

Final Cheat Sheet

Substance Misuse & Toxicity

Substance Use Disorders (SUD)

- **Substance Use Disorder (SUD):** A mental health disorder marked by chronic substance use that leads to significant impairment or distress, characterized by loss of control and compulsive behavior.
- **Substance Abuse:** The excessive use of substances at high doses that results in health or social problems, without capturing the broader chronic and mental health aspects of SUD.

Alcohol Harm Reduction

Population-level strategies aim to reduce alcohol-related harm through:

- **Deterrence:** Fines or penalties (e.g., for drink-driving) discourage unsafe behavior.
- **Access Control:** Raising legal drinking ages limits early exposure.
- **Technology:** Tools like ignition interlock devices help prevent repeat offenses.
- **Random Testing:** Roadblocks and breath tests deter drink-driving.

Opioid Withdrawal

Common signs include sweating, restlessness, muscle/joint aches, and a runny nose. These physical symptoms differ from psychological effects (like anxiety) and contrast with alcohol withdrawal symptoms, which can include tremors and seizures.

Genomics

Genetic Diseases

- **Purely Genetic:** Conditions like Down Syndrome arise solely from genetic changes.
- **Multifactorial:** Diseases such as Type 2 Diabetes and obesity result from both genetic predispositions and environmental factors.
- **Infectious Diseases:** Caused by pathogens, they are distinct from genetic conditions.

Genomic Epidemiology

This field integrates genomic data with traditional methods to provide molecular insights into population health, extending beyond individual-focused studies like pharmacogenomics.

Pharmacogenomics & HLA Associations

For example, carriers of HLA-B*1502 have an increased risk of Stevens-Johnson Syndrome with carbamazepine, whereas HLA-C variants are not linked. This approach enhances drug safety by tailoring treatments to individual genetic profiles.

Humanitarian Emergencies

The Black Death spread rapidly due to ineffective, localized public health measures and global trading patterns. Modern responses, by contrast, are more coordinated and global.

Global Health Principles & Determinants

- Global health seeks international equity by combining prevention, clinical care, multidisciplinary strategies, and transnational cooperation.
- Education improves health literacy and resource access, while working conditions, though important, are secondary to broader socioeconomic factors.

Disaster Typology & Resilience

- **Complex Disasters:** Combine natural events with human crises (e.g., disease outbreaks in displaced populations).
- **Natural Disasters:** Purely environmental (e.g., earthquakes).
- **Technological Disasters:** Result from human-made events (e.g., industrial accidents). Resilience depends on strong education and research.

Climate, Environment & Public Health

Climate Concepts

- **Climate Variability**
 - **El Niño:** A temporary phenomenon causing short-term changes in rainfall.
 - **La Niña:** Typically brings cooler & wetter conditions (counterbalance El Niño's effects).
- **Climate Change:** Long-term trends affecting weather patterns. Mitigation efforts (reducing fossil fuels, clean energy adoption) address causes, while adaptation (heat stress education, mental health support) manages impacts.

Triple Planetary Crises

This framework covers climate change (extreme weather), biodiversity loss (ecosystem degradation), and pollution (contaminant exposure).