

BIG ISLAND | HEALTH

Man recovering from toxic bacteria

BIG ISLAND MAN CONTRACTS INFECTION FROM WATER AT KIHOLO BAY

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One of the highly toxic bacteria that killed a 34-year-old Honolulu man on Thursday night infected and nearly killed a Big Island man almost two weeks ago.

Vibrio vulnificus infected 59-year-old John McNamara through a small

wound on his right arm after he entered the water at Kiholo Bay on April 1. McNamara, a Vietnam veteran, said he sat down in the lagoon to cool off after a short hike. He tasted the water to see if it was salty and asked a woman across the way why she did not go in the water. She answered, "because the kids pee in there."

At the time McNamara thought

nothing of his wound nor the woman's comment.

Two days later, McNamara's arm started to severely burn and ache. At the suggestion of his friends, he went to the Kona Community Hospital emergency room, he said.

Dr. Alistair Bairos, KCH general surgeon, said he knew right away that McNamara needed an operation.

"He came into the emergency room

catastrophically ill," said Bairos. "From the moment I saw him I knew he needed to have surgery."

Although nothing about McNamara's appearance was "dramatic," his heart was racing and his blood pressure was dangerously low. Bairos saw a similar case about 20 years ago when an elderly woman became

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infected with the bacteria. The lady was first seen by a doctor from New Orleans, La., who immediately recognized her symptoms as those of a serious infection. According to the federal Department of Health Centers for Disease Control and Prevention, *V. vulnificus* occurs most frequently in the Gulf Coast states.

Within several hours of admittance, Bairos said McNamara had to be "massively resuscitated" in order to be operable. While the average person requires about five liters of fluids for stabilization, McNamara needed about 10 to 12 liters.

Bairos said that with *V. vulnificus* infections, surgeons must go in and remove the dead tissue destroyed by toxins released from the bacteria. In McNamara's case, the toxins did not reach his muscles. After 10 days in the hospital and a few surgeries, Bairos said McNamara's prognosis is good.

"He's going to do fine," he said. "He will need another operation for skin grafts, but he should have a fully functioning arm."

McNamara said the state should put up warning signs at areas with poor water quality. He said he was angry that even the tour books did not warn about bacterial infections.



COURTESY OF DR. STEPHEN DENZER

A small wound on John McNamara's right arm allowed a systematic infection of *Vibrio vulnificus* after a swim in Kiholo Bay.

"I kind of feel like someone who fell off a 10-story building," said McNamara of his condition. "I lost a lot of muscle; I was a very active person."

In addition to *V. vulnificus*, Oliver Johnson, the Honolulu man who died on Friday, was

also infected with the "flesh eating bacteria" necrotizing fasciitis and aeromonas hydrophila.

V. vulnificus occurs naturally in the ocean and can cause minor skin infections and stomach problems. However, a

d tissue destroyed by the bacteria's toxins

Tips for preventing *V.vulnificus* infection

- ▶ Avoid exposure of open wounds or broken skin to warm salt or brackish water, or to raw shellfish harvested from such waters.
- ▶ Do not eat raw oysters or other raw shellfish.
- ▶ Cook shellfish (oysters, clams, mussels) thoroughly. For shellfish in the shell, either a) boil until the shells open and continue boiling for five more minutes, or b) steam until the shells open and then continue cooking for nine more minutes. Do not eat those shellfish that do not open during cooking. Boil shucked oysters at least three minutes, or fry them in oil at least ten minutes at 375 degrees.
- ▶ Avoid cross-contamination of cooked seafood and other foods with raw seafood and juices from raw seafood.
- ▶ Eat shellfish promptly after cooking and refrigerate leftovers.
- ▶ Wear protective clothing (e.g., gloves) when handling raw shellfish.

Source: U.S. Department of Health, Centers for Disease Control and Prevention

bloodstream infection carries a fatality rate of 50 percent even after treatment, according to the CDC. *V.vulnificus* infections are not contagious, they cannot be transmitted from person to person, said Bairos.

Patients with compromised

immune systems, especially liver disease and diabetes, are most susceptible to infection by these bacteria. According to the CDC, a recent study showed that people with pre-existing medical conditions were 80 times more likely to develop *V.vulnificus* bloodstream infections than were healthy people.

"The scariest types of bacterium were the ones in Honolulu and Hawaii (Island)," said Dr. Stephen Denzer, an internal medicine physician in Kealahou who worked closely with Bairos on McNamara. "These were healthy people who got scratches and two days later became seriously ill," he said.

Denzer said that people should see a doctor if their symptoms, such as fever, redness and swelling, rapidly progress; especially if the symptoms follow open wound exposure to ocean water. He said that anyone with a wound should try to stay out of the ocean until it heals. Any bacteria infection should be washed thoroughly with a nonabrasive antibacterial soap or alcohol.

Since these symptoms are common and indicative of other illnesses, systematic bacterial infections are very difficult to diagnose, said Denzer. *V.vulnificus* infection can be diagnosed through routine stool, wound and blood cultures.

For infections of *V.vulnificus* and necrotizing fasciitis, antibiotics is not enough for treatment, said Denzer.

"The combination of very extravagant antibiotics and very aggressive urgent surgery is the only way people are saved," he said.

Dr. Sarah Park, deputy chief of the Hawaii Department of Health's Disease Outbreak and Control Division, said that potentially infected people should pay attention to whether their symptoms are out of proportion with the injury.

Kurt Tsue, Hawaii DOH spokesman, said there were no *V.vulnificus* infections reported in Hawaii in 2005 and so far two cases in 2006 — one on Hawaii and one on Oahu.

"People think of infectious diseases as being a thing of the past, that we have antibiotics that can whip any infection," said Denzer. "But as we saw with these recent cases, this is not true."

Not only people with open wounds are susceptible to *V.vulnificus*. Though unusual, people can become infected by the bacteria through ingestion of raw seafood, especially oysters, according to the CDC. The center said not much can be done to ensure the safety of oysters. The bacteria does not alter the color nor taste of the shellfish.

In the last decade several people have died from severe bacteria infections including three Maui people in 2002. Numerous others became infected but survived, including a 5-year-old Oahu girl in 1999.