

# Insulin Inhaler

The idea of inhaling insulin has been around for decades. It wasn't until the 1990s that researchers made it possible.

With an inhaler much like the ones people with asthma use, you breathe a fine insulin powder into your lungs. There, it enters your blood through tiny blood vessels.

*In June 2014, the FDA approved Afrezza.* It's an inhaler with pre-measured, rapid-acting insulin you use before meals.

It's not for diabetes emergencies such as diabetic ketoacidosis (DKA). Common side effects of inhaled insulin are low blood sugar, a cough, and a scratchy or sore throat.

If you have type 1 diabetes, you'll still need to take long-acting insulin, too, to help control your blood sugar. And if you smoke or you have a lung disease, such as asthma or COPD, you shouldn't use inhaled insulin.

In a 24-week study, Bode compared Afrezza with a rapid-acting, injected insulin in more than 500 patients with type 1 diabetes. Afrezza and injected insulin controlled blood sugar equally well, he says. But he found that those using Afrezza were less likely to get very low blood sugar, a complication of insulin use.

With Afrezza, "there is also less weight gain," Bode says. He credits that to the shorter time Afrezza remains in the body.

In another study, researchers found that people with type 2 diabetes who weren't getting enough control of blood sugar with oral medications did better when they added inhaled insulin before meals.

Another study done by (Peyrot M, Rubin RR.) with a Name of (Patient-reported outcomes in adults with type 2 diabetes using mealtime inhaled technosphere insulin and basalinsulin versus premixed insulin) compared Technosphere+glargine (TI+G) WITH the biphasic rapid-acting insulin arm in 618 non-smoking adult patients with HbA1c > 7% with mean age of 56 for 45 weeks. The Results Was Treatment with inhaled Technosphere insulin was implemented without a negative impact on health-related quality of life and with a reduction in diabetes worries. Improvements in perceptions of insulin therapy, treatment satisfaction, and treatment preference did not differ from treatment with premixed aspart insulin with pvalue <0.001

These studies were presented at the American Diabetes Association meeting in June.

**The FDA approved Afrezza's** safety and effectiveness based on about 3,000 people, including 1,000 with type 1 diabetes and about 2,000 with type 2.

## **Conclusion:**

The Insulin Inhaler Has The Same Efficacy Of Injected Insulin , it is superior because it causes less weight gain & less hypoglycemia but it has the dis-advantage that it has side-effects like ( cough & sore throat ) and it can't be used in emergencies diabetic ketoacidosis and it should be used with a Rapid Acting Insulin in type 1 D.M.

**References :**

- 1-** Kathleen Doheny .Reviewed by Brunilda Nazario, MD.WebMD Health News.June 30, 2014  
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- 2-** Peyrot M, Rubin RR . Patient-reported outcomes in adults with type 2 diabetes using mealtime inhaled technosphere insulin and basalinsulin versus premixed insulin. Diabetes Technol Ther. 2011 Dec;13(12):1201-6. doi: 10.1089/dia.2011.0037. Epub 2011 Oct 14  
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