Everything Jersey

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Past may hold clue to future flu fight

Secrets may be in blood of 1918 survivors

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People who lived during the 1918 influenza epidemic may hold secrets in their blood that could help fight a future pandemic, but finding them now is a race against time.

People who were toddlers at the end of World War I -- when the epidemic swept the globe and killed 50 million -- are in their 90s now. Nearly a lifetime after the notorious outbreak, researchers are hoping those who lived through it will come forward and donate a vial of blood, which then will be analyzed for antibodies to the virus.

In particular, a New Jersey researcher is seeking those who had siblings or other close relatives who were infected or who died of influenza in 1918.

"If we can examine their blood and antibodies, maybe we can solve the great mystery of this virus," said Eric Altschuler, a researcher at the UMDNJ-New Jersey Medical School. "Why was it so much more lethal than all other flu?"

Altschuler said antibodies and other cells created by the immune systems of people who survived the 1918 virus could, possibly, be used to create treatments if a similar virus again circles the globe, especially a bird flu.

Altschuler will work with immunologists at Mount Sinai School of Medicine in New York.

Other researchers said scientists must collect the blood of influenza survivors before they are all gone.

"We can see how these antibodies responded to the virus and why these people survived," said Thomas Rowe, who studies emerging pathogens at Southern Research Institute in Birmingham, Ala.

"This virus killed so many people and spread so rapidly that maybe we will be able to uncover something about the virus that we didn't know," he said.

It was just last year when researchers were able to reconstruct the DNA of the 1918 virus from the lung tissue of two soldiers who died in the epidemic. Their specimens were saved by the U.S. Army. Tissue also came from an Alaska woman buried in frozen ground. Researchers concluded the 1918 virus was a bird flu that jumped to humans.

Now that scientists have reconstructed the strain, they can search for the antibodies. Altschuler said most researchers believe that just about everyone alive at the time, except for the most isolated, probably came in contact with the influenza virus. Still, researchers especially want to find those who recall the illness in childhood or who heard family stories about the horrific virus affecting people close to them.

Unlike most influenza, the 1918 strain was most virulent for the young and healthy. People hemorrhaged from their noses and mouths -- even from their eyes and ears. Makeshift tents in public parks became

hospitals for the dying.

"The healthiest, young adults had the highest death rate. As high as 7 percent or 8 percent in some places," said John M. Barry, author of "The Great Influenza: The Epic Story of the Deadliest Plague in History."

He said young people today know little about the epidemic.

"But whenever I mentioned my book to older people it registered. They would say, 'My mother died. My grandfather died,'" he recalled.

Interest in the 1918 epidemic has grown in recent years as public health experts and politicians express concerns about a possible bird flu pandemic.

Several scientists said they are intrigued by Altschuler's study, even those who are not sure the antibodies can be isolated.

"I don't know how scientifically feasible this is, but if this is indeed feasible it would be a very interesting discovery," said Yanzhong Huang, director of the Center for Global Health Studies at Seton Hall University. "It is worthwhile to try."

Altschuler is a physician and medical historian who says he got the idea for his study from television when the NBC show "Medical Investigations" aired an episode about an epidemic.

To participate in the study, call Altschuler at (973) 972-5439.