11.82 Zinc Deficiency & Toxicity

As can be seen on the bottom map in the link below, the risk of zinc deficiency is low in North America, but there are other places in the world where it is much more common.

Web Link
Zinc Deficiency

At particular risk are children, pregnant women, elderly & the poor\(^1\). Symptoms of zinc deficiency include\(^1,2\):

- Growth retardation
- Delayed sexual maturation
- Dermatitis
- Hair loss
- Impaired immune function
- Skeletal abnormalities

In the link below you can see a picture of an infant with dermatitis caused by zinc deficiency.

Web Link
Zinc Deficiency Dermatitis

Another cause of zinc deficiency is mutation of ZIP4 that results in the condition acrodermatitis enteropathica. Without ZIP4, zinc cannot be taken up efficiently into the enterocyte. This condition is managed by administering very high levels of zinc, some of which is absorbed through other mechanisms\(^2\).

Zinc toxicity is not common, but an acute toxicity results in:\(^1\)

- Nausea
- Vomiting
- Intestinal cramps
- Diarrhea

Chronic toxicity can result in copper deficiency, as will be discussed in the last copper subsection\(^2\).

References & Links
Links
Zinc Deficiency - http://www.zinc.org/info/zinc_is_essential_to_human_health