Deputy Sheriff Epidemiologist at the Iowa Dept. of Public Health (IDPH), Cortland Hoff, received a notice of a non-infectious disease in March 2003. They were wondering why three emergency rooms were flooding with patients in the Des Moines area. These hospitalized patients were found to be cyanotic or blue. Tom Boo, a co-author, figured out that the common factor between at least a majority of the patients was a wedding and drinking of the wedding punch. By the time he arrived at the hospital, methemoglobinemia had been lab-confirmed in many patients. Some had chocolate-colored blood, complained of dizziness, headache, and shortness of breath. All are common symptoms of methemoglobinemia. The patients stated that the punch tasted funny and that the photographer got sick first and also was one of the first people to consume the punch. After obtaining this information they proceeded to continue the interviews with a basic questionnaire consisting of age, origin, consumption at the wedding, and other variables.

Through collaboration with Poison Control, a list was created of possible compounds causing methemoglobinemia, the most common being nitrates and nitrites. Also, depending on the compound, methemoglobinemia can be caused by inhalation, cutaneous exposure or ingestion, three modes of exposure. When interviewing the kitchen staff at the church where the wedding had been held they found out that the punch and other foods were prepared elsewhere. The preparers were a couple who sold the punch from home. Two out of three buyers of the punch were contacted in time. The third bought two gallons for a baby shower with attendance of 15. The attendees also stated that it tasted funny, thus did not drink a lot.

**DISCUSSION QUESTIONS:**

1. Even though the investigators received almost identical responses from many patients why did they keep their options open for sources other than the punch?

2. What are the three components used in this investigation?
3. What is the most common compound that causes methemoglobinema?

4. What is methemoglobinemia and what is its function?