

Spurred by Perry: Platypus Toxicology in 10 Facts

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1. **Male Delivery System:** Only male platypuses deliver venom, using spurs located on their hind limbs that connect to paired crural glands.
2. **Bilateral Strike:** When defending themselves, platypuses strike simultaneously with both spurs.
3. **Unique Venom Chemistry:** The venom is thick and clear, containing defensin-like peptides, C-type natriuretic peptides, and nerve growth factor—making it the only mammalian venom known to contain a D-amino acid.
4. **Non-Lethal to Humans:** While dangerous to small prey, platypus envenomation is not fatal to humans.
5. **Systemic Effects in Small Animals:** Envenomation in smaller animals leads to severe pain, hypotension (lowered blood pressure), potential coagulopathy, and temporary paralysis.
6. **Localized Reaction:** Human envenomation causes immediate severe swelling and increased local blood flow, which worsens the pain.
7. **Opioid-Refractory Pain:** The resulting pain is typically resistant to conventional opioid medications and causes profound functional impairment.
8. **Long-Lasting Hyperalgesia:** Victims frequently experience prolonged, heightened sensitivity to pain that can persist long after the initial injury.
9. **No Available Antivenom:** There is no specific antivenom manufactured for platypus envenomation.
10. **Targeted Treatment Protocol:** Management relies on supportive care and hospital admission for monitoring, with regional anesthesia/nerve blocks strongly considered to bypass opioid resistance.

References:

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