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Cholesterol-lowering drugs may be useful in an influenza pandemic

Recent concerns about the possibility of a serious influenza pandemic have spurred many countries to start stockpiling vaccines and antiviral agents. However, an article in the July 15 issue of *Clinical Infectious Diseases*, now available online, proposes that cholesterol-lowering drugs known as statins could be helpful, and would be more readily available in the event of a global influenza pandemic.

Statins lower "bad" cholesterol levels in the blood by blocking the liver's production of cholesterol. Statins may further protect the heart by regulating the immune system and reducing inflammation. Recent studies suggest that these effects also help patients with serious infectious diseases such as pneumonia and bacterial infection of the blood.

Because influenza is associated with inflammation and an increased risk of cardiovascular diseases, the anti-inflammatory and immunomodulatory effects of statins might also help people with influenza, suggests David Fedson, MD, a retired former director of medical affairs for a major vaccine maker. If an influenza pandemic did occur, statins would have the added benefit of being immediately available, unlike influenza vaccines, which have to be manufactured after the virus strain is identified.

"It is important to recognize that the statins/influenza idea is only that--an idea," Dr. Fedson said. "It needs to be confirmed by rigorous scientific studies." Statins wouldn't replace vaccines, he added, because "unlike vaccines, they probably wouldn't prevent [influenza virus] infection itself." However, if research demonstrates that statins are beneficial, "their value would most likely be in preventing serious complications and death. In order to do this, they would probably have to be continued throughout the duration of the illness."

Besides being readily available, statins would be relatively inexpensive, particularly the generic varieties. "As generics, they are already being produced in several developing countries and should be available and affordable in almost all countries," Dr. Fedson said. "Keep in mind that very large amounts of statins are produced for tens of millions

of cardiovascular disease patients to take year round. For influenza, they probably would be taken for only five to 10 days, and this would not have a major impact on ordinary production and sales levels by the manufacturers."

Further research on statins as treatment and prophylaxis for pandemic influenza, including laboratory studies and clinical trials, is crucial, Dr. Fedson said, concluding in his article that statins "could become the only currently available agents to alter the course of what otherwise might become an unprecedented global health crisis."

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Founded in 1979, *Clinical Infectious Diseases* publishes clinical articles twice monthly in a variety of areas of infectious disease, and is one of the most highly regarded journals in this specialty. It is published under the auspices of the Infectious Diseases Society of America (IDSA). Based in Alexandria, Virginia, IDSA is a professional society representing about 8,000 physicians and scientists who specialize in infectious diseases. For more information, visit www.idsociety.org.
