

Evaluation of the Sodium Pyruvate Formulation to Deliver Other Drugs

Nicotine Inhalation with Pyruvate in the Sinuses or Lungs. We placed nicotine into a modified pyruvate nasal solution and discovered that inhaled nicotine (nasal or lungs) was well tolerated over nicotine by itself, which was irritating. The combination was synergistic. **Forty Smokers** who used this formula rated the pyruvate nicotine formula much higher than nicotine by itself. The 20mM pyruvate solution in combination with nicotine balanced the negative effect of nicotine and enhanced the effect of nicotine.

Insulin inhalation with Pyruvate in the Sinuses or Lungs. The addition of pyruvate enhanced insulin uptake for patients that have diabetes with pulmonary lung or sinus diseases. The 20mM pyruvate solution in combination with insulin balanced the negative effect of insulin and enhanced the effect of insulin.