

Cat-dancing Disease

The following is a true story. The events took place in Minamata, which is a city located on the west coast of the southernmost island of Japan.



Figure SEQ Figure * ARABIC 1: Map of Minamata Bay and location of the Chisso factory. (CC BY-SA 3.0) .

Minamata was a poor fishing community whose residents relied almost exclusively on fish and shellfish from the surrounding bay as a source of protein. Chisso was a local company that produced acetaldehyde, which is a chemical used to produce plastics. After World War II, the production of acetaldehyde boomed and so did the local economy. Most residents welcomed their improved lifestyles and life was good. About the same time, some strange things started to happen. Dead fish began to float in Minamata Bay. Cats began exhibiting bizarre behavior. They started walking so strangely that the people said the cats were “dancing.” Some cats even fell into the sea and drowned, in what residents referred to as “cat suicides.”

Soon after, some people began to act strangely. Fishermen and their families were the earliest and most severely afflicted. They would stumble while walking, not be able to write or button their shirts. Some had trouble hearing and swallowing, and sometimes trembled uncontrollably. In 1956 an apparent epidemic of these symptoms broke out and confusion and fear spread in the community. The cause of the epidemic was a mystery. Was it a virus that caused swelling of the brain? Was it alcoholism? Was it infectious?

Who would have guessed, that when friends or family members occasionally shouted uncontrollably, slurred their speech, or started dropping things, that the cause of these health problems was industrial water pollution?

These subtle early symptoms were the start of a debilitating nervous condition caused by ingesting mercury. The effect on people’s health was dramatic and symptoms included loss of motor control, and sometimes resulted in partly paralyzed and contorted bodies.

We now know that mercury contaminated wastewater from Chisso’s production of plastics spilled into the bay. Once in the bay, mercury entered the food chain. The mercury traveled from microorganisms inhabiting the bay, and then up the food chain to fish and shellfish, and then finally to the cats or humans which ate the fish and shellfish.

Mercury concentrates itself in the brain and spinal cord. Early effects of mercury poisoning include loss of feeling in the hands and feet and loss of peripheral vision. Patients in advanced stages of the condition show considerable shrinking of the brain. Symptoms include uncoordinated walking, tremors, and violent convulsions. The effects of mercury poisoning can even lead to death.



Figure SEQ Figure * ARABIC 2: Residents of Minamata protest outside the Chisso factory. Photo by William Eugene Smith.

