

Update on Contaminated Water Diver Training



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Awareness of problems in contaminated water diving has increased

Most commercial diving companies now recognize there is a need to protect divers in contaminated water.



New problems have been revealed

- Non-point source pollution
- 40% of U.S. waters do not meet EPA standards



Stories circulated about divers who have gotten cancer

- San Diego Harbor patrol
- Michigan Police
- Israeli Navy



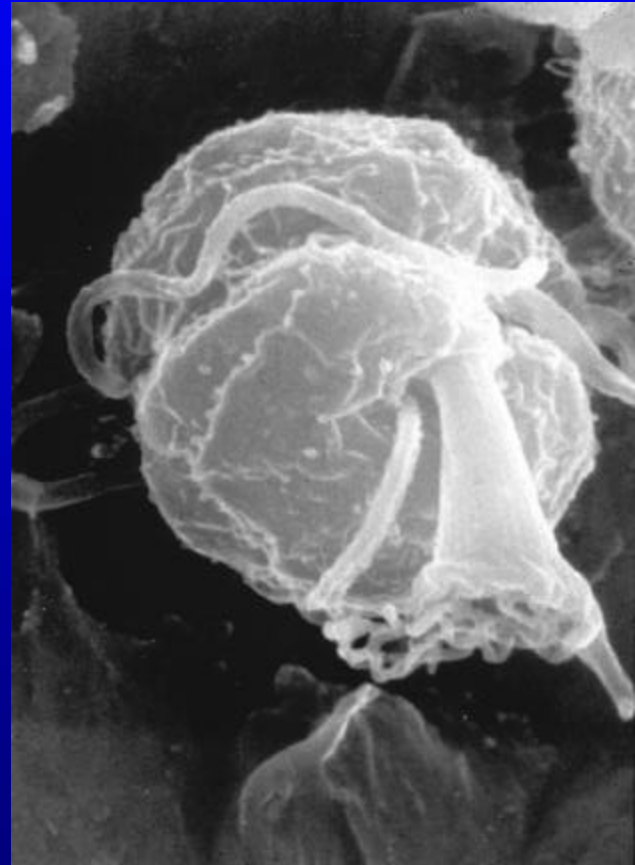
Scientific correlation has been established with Israeli Navy divers exposure

- Haifa harbor dives
- Dr. Elihu Richter
- Paper to be published in Environmental Health Perspectives in 2003



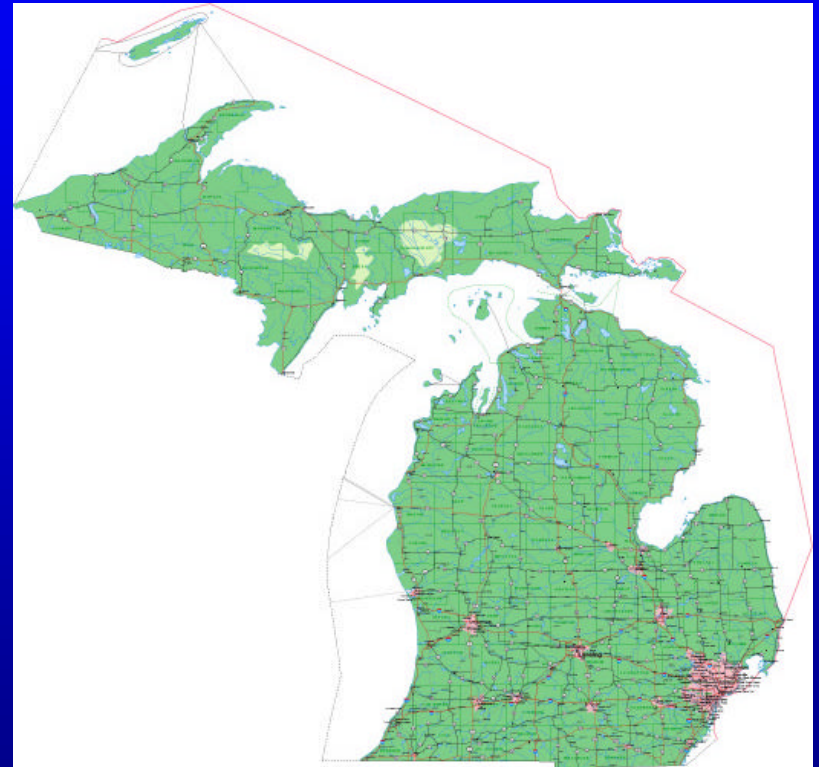
New form of Pfiesteria identified

- *Pfiesteria shumwayae*
- Appears to be equally toxic to *P. piscicida*
- Toxic to humans



Swimmer's Itch

- Schistosome cercarial dermatitis
- Carried by fecal matter from water fowl
- Results in intense itching



Michigan

Acanthamoeba Keratitis

- Affects wearers of contact lenses
- Infection of cornea
- Can lead to vision loss
- Can occur in fresh and salt water



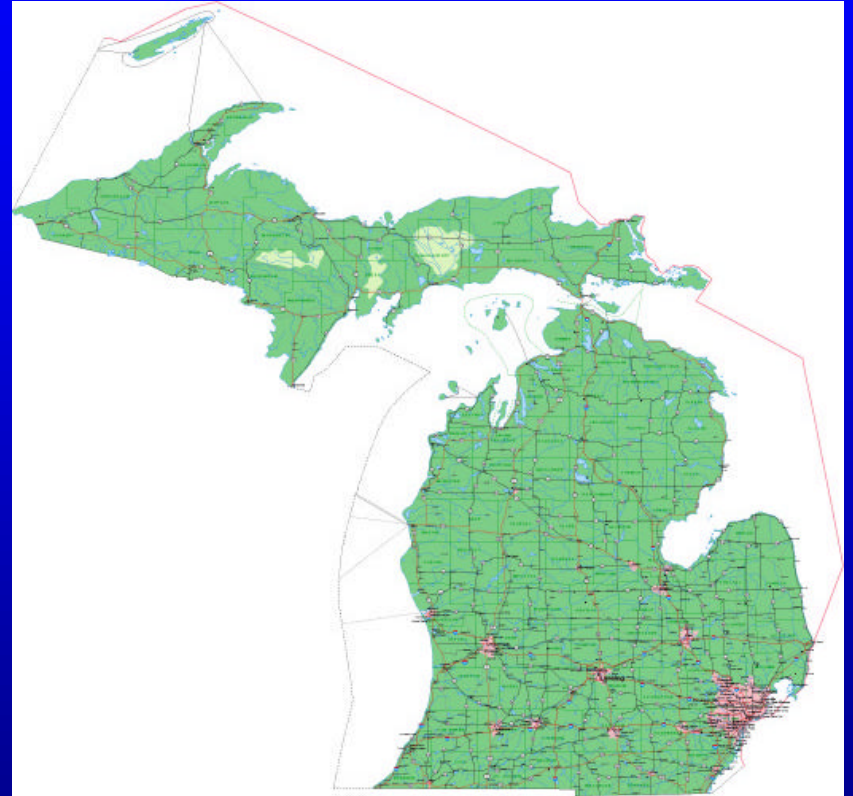
Tributyltins

- Used on hulls of large ships
- Absorbed through skin
- Still in use worldwide
- Danger to diver doing hull searches



PCBs

- Dangerous carcinogen
- Accidental dumping
- Boating canals in Michigan site of worst contamination incident in 2002
- 30,000 times safe exposure level in Michigan



Michigan

507 Lakes in
California listed
as “impaired”
under Clean
Water Act

No pollution control plan
mandated until 2012



California

Drug wastes contaminating inland waterways

- Steroids, antibiotics, & hormones
- Personal care pollutants
 - Considered the next big unknown in pollution



Hudson River PCBs

- General Electric dumped PCBs into river
- 40 mile stretch of river affected
- Dredging scheduled to start in 2005



Most polluted beaches

- Huntington Beach, CA
- Malibu Surfrider Beach, CA
- Kiddie Beach, Ventura, CA
- La Jolla Beach, CA
- Mission Bay, CA
- Miami Beach, FL
- Jones Beach, NY
- Indiana Dunes Lakeshore, Porter County, Ind.

Different groups take different approaches

- No standard for public safety divers
- Commercial industry has standard



Filming of contaminated water diving techniques

- Traveled across U.S.
- New York
- Columbus, GA
- Long Beach, CA
- Huntington Harbor, CA



New York Harbor Patrol Divers

- Dive full time
- Use AGA mask
- Use Viking PRO suit
- Don't use dry gloves
- No formal decon procedure



Trident Foundation

- Use both AGA & SuperLite helmets
- Use Viking suits
- Use dry gloves
- Perform extensive decon procedures



California Department of Transportation

- Full time team of divers inspecting bridges
- Almost all diving is in polluted sites
- Use surface-supplied gear exclusively



Long Beach, CA Lifeguards

- Perform hull searches in harbor
- Rescues in harbor
- Body recoveries
- Use AGA/Viking/Dry gloves
- Full decon procedures used



Companies are adapting techniques and equipment to their needs

- Decon procedures vary widely
- Decon adjusted to level of threat
- Diving equipment is consistent



When to use full-face mask

- When contaminants will not cause permanent injury or death
- You know for sure there are no other contaminants present



When to use helmet...

- When contaminants will cause permanent injury or death
- When risk that full-face might be dislodged is high



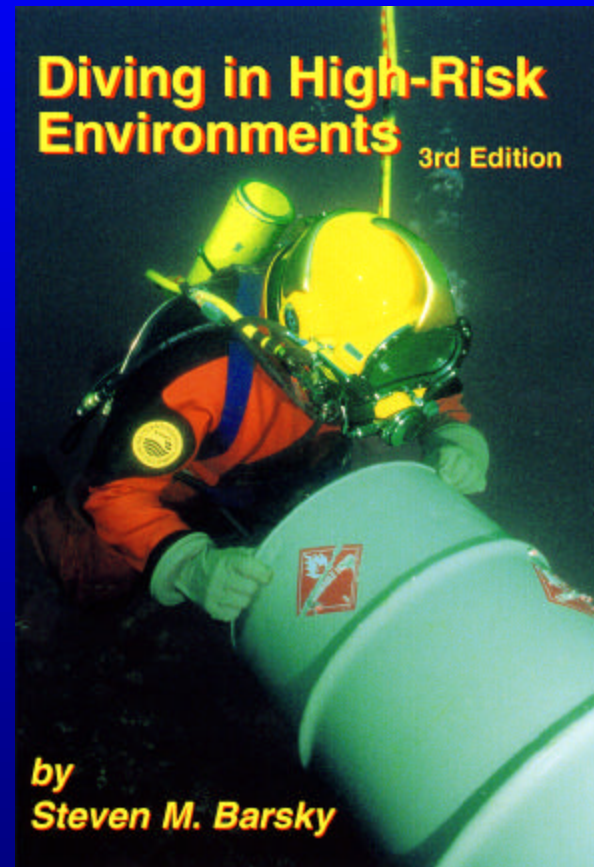
Tools available to assist in training

- Chemical tables
- Training course on CD ROM
- Diving in High-Risk Environments
- NEW! Video on CD-ROM



CD-ROM supplements other materials

- Use with training course and book
- Good review tool after formal training is complete



Video is in QuickTime Format- plays cross-platform on Mac & PC

- 9 separate programs
- Quick review
- Can view each program individually
- Average running time 5 minutes per program



Let's take a look at the video....



Thank you for attending!

