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The clinical relevance of dry powder inhaler performance for drug delivery

Pascal Demoly , Paul Hagedoorn , Anne H. de Boer , Henderik W. Frijlink

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Highlights

- Optimal size of inhaled drug particles for deposition in the airways is 1.5–5 μm
- Particles $>5 \mu\text{m}$ are mainly deposited in the oropharynx by inertial impaction
- Particles $<1 \mu\text{m}$ have a $>40\%$ chance of being exhaled, rather than deposited
- Oropharyngeal impaction increases at higher inspiratory flow rates (IFR)
- An optimal inhaler increases its fine particle ($<5 \mu\text{m}$) output as IFR increases

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