Gamma-hydroxybutyrate (GHB)

**Overview**
Recreational drug that can cause rapid respiratory & CNS depression, bradycardia and myoclonic jerks. Effects are short lived (4-6hrs) and can have sudden offset.

**Toxic mechanism**
Breakdown product of GABA & possible neurotransmitter. May by agonist at several receptors and may affect dopamine, ACh & 5HT, endogenous opioids effects.

**Toxicokinetics**
Rapid oral abs reduced by food. Rapidly oxidised to \( \text{CO}_2 \) & \( \text{H}_2\text{O} \) with zero order kinetics. Elimination complete within 4-6 hrs.

**Clinical features**
Brief euphoria followed by coma in OD. Often can be roused, only to lapse into coma again when not stimulated. Sudden recovery of consciousness often within 2-3 hrs often with some agitation/delerium.

Typical features:
- **General**: Vomiting, bradycardia, sweating
- **CNS**: miosis, agitation, delirium, rarely myoclonic jerks
- **Respiratory**: depression, airway obstruction, Cheyne-Stokes breathing

**GHB withdrawal syndrome** may occur after stopping daily use.

**Investigations**
- **Screening**: BSL, ECG, paracetamol
- **Specific**: Blood & urine levels of GHB rarely useful.

**Risk assessment**
Risk of life-threatening CNS/respiratory depression, increased by EtOH consumption.

**Management**
- **Resus**: ABCs, \( \text{O}_2 \). If coma, respiratory depression or loss of airway reflexes → intubate.
- **Supportive measures**: monitor for CNS/respiratory depression. If bradycardia accompanied by hypoBP or poor perfusion can use atropine.

**Disposition**
If no symptoms in 2hs after ingestion may be d/c, otherwise admit until ambulant & eating/drinking.