.80
- Perić, I., Costina, V., Djordjević, S., Gass, P., Findeisen, P., Inta, D., Borgwardt, S., & Filipović, D. (2021).

 Tianeptine modulates synaptic vesicle dynamics and favors synaptic mitochondria processes in socially isolated rats. *Scientific Reports*, 11(1), 17747. https://doi.org/10.1038/s41598-021-97186-7
- Rozov, S. V., Rosenholm, M., Hintikka, S., & Rantamäki, T. (2021). Tianeptine induces expression of dual specificity phosphatases and evokes rebound emergence of cortical slow wave electrophysiological activity. *Neuroscience Letters*, 764, 136200. https://doi.org/10.1016/j.neulet.2021.136200
- Samuels, B. A., Nautiyal, K. M., Kruegel, A. C., Levinstein, M. R., Magalong, V. M., Gassaway, M. M., Grinnell, S. G., Han, J., Ansonoff, M. A., Pintar, J. E., Javitch, J. A., Sames, D., & Hen, R. (2017). The Behavioral Effects of the Antidepressant Tianeptine Require the Mu-Opioid Receptor.

 *Neuropsychopharmacology, 42(10), 2052–2063. https://doi.org/10.1038/npp.2017.60
- Tianeptine Addiction And Abuse Addiction Center. (n.d.). Retrieved September 30, 2023, from https://www.addictioncenter.com/stimulants/antidepressants/tianeptine-addiction-abuse/
- Tianeptine is Now a Schedule II Controlled Substance | DTPM. (n.d.). Retrieved September 30, 2023, from https://dtpm.com/articles/tianeptine-is-now-a-schedule-ii-controlled-substance/

Tianeptine: 5+ Dangers & Why The Zaza Drug Isn't FDA Approved. (n.d.). Retrieved September 28, 2023,

from https://www.sandstonecare.com/blog/tianeptine-zaza-drug/