Lifewire: Study finds tobacco smoke contributes to TB infections

by Amy Winter

University of California Berkeley researchers have found another possible side effect to cigarette smoking. A study published in the American Medical Association's Archives of Internal Medicine found evidence that smokers have a greater risk of developing a tuberculosis infection, which can become active TB.

"Active TB is often fatal, particularly if left untreated," said study author Kirk Smith, a Berkeley professor of environmental health sciences. "The risk factors that lead to latent TB infection becoming active are still not well understood, but this study shows that smoking is probably one of the most important. It could be that smoking suppresses the respiratory immune system, allowing latent infections to blossom. Smoking also seems to make people more susceptible to becoming infected in the first place."

After evaluating 24 studies dealing with smoking and TB results, the group discovered that smokers are 73 percent more likely to become infected with TB than nonsmokers. Once infected, smokers have a 50 percent greater chance of getting active TB. Therefore, a smoker is 2.5 times more likely to develop active TB.

"Our study is the first systematic, quantitative assessment of TB risks from smoking," said Michael Bates, lead author and adjunct professor of epidemiology at Berkeley. "There have been mixed opinions on whether smoking has any relevance to TB. Our review and analysis of the research in this area indicates that there is no connection, and that smoking is a major risk factor for TB."

One-third of the population has Mycobacterium tuberculosis, the culprit for causing TB, in their systems, according to the World Health Organization. The bacteria can stay dormant in the body for years as long as the immune system remains strong. But the bacteria can spread and develop into active TB once the immune system is weakened.

Tuberculosis is an infectious disease that most likely starts in the lungs, according to the American Lung Association. TB germs are passed through the air; however, in order to develop the disease, one usually has to be in contact with the infected person over a long period of time.

Latent TB differs from active TB. As long as the immune system fights off the TB germs, they remain latent, according to the ALA. People who become sick with the TB disease develop active TB; their immune systems couldn't stand against the bacteria.

Certain groups are more susceptible to developing active TB:

- Those with the AIDS virus, since it weakens the immune system.

- Those in close contact with TB infected persons.

- Those with medical conditions that weaken the immune system.

- Health care workers.

- People who suffer from malnourishment.

The symptoms and signs of TB disease to watch for:

- A consent cough.

- Fatigue.

- Fever.

- No appetite.

- Coughing up blood.

The ALA recommends a visit to the doctor by anyone with any of these symptoms. Doctors can perform a TB skin test in order to determine whether a person is sick with active TB disease.

Approximately 10 million Americans contract TB germs, according to the ALA; however, only 10 percent of this group will develop active TB. The other 90 percent won't become ill and can't spread the disease.

The multiplying of TB cases is a worldwide problem, especially in Africa due to the AIDS epidemic. Each year, approximately 1.7 million people lose their lives to TB.

"TB is very difficult to deal with," said Smith. "There is a lot of worry about TB in the world. The standard methods of dealing with it - such as finding people who are infected and then treating them - are barely holding ground. Effective prevention measures are needed to help in the battle."

The researchers believe that eliminating the amount of smokers could help to control the spread of TB.

"Currently, smoking cessation is not part of TB control programs," said Bates. "The evidence from this study suggests that it should be."

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