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Mercury exposure aboard an ore boat

Two maritime academy interns were exposed to mercury vapor after spilling a bottle of Mercury onto the floor in an enclosed storeroom while doing inventory aboard an ore boat. During a three day period, one of the interns suffered transient clinical intoxication which resolved after being removed from the environment, showering and discarding all clothing. His initial serum Mercury level dropped from 4ng/ml to less than 0.05ng/ml. The other had an initial level of 11ng/ml that continued to rise to a maximum of 188.8ng/ml. He complained of tremulousness, insomnia and mild agitation and he was hospitalized. He had earlier showered and discarded all clothing except his footwear. Continued exposure due to Mercury in contaminated boots during the two weeks prior to hospitalization was presumed to be the cause. Removing his footwear led to resolution of his toxic symptoms and correlated with subsequent lowered serum Mercury levels. Chelation was initiated as recommended despite its uncertain benefit for neurologic intoxication. Mercury is used in the merchant marine industry in ballast monitors called King Gauges. New engineering is required for ballast monitoring to eliminate this hazard.

Biography

Richard R. Roach, MD, FACP, spent 9 years serving USS Great Lakes Fleet as their occupational medicine physician. A graduate of University of Minnesota Medical School and board-certified Internist, he is presently Assistant Professor of Medicine for Kalamazoo Center for Medical Studies. He has served as a consultant to the Minnesota Health Department in establishing protocol for lead intoxication.

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