

# **LD-50 Lab Introduction**



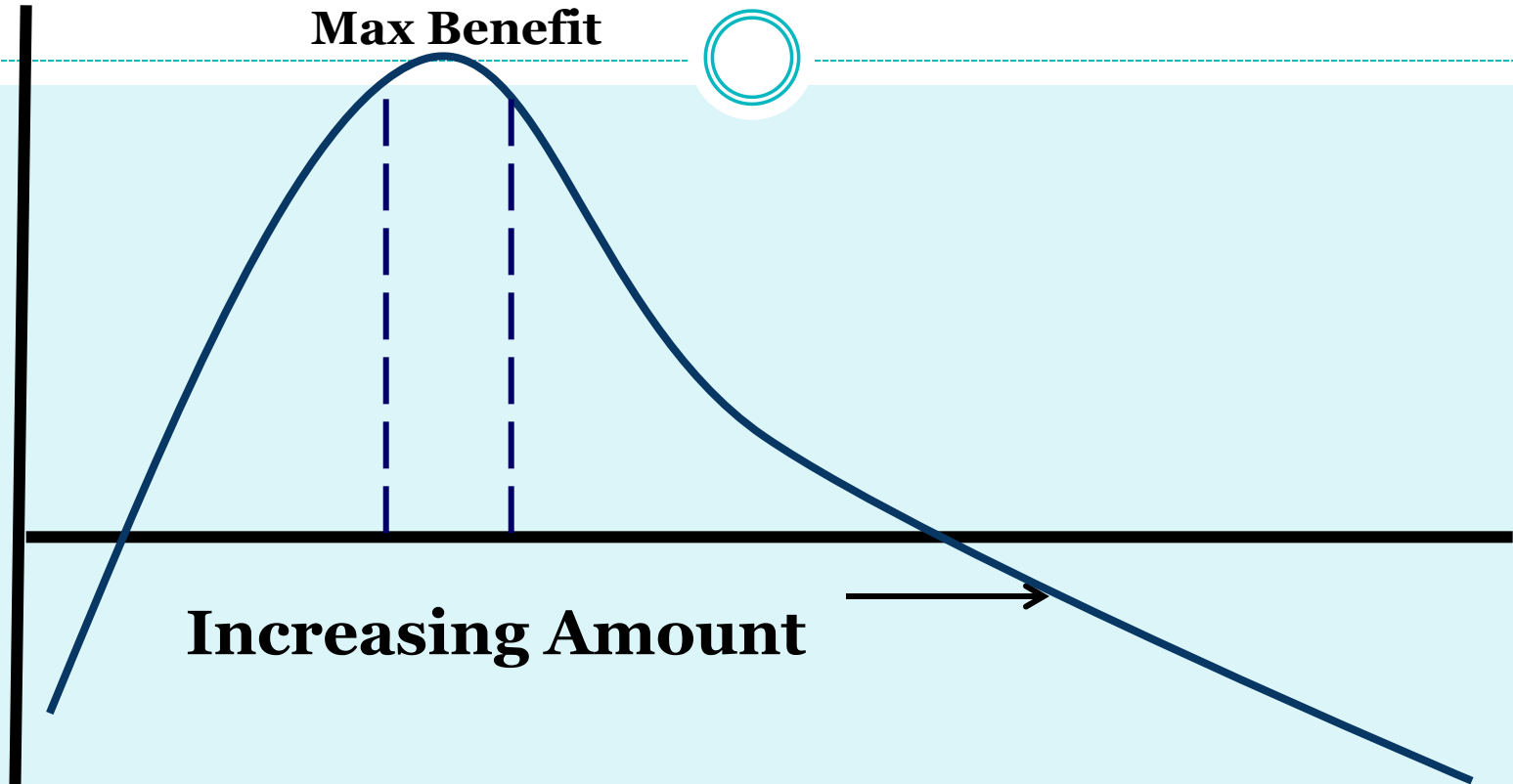
**SCRIPPS CLASSROOM CONNECTION  
RANDIE BUNDY AND JENNIFER OGO**



“Everything is poisonous yet  
nothing is poisonous.”

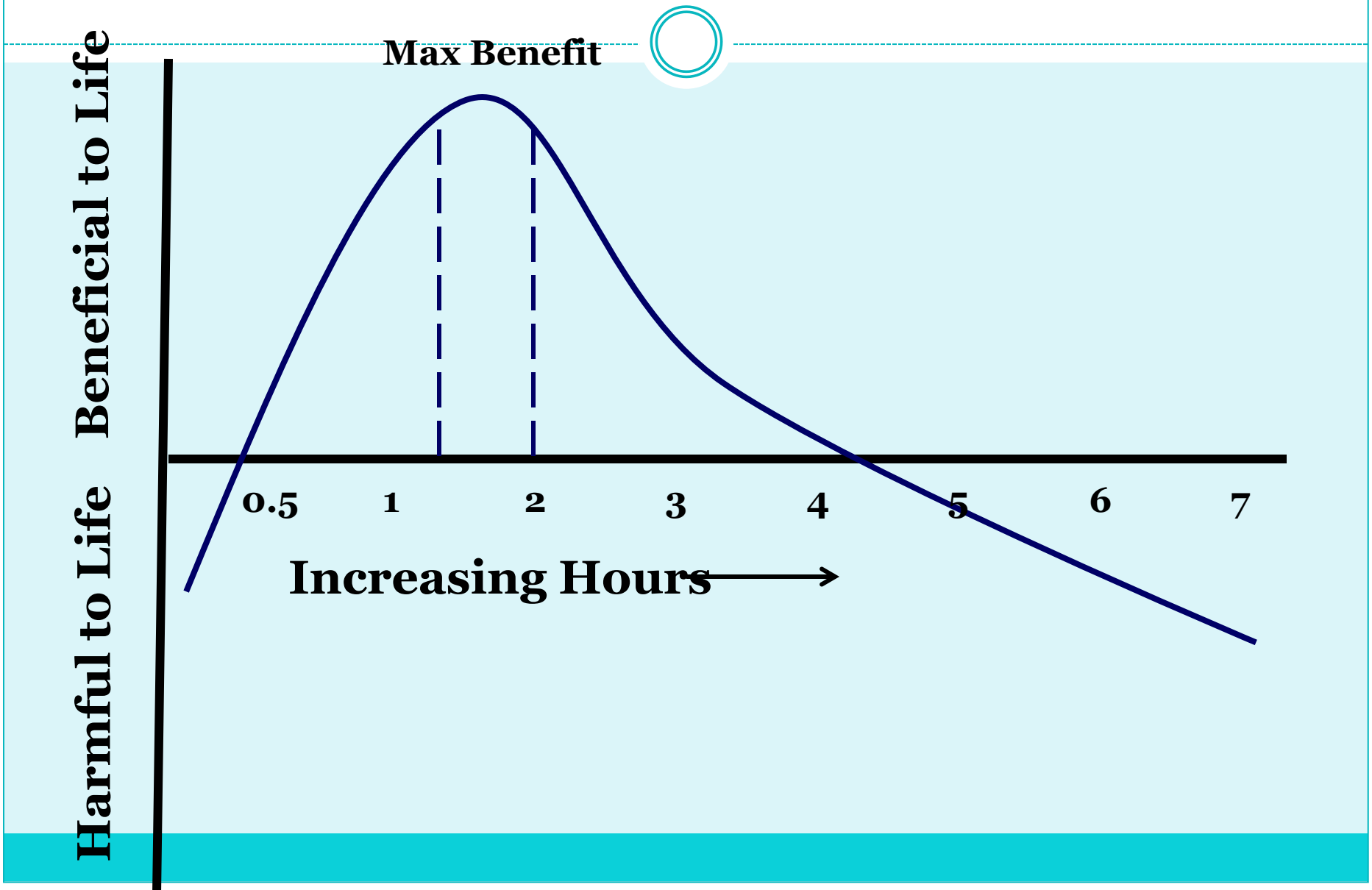
Paracelsus

**Harmful to Life**   **Beneficial to Life**



**Everything can be beneficial up to a certain point, and then might be harmful.**

# Example: Watching TV

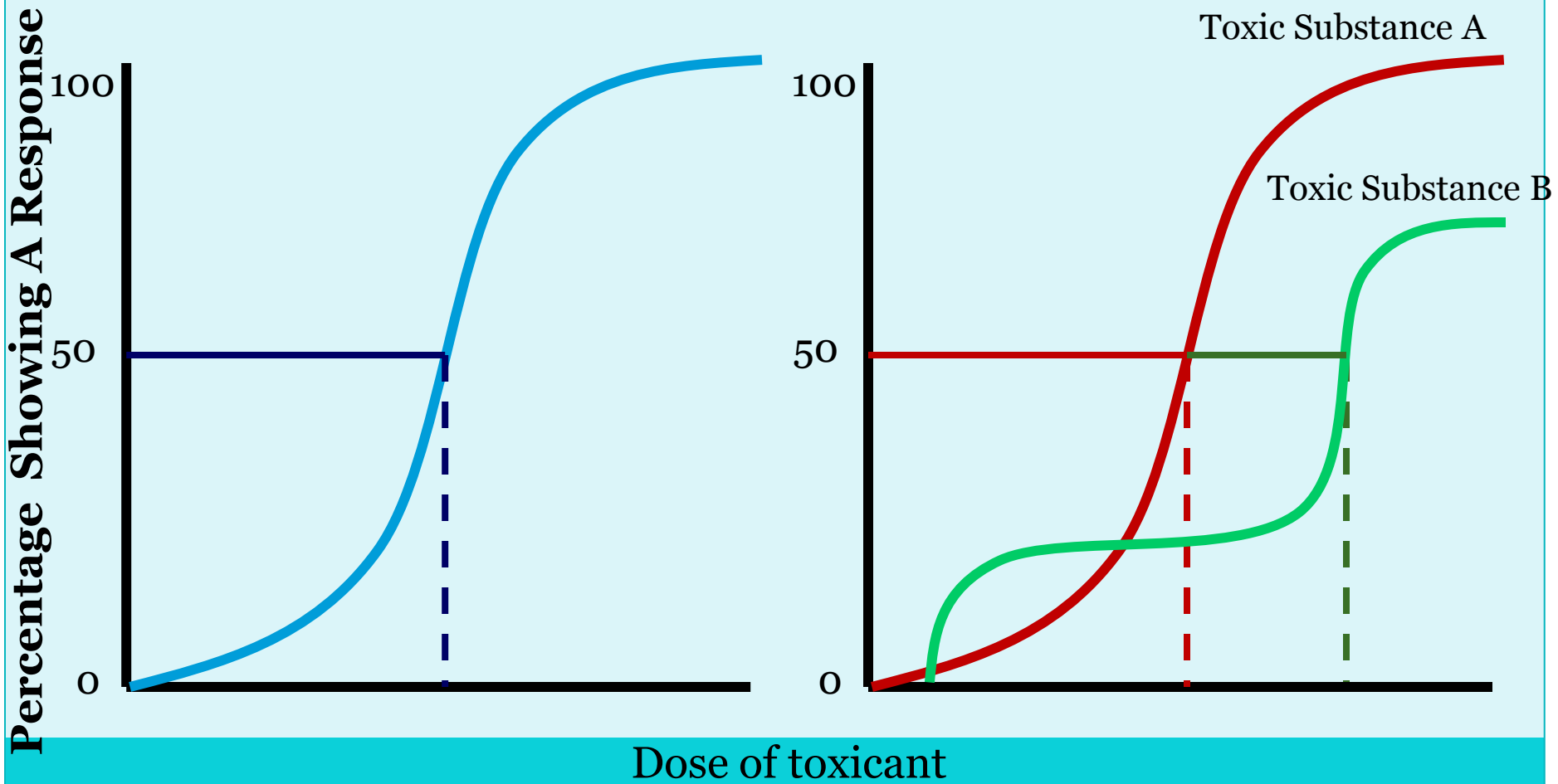


# Dose Response Curves



- Different responses to different “doses”
  - Must use indicators
- Important dose “indicator”
  - **LD50**- lethal dose, where 50% of the population dies

# A Closer Look: LD 50 Examples

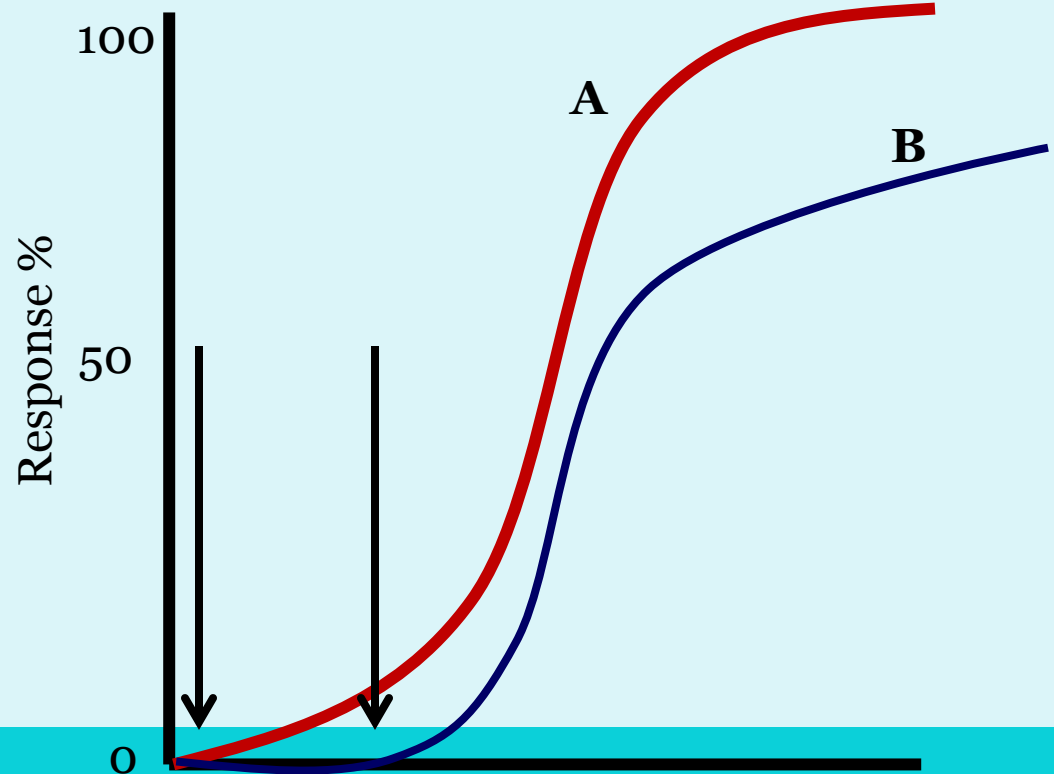


# Threshold Effects



- **Threshold:** below this dose level, some effects are seen to occur in response to the dose

**Which substance,  
A or B  
has a higher  
threshold for  
toxicity?**





**What do you do with the LD50  
values?**



# Risk Assessments



- **Determining potential adverse environmental health effects on people exposed to pollutants**
  - **LD50 and threshold effects**
  - **Includes many steps and processing**
  - **Eventually incorporated into regulations**