

## Pulmonary Delivery of Therapeutics

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Lungs are a promising organ for administrating substances because of their large inner surface area, thin epithelium, and relatively low protease activity.

In the early 1970s inhaled therapy was regarded as specialized and private for severe lung disease. In the 1980s and 1990s inhalation therapy became increasingly used in treating asthma, pulmonary drug delivery became a part of important administration route. So far, inhalation therapy has been used with low molecular weight drugs to treat local lung disease. With advances in the related technologies, pulmonary delivery is being increasingly tried for systemic delivery of peptide and protein therapeutics and insulin is the peptide that is expected to be the first approved for inhalation therapy.

Pulmonary delivery is suitable for a wide range of molecules and offer advantages to patients, including a noninvasive alternative to injection, rapid symptom relief.

This presentation will discuss the histological features of the lungs, techniques utilized in pulmonary delivery, products on the market and in development.