

Health Impacts of Mercury

An Environmental Health Concern

*Dr Ejaz Ahmad Khan,
Assistant Professor
Health Services Academy, Islamabad*

In This Presentation

- *What is Mercury?*
- *Uses of Mercury*
- *How it affects health?*
- *What needs to be done?*

What is Mercury?

- Mercury is naturally occurring chemical extracted from Cinnabar Ore
- Highly toxic
- Three major forms
 - Elemental
 - quicksilver
 - Inorganic
 - Mercury oxide or mercury sulfide
 - Organic
 - Combination of carbon and mercury produce organic compounds (methyl mercury)

FIGURE 6-4 Cinnabar ore.



Source: Author, courtesy of the Almaden Quicksilver Mining Museum, Almaden, California.

Cont...

- Used to treat syphilis, be fungicide in agriculture and used in dental amalgams to fill cavities
- Usually releases to environment as a by product of industrial activities
- It accumulates in the beds of lakes, rivers and other bodies of water at even low levels
 - Low levels of mercury can however be magnified to higher levels as the results of methylation and bioaccumulation and pose hazards to human health

The New Almaden Mine, California

Named after the famous Almaden mines of Spain, the New Almaden Quicksilver Mine is located in the San Francisco Bay area of Northern California. From the late 18th century until 1976 when mining operations terminated, large quantities of mercury were extracted from the mine. However, the legacy of the mining operation lives on: Mercury contamination from this former mining operation poses a continuing hazard to fish and aquatic life in the affected geographic area; signs have been posted to warn persons not to consume fish caught in nearby streams and lakes due to potentially toxic levels of mercury. Figure 6-5 shows different aspects of the mercury mining operations at the New Almaden mine.

Figure 6-5 The New Almaden Mine area. **A:** Sign advising against consumption of mercury-contaminated fish. **B:** Defunct equipment used for mercury mining and extraction. **C:** Cinnabar ware crafted by Chinese artisans.



Source: Author, courtesy of the Almaden Quicksilver Mining Museum, Almaden, California.

Use of Mercury in Industries

- Used as catalyst in manufacturing plastics
- Used as flame-retardant in paper making
- Used as fungicide in paints
- Used as an alloy in dental fillings
- Used in manufacturing of scientific equipment

The Health Effects

Mercury:

liver and kidneys

inhalation through alveolar membranes of lungs
travel to brain causing neurological problems
loss of coordination

and skin exposure may lead to absorption

'Mad Hatters' Disease: prevalent among 19th Century's
hatmakers

预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_14099

