

TRUE
NASAL

Migraine and Nasal Drug Delivery

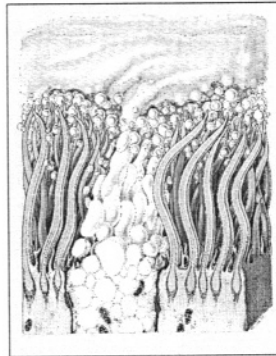
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Advantages nasal delivery

- No first pass metabolism
- Pulsed absorption profile
- Easy administration
- Nasal absorption not disturbed by gastric stasis or vomiting
- Not expensive and not painful, compared to injection therapy

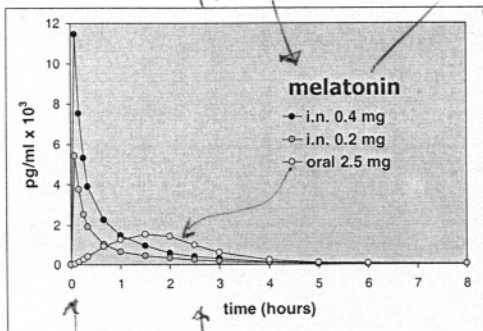
Disadvantages nasal delivery

- Only for drugs that are really absorbed nasally
- Only for drugs that are active in a low dose
- Drug substance should be water soluble or in solution
- Drug itself and excipients should be non-irritant
- Not suitable for drugs which need slow absorption profile and/or relatively constant blood level

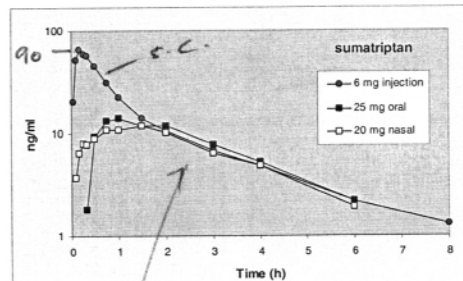


150 cm²
 mucous layer
 million of cilia
 elevating medi.

10-15 minutes transport
 heel waste



nasal



Duquesnoy et al., Europ. J. Pharm. Sci. 1998; 6: 101

*0% new absorption!!
 solution -> stomach*

because it is
→ nasal.

Intranasal Sumatriptan

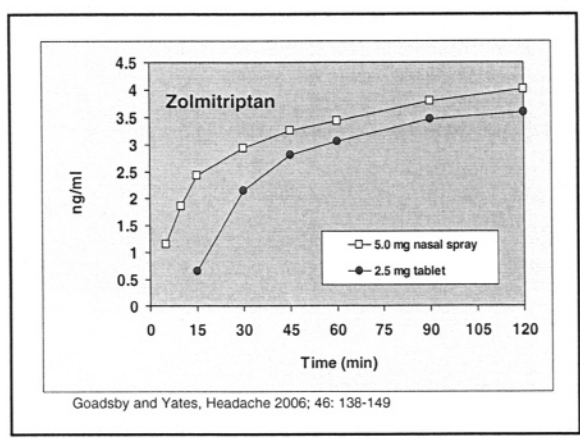
- Overall oral and intranasal administration have equal efficiency
- Intranasal usually faster onset of effect
- Higher recurrence rates (34-46%) than with DHE (8-14%)
- Most pronounced AE: taste disturbance

Sumatriptan Comparative Pharmacokinetics

	T _{max}	F (%)	T _{1/2} (h)
Oral	0.7	14	2.0
Intranasal	0.7	16	2.0

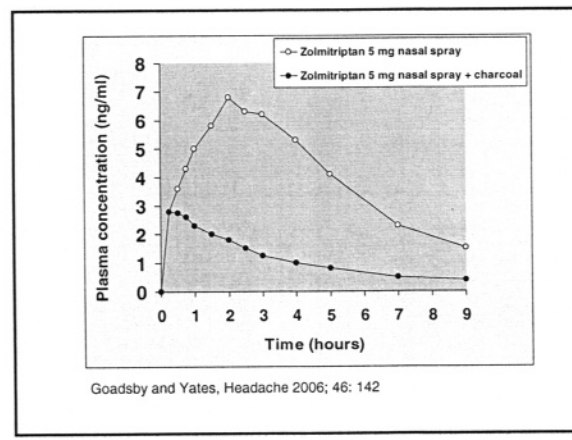
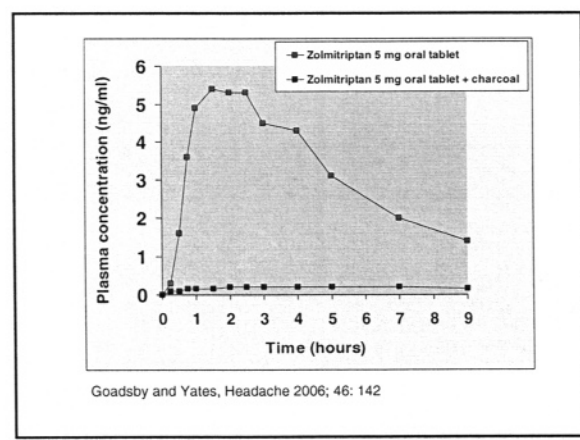
- Similar rate of absorption
- Multiple peaks after intranasal administration
- Intranasal / oral absorption

Zolmitripton



Intranasal Zolmitripton

- More rapid absorption following intranasal administration
- Nasal-oral absorption profile (T_{max} ≈ 2h)
- Absorption not impeded by xylometazoline
- Sustained efficacy demonstrated in long-term study
- Main AE: mild local nasal symptoms



quite good design
 Study: 3 groups
 1 NS + char
 2 NS nasal + char
 2

