

October 25, 1956

# Minamata Disease?

The numbers of victims continues to increase,  
but the cause is still unknown.

## FROM THE WIRE

Dancing cats and crows falling out of the sky was just the beginning of the horrible tragedy now termed Minamata Disease.

On September 3, 1956, Mrs. Watanabe admitted her 10 year old child to the Chisso factory pediatric clinic. The child was complaining of nausea and an inability to chew or swallow. A week later, Mrs. Watanabe admitted her youngest child listing similar symptoms. Chisso doctors claim that the symptoms are similar to cerebral palsy. According to local sources, "the Watanabe's are a typical fishing family." Examination of the Watanabe's home reveals a small shack that lacks plumbing or electricity. Typical of the fishing villagers, they relied entirely on rice, wheat, sweet potatoes and fish for their nutrition.

Soon after the first official account of Minamata Disease, four more patients were admitted to the hospital and placed in isolation for fear that they had they had the disease. *Encephalitis japonica*, despite their lack of fever or symptoms. All of the victims lived near

Minamata Bay, thus the syndrome was named Minamata disease.

In order to determine whether this disease was more widely distributed than previously thought, all of the physicians in the area compared their records. Upon discovering that 30 other people shared these symptoms, a committee from the Kumamoto University medical school has been formed to find the cause.

The only clue that the team has now is the dancing cats and falling crows that shared the same symptoms. Primarily, they are exploring the possibility of an infectious bacteria or virus being transmitted to humans. Other possible causative agents include a chemical, plant or animal poison, bacterial toxin, or a food-borne infection.

They have begun examining all of the children in the area as well as distributing questionnaires to

local villagers. Living conditions including lack of sanitation and contaminated wells are also being researched. The committee's work will continue until they determine the cause of this horrible disease.

## Minamata Disease Symptoms

Minamata Disease appears to most directly affect the nervous system. The symptoms of the 30 victims have ranged in the degree of severity. Some common symptoms include:

- Numbness of the lips and limbs
- Tunnel vision
- Drunken walk
- Inability to chew or swallow
- Slurred and jerky speech
- Loss of memory
- Uncontrollable grimaces
- Insomnia
- Elevated blood sugar

# Summary of the Committee's Field Research

November 4, 1956

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We investigated the lifestyles of 80 families. 40 families were afflicted with Minamata Disease (the experimental variable), and the other 40 families were the control.

## Examination of Living Conditions:

Poverty in this area is widespread. The health standards are very low in these rural and fishing communities. The homes of almost all 80 families are small and unsanitary. On a purely observational note, the afflicted families seem to live in less sanitary conditions than the control families indicating a lower socio-economic status.

## Drinking Water:

Bacterial contamination of drinking water seems obvious. The wells are dirty, uncovered and polluted. There is no significant difference between the water for the control families and the afflicted families; however, further analysis may prove otherwise.

## Nutrition:

The results of the diet survey indicate that the diets of all families examined include rice, wheat, sweet potatoes and seafood. Interestingly, the poorest families eat most of the fish. 25 of the 40 afflicted families ate fish from Minamata Bay everyday, whereas only 4 of the 40 control families ate fish from Minamata Bay everyday.

## Sources of Bay Pollution:

Pollution from the bay could be a cause of Minamata Disease. We have identified four possible sources of pollution in the Bay. A slaughterhouse in Tsvkinoura gushes water from the bottom of the bay near Yudo. A Chemical-fertilizer factory occupies most of the shoreline of Minamata City which discharges effluent into the Bay. Agricultural discharge from the coastline could include pesticides, herbicides, and chemical fertilizers. Lastly, Minamata Bay was a site where ammunition was discarded at the end of WWII.

## Recommendations:

After examining the fish from Minamata Bay closely, we noticed that they exhibited the strange behavior of rising up to the surface of the bay in large numbers. This behavior seems analogous to the erratic behavior exhibited by the cats and the crows. We recommend that fishing be banned in Minamata Bay until further research indicates that these fish are safe for consumption.