**Reading 1**

Lead poisoning is a disease that affects hundreds of millions of people each year. Although it is most toxic for children and pregnant women, anyone can be affected by exposure to lead. For example, in developing countries, as much as 20% of mental retardation is demonstrated as caused by lead exposure, while worldwide it accounts for 1% of the global burden of disease. Because of lead’s harmful effects, the CDC has lowered the standard for “concern” from 60 μg/dL to 5 μg/dL of lead in the blood within the past 50 years. The symptoms of toxicity are as follows:

Symptoms of Toxicity

* Central Nervous System
  + Hyperactivity
  + Restlessness
  + Behavioral disturbances
  + Learning disabilities (low score on cognitive tests)
* Peripheral Nervous System
  + Neuropathy (adults only)
* Gastrointestinal
  + Anorexia
  + Vomiting
  + Constipation
  + Abdominal pain
* Blood
  + Anemia
  + Basophilic stippling

Lead is toxic to everyone, but affects children more readily. Because of their incomplete development and possible proximity to leaded paint, children are at an increased risk for elevated blood lead levels (eBLLs) as outlined below:

* High exposure
  + Hand-to-mouth activity
  + Pica
  + Repeated ingestion of paint chips/dust
  + Inhalation of dust
* High absorption
  + Fraction of absorption is 40% in children compared with 10% in adults
* High susceptibility
  + At the critical periods of brain development
  + Immature blood-brain barrier