

But is it Toxic? – The Theory Behind Toxicology

Philippus Theophrastus Aureolus Bombastus von Hohenheim (1493 – 1541), whom assumed the title “Paracelsus” is considered the father of modern toxicology wrote:

Alle Ding' sind Gift und nichts ohn' Gift; allein die Dosis macht, dass ein Ding kein Gift ist.

"All things are poison and nothing is without poison, only the dose permits something not to be poisonous."

The basis of modern toxicology is that no substance is truly benign, but has a dose at which it becomes toxic. The question is for each substance what exposure constitutes risk and at what exposure over what period of time does a substance become toxic.

Because a substance has shown that at a certain exposure level over a period of time it can damage humans, animals or plants, it does not follow that a lower exposure constitutes any risk whatsoever.

Drinking enough water in a short enough period of time to sufficiently knock electrolytes out of balance can be fatal. That does not suggest that drinking a glass of water constitutes any risk whatsoever.