

Inhaled Insulin: Promises and Concerns

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Abstract

Since the introduction of Pfizer Exubera® in the early 1990s, a number of other inhaled insulin solutions have been developed. This article provides an overview of inhaled insulin systems developed by Pfizer, Novo Nordisk, MannKind, and Lilly, three of which are currently in phase 3 trials. The strengths and weaknesses of each product, as well as the general technologies (liquid vs dry powder), are evaluated. Results of clinical studies conducted by Pfizer and corroborated by other studies are summarized. Although inhaled insulin promises much, a greater body of controlled studies is necessary to draw firm conclusions about its safety and efficacy.

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Abbreviations: (COPD) chronic obstructive pulmonary disease, (FEV1) forced expiratory volume in 1 second, (DL_{CO}) carbon monoxide diffusing capacity, (HbA1c) hemoglobin A1c, (PFT) pulmonary function test, (PWD1) persons with type 1 diabetes, (PWD2) people with type 2 diabetes

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