

# NASAL DRUG ADMINISTRATION

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## Abstract

The objectives of the presentation "Intranasal drug administration" are to show (1) the history of nasal drug administration, (2) intranasal basics (anatomy/physiology), (3) advantages of intranasal drug administration, (4) the demonstration of the "LMA atomization – MAD Nasal™" system, (5) indication of intranasal drug administration, and (6) case reports. The history of intranasal drug administration starts in 1961 with "Nasivin™" as a nasal decongestant. Concerning the nasal anatomy and physiology we refer to medical textbooks. The following advantages of intranasal drug administration should be mentioned: (1) in most cases, the nose is easy to reach, (2) the nose is one of the most exposed parts of the body, (3) no special medically training is required, (4) there is a fast access to the body, (5) there is a painless access to the body, and (6) there is a reduced risk of needle stick for the healthcare provider. Before intranasal drug application, there are the following preconditions which must be guaranteed (1) normal mucosa, (2) no nasal congestion, (3) no previous use of vasoconstrictors, (4) no injuries of the nose, (5) "lipid loving" drugs, and (6) small volume and high drug concentration. Intranasal drug administration should be considered in seizure activity, for sedation, for the treatment of acute pain situations, and for the treatment of intoxicated patients. At this time, midazolam, naloxone, fentanyl citrate, sufentanil, ketamine, and s-ketamine are the drugs which can

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be applicated intranasally. An important factor concerning the successfully intranasal drug application is the use of the right drug dosage and a volume to a maximum of 1ml per nostril.