

Tuberculosis patients can reduce transmissability by inhaling interferon through a nebulizer

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A new study published in the September 15, 2009, issue of *PLoS ONE* found that patients with cavitary pulmonary tuberculosis receiving anti-TB medications supplemented with nebulized interferon-gamma have fewer bacilli in the lungs and less inflammation, thereby reducing the transmissibility of tuberculosis in the early phase of treatment.

Tuberculosis, often called TB, is an infectious disease that usually attacks the lungs and infects one-third of the world's population, resulting in 9.2 million active cases per year. TB is usually spread between family members, close friends and people who work or live together. With estimates that nearly 1 billion people will become newly infected between now and 2020, the World Health Organization has set the goal of halving the prevalence and mortality of the disease by 2015. The study shows that patients who inhale interferon through a nebulizer can reduce their disease's transmissibility during the first few weeks of treatment.

"Our findings create an opportunity to combat TB bacilli in the lungs and reduce inflammation in the early stages of the disease when the tuberculosis is transmissible," says William N. Rom, MD, MPH, the Judith and Sol Bergstein Professor of Medicine and Environmental Medicine, director of the Bellevue Chest Service, and director of the Division of Pulmonary and Critical Care Medicine at NYU Langone Medical Center. "Nebulized interferon doesn't replace medications used

to fight tuberculosis, but it shortens the time when the disease is spread - which could be critical for control of the spread of the disease."

In the study, researchers recruited 89 eligible patients with active [tuberculosis](#) in Cape Town, South Africa, and performed a randomized, controlled clinical trial. One group of the patients took anti-TB medications supplemented with nebulized interferon-gamma over a four-month period, and another took TB medications alone. Dr. Rom and his colleagues found that those patients that inhaled interferon had a significant decrease in the amount of tubercle bacilli from the sputum smear at four weeks and fewer symptoms of cough, night sweats, fever and wheezing. Scientists also found that this group also had fewer inflammatory cytokines in lung cells recovered by bronchoalveolar lavage after four months.

Source: New York University School of Medicine ([news](#) : [web](#))

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