

Can vaccines be delivered via the lungs instead of by injection?

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In addition to the obvious benefit of eliminating the need for an injection, new vaccine delivery methods via the lungs offer particular advantages for protecting against infectious agents that enter the body through the respiratory track. A comprehensive review article that presents the current status, challenges, and opportunities of pulmonary vaccine delivery is published in [*Journal of Aerosol Medicine and Pulmonary Drug Delivery*](#).

In "[Pulmonary Vaccine Delivery: A Realistic Approach?](#)" Wouter Tonnis and coauthors from University of Groningen and National Institute for Public Health and the Environment (Bilthoven), The Netherlands, describe the unique physiology and immune responsiveness of the respiratory track that make pulmonary vaccine delivery such an attractive alternative to traditional injections. Although pulmonary vaccination is still a young field, with much more research needed, evidence suggests administration of a vaccine to the lungs can induce a local [immune response](#) more effectively than conventional types of vaccine delivery, in addition to stimulating [antibody production](#) throughout the body. This could be especially important for combating pathogens that cause pulmonary diseases.

"The lung is an immunologic powerhouse that remains largely unexplored. Theoretically we should be able to avoid needles and simply inhale our vaccines," says Editor-in-Chief Gerald C. Smaldone, MD, PhD, Professor and Chief, Division of Pulmonary and [Critical Care Medicine](#) at SUNY-Stony Brook.

More information: The article is available free online on the [*Journal of Aerosol Medicine and Pulmonary Drug Delivery*](#) website.

Provided by Mary Ann Liebert, Inc

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