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## Inspire or expire: a matter of life or death

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## **Inspire or expire - a matter of life or death**

1. In opioid overdose, cardiac arrest predominantly follows hypoxemia secondary to respiratory depression, rather than primary cardiac mechanisms. (this thesis)
2. OX2R agonism counteracts OIRD while preserving analgesia and wakefulness, suggesting a complementary approach to naloxone in controlled settings. (this thesis)
3. Mechanism-agnostic respiratory stimulants provide additive benefits to naloxone in mixed-drug overdoses by bypassing the mu-opioid receptor. (this thesis)
4. Machine learning is able to identify distinctive breathing signatures and is therefore useful for identifying opioid-induced ventilatory depression. (this thesis)
5. Four milligrams of intranasal naloxone are sufficient to reverse moderate opioid-induced respiratory depression. (this thesis)
6. TAK-925 is a potential 'holy grail' for anesthesiology that has long been sought. (Imamura et al., Anesthesiology, 2025)
7. People who intentionally overdose on opioids, fear withdrawal above death. (NIAID Medical Countermeasure Meeting, Rockville, 2024)
8. Higher doses of naloxone are needed due to the constant shift to more potent opioids. (Moss et al., Substance Abuse Treatment, Prevention, and Policy, 2019)
9. 'Nalmefene is not a naloxone replacement' (Infante et al. International Journal of Drug Policy, 2024)
10. Pharmacotherapy alone is insufficient to tackle opioid morbidity and mortality in the United States.
11. To advance science, Einstein's (1955) principle 'not to stop questioning' must apply not only to established knowledge, but also to the conventional boundaries of research.