

Selenium and human risk

Describes the selenium issue in relation to risk to children and adults.

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- Selenium is an essential nutrient, but it has a narrow range of “safety”. Too little in your diet is not healthy, neither is too much. Like all minerals, correct dosages are necessary.
- The Agency for Toxic Substances and Disease Registry (ASTDR) states:
“It is likely that the health effects seen in children exposed to selenium will be similar to the effects seen in adults. However, one study found that children may be less susceptible to the health effects of selenium than adults.” (See ASTDR website: <http://www.atsdr.cdc.gov/tfacts92.html#bookmark07>)
- Selenium compounds have not been shown to cause birth defects in “humans or in other mammals.” (See ASTDR website: <http://www.atsdr.cdc.gov/tfacts92.html#bookmark07>)
- In an agency-led human health risk assessment completed in 2002, it was determined that human health effects are not likely to occur by ingesting water, wildlife or fish in the phosphate mining area. http://giscenter-ims.isu.edu/SISP/Area_Wide_Reports.html
- In 2003, the Idaho Fish Consumption Advisory Program Committee issued a temporary, precautionary fish consumption advisory limiting the consumption of cutthroat and brook trout for children to four ounces of fish per week from a small creek known as East Mill Creek. Their exposure calculations indicated a potential risk to a child that lived near this stream and relied upon this stream and immediate area for all their food and water. The agency’s analysis concluded that consumption of fish by children under this scenario is considered highly unlikely. Further, East Mill Creek is a stream that has difficulty providing a productive fishery due to the limited habitat and low flow conditions. (reference: http://www.atsdr.cdc.gov/HAC/pha/idahoselenium/isp_toc.html) Moreover, there are no residential structures located near East Mill Creek, and is highly unlikely that any will be built in the future.