



Copies of any bulletin may be ordered by calling the Section of Epidemiology at (907) 269-8000
or by writing to us at PO Box 240249, Anchorage, Alaska 99524-0249

Bulletin No. 10

June 18, 1982

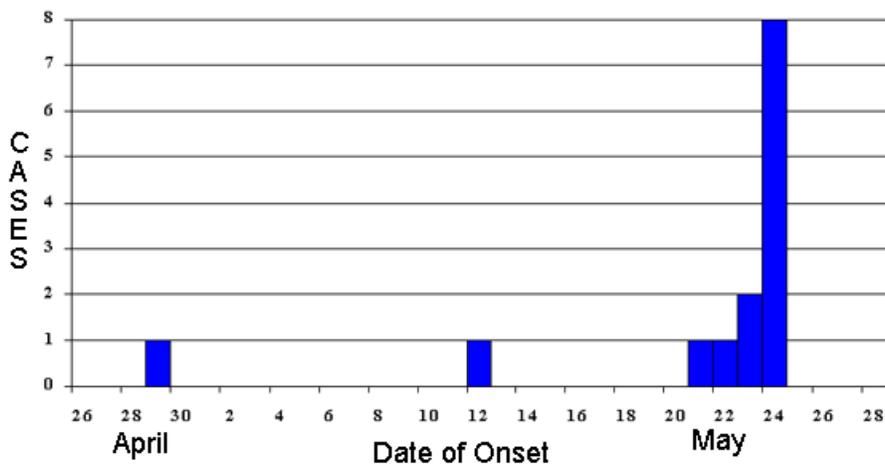
Alaska Roulette - Paralytic Shellfish Poisoning
Ketchikan

Exquisite spring weather and a low, low tide May 24 conspired to lure clam lovers to the beaches in Ketchikan for a round of Alaskan Roulette. But mother nature was not playing fairly. All the chambers were loaded.

Breathing with difficulty, unable to walk or clear his airway, a 22-year-old man was brought to the Ketchikan General Hospital May 24, where a physician had to intubate him. He had eaten butter clams. Breathing stopped entirely within 30 minutes as his paralysis deepened. A ventilator was connected to the endotracheal tube and his life was sustained until the shellfish poison began to wear off the next day and spontaneous breathing resumed. The man recovered.

News of this case prompted an immediate joint investigation with the Department of Environmental Conservation. Nine separate outbreaks were discovered involving 14 people.

Cases by Date of Onset



SYMPTOMS

Parasthesia	100.0%
Lips	71.4%
Tongue	74.1%
Face	28.6%
Hands	85.7%
Feet	35.7%
Nausea	35.7%
Vomiting	42.9%
Dysphonia	21.4%
Dysphagia	14.3%
Muscle Incoordination	35.7%
"Floating" Sensation	28.6%
Respiratory Difficulty	14.3%
Mechanical Ventilation	6.7%

Cases reported symptoms during the previous 30 days ranging from mild tongue or lip paresthesia to profound paralysis within four hours of eating shellfish (Table of Symptoms.) The eight males and six females ranged in age from 13-76 years. They included nine Caucasians and five Alaskan Natives. Nine were life long residents of Southeast Alaska.

Implicated shellfish included butter clams, small neck steamer clams, cockles, and mussels. These were obtained from five sites near Ketchikan as well as from two remote beaches west of Craig.

Shellfish associated with human illness contained up to 12,093 µg of toxin/100g of meat! (over 80 µg/100g is considered unsafe). The attack rates were 100% in five outbreak episodes and 50.5%, 33.3%, and 10.0% in three, for an overall rate of 52.0% in the eight outbreaks where sufficient data to analyze was available.

Pilots from four local air service in Ketchikan had seen no unusual discoloration in the water in Tongass Narrows. Thus no visible or obvious "Red Tide" could be associated with the two earliest cases, nor with the twelve that were clustered about May 24, the date of the lowest low tide to occur in April or May (-4.3 feet).

This represents the first epidemic of paralytic shellfish poisoning reported in Alaska in 1982. Since 1980, eight outbreaks involving 29 people have been investigated by the Section of Communicable Disease Control. These occurred in every season of the year

and in widely separate locations. Alaskans have been fortunate in recent years in that those who have been as severely poisoned as the index case in this outbreak have been close enough to medical life support systems to sustain them through their period of respiratory paralysis. Less fortunate were over 100 Russians and Aleuts who died in Alaska's worst PSP outbreak in Peril Straights in 1799. PSP deaths along with Pacific coast continue to occur on a regular basis, the most recent reported last year from Washington.

The single available control measure is education. The risk of PSP is always present when eating non-commercially obtained shellfish from any beach at any time of year in Alaska. There are no reliable precautions or tests available to predict to prevent PSP. Further, a major outbreak of PSP has occurred in the Ketchikan area, related to multiple kinds of shellfish from multiple sites. Any shellfish taken in recent months from any beach near Ketchikan is highly likely to be toxic and should be discarded. There is no way to predict how geographically widespread this contamination might become, nor when Ketchikan shellfish might be back to "normal".

The only strategy that comes with a guarantee when faced with "Alaskan Roulette" is not to play at all. Leave the shellfish on the beach!

Please report any suspected case of Paralytic Shellfish Poisoning that occurs in Alaska to the Epidemiology Unit directly at 272-7534, or by calling Zenith 1700 to leave a taped report.

(Reported by Kit Ballentine, DEC, Ray Carlson, DHSS; Hugh Owens, M.D.; William Anthes, M.D.; Myron Bloom, M.D.; David Johnson, M.D.; Ty Salness, M.D.; and Arthur Wilson, Jr., M.D.)

FAREWELL TO DR. CHARLES RYAN

This is the last newsletter to which Dr. Ryan will contribute in his capacity as a medical epidemiologist assigned to the State of Alaska by the Centers for Disease Control.

During his two year assignment to the Epidemiology Unit, Dr. Ryan investigated numerous epidemics from Barrow to Ketchikan and conducted two major epidemiologic studies - one on how to control a major epidemic of shigella in Emmonak and Alakanuk, the other on otitis media and hearing impairment in Alaskans. We are delighted that Dr. Ryan will be staying in Alaska where we wish him every success in the private practice of pediatrics in Anchorage.

Tom Kosatsky, M.D., will replace Dr. Ryan for a two-year assignment with the Epidemiology Unit beginning in August. Since completing his medical training in 1977, Dr. Kosatsky has been a Family Practitioner in Nova Scotia. He recently joined the Centers for Disease Control, Atlanta, Georgia as a Visiting Scientist in the Epidemic Intelligence Service. We look forward to welcoming Dr. Kosatsky to Alaska.