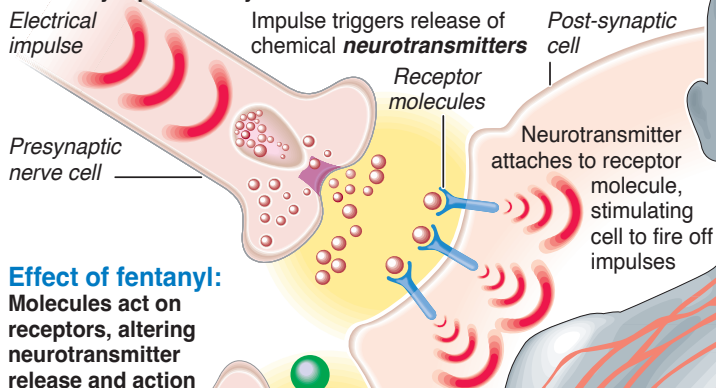


# Russia lifts veil of secrecy over gas

The gas used by Russian forces to end the Moscow theatre siege has been identified as a derivative of fentanyl, a potent opium-based narcotic, 100 times stronger than morphine. At least 119 hostages were killed by exposure to the gas, and of those rescued, 245 are still in hospital

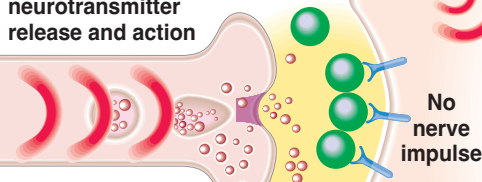
**Nervous system:** Brain and rest of **central nervous system (CNS)** rely on transmission of signals through nerve junctions called **synapses**

## Normal synaptic activity



## Effect of fentanyl:

Molecules act on receptors, altering neurotransmitter release and action



## Symptoms:

- ① Euphoria, drowsiness, impaired judgement, lack of coordination, hallucinations
  - ② Excessive dilation or contraction of pupils
  - ③ Fentanyl suppresses breathing. In high doses, it can incapacitate muscles involved in breathing
  - ④ Nausea and vomiting
- High exposure can result in delirium, seizures, coma, or death by respiratory failure**

**Treatment:** Doctors have reported some success using naloxone – a drug typically administered in opiate overdose cases involving respiratory difficulty