



Enzymes You Should Know For Dr. Evans' Final Exam

- ☠ Acetylcholinesterase inhibition:
MOA of anatoxin-a(s) produced by *Anabaena flos-aquae*
- ☠ Cytochrome oxidase (cytochrome c oxidase):
Target enzyme for Cyanide
- ☠ Cytochrome P450 (mixed function oxidases):
Xenobiotic transformation; pathogenesis of ABPEE
- ☠ Glucose-6-phosphate dehydrogenase:
Protective against RBC oxidative damage
- ☠ β -Glucosidase and Hydroxynitrile lyase:
Production of Cyanide from Cyanogenic Glycosides
- ☠ Glutathione peroxidase:
Contains SE; protective against RBC oxidative damage

“Skull and Cross Bones” Ratings



- Must be able to identify plants visually and by scientific or generic names. It is critical to understand toxic syndromes!!!



- Must be able to identify plants by scientific or generic names. It is very important to understand toxic syndromes!!!

A Moment for Quiet Reflection

“Expecting the world to treat you fairly because you are a good person is a little like expecting the bull not to attack you because you are a vegetarian.”

- Dennis Wholey

TOXESSENTIALS (Introduction)

- ☠ Palatability of “toxic” plants, availability of “toxic” and “nontoxic” plants, feed contamination and animal hunger, curiosity and stupidity will determine whether “toxic” plants are consumed.
- ☠ Consider potential exposure, evidence of consumption, weather conditions, geographical location, clinical signs and necropsy findings in making your diagnosis of a plant toxicosis.
- ☠ The toxic principles in plants include various classes and mixtures of classes of compounds, such as Alkaloids, Proteins, Peptides, Amino Acids, Glycosides, Oxalates, Tannins, Resins, Nitrates, Sulfides and some Unknown Compounds.
- ☠ Understand the concept of the dose-response relationship:
The more of a toxicant that is consumed, the more severe the observed clinical signs!!! Toxic plants and/or plant toxins can affect multiple systems and can cause different syndromes in different species.

Some plants are very sensitive about the things humans do to them!!!

