

6/28 N. DeNoble

1.28 mg = 2 Marlboro cigs

(A) Acetaldehyde, nicotine (N) covary in cig.

A doses = N doses.

32 ug/kg circulating blood level ug/ml blood.

(data based on blood levels) HPLC, CC.

Need for negative reinforcement compd.

Nicotine } both positive  
Acetaldehyde } reinforcers

Any negative reinforcers in cig?

Probit program - convert d-s curves into straight lines  
to compare across compds - efficacy comparisons.

Reinforcing function shifted upward for Acetaldehyde than  
Nicotine. \* Acetaldehyde better predictor than  
nicotine than for sales projections.

Data for A+N predict sales at 96% accuracy.  
Additive effects accounts for 96% sales.

Marlboro  
900 ~~ug~~ ug A  
800 ~~ug~~ ug N

Merit

\* Higher each number (A+N) higher the predictability

Naloxone -  
shows acetaldehyde (agonist) - ~~no~~ A doesn't work  
thru internal opioid system.

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6/25 - V. DeNoble

McMillan,

Haloperidol - dopinergic antagonist - Acetaldehyde.  
Depressed Acetaldehyde response  
& full recovery after 72 hrs.

With Nicotine: 40% reduction in N intake w/ Haloperidol  
24 hrs - multiple dopinergic pharmacological  
effects. (Dopamine involved in general  
reward response).

### A & N Interaction:

Evidence for greater than additive behavioral interaction -  
at 8 mg/kg A & N.

What is maximal reinforcing rate of A & N.

Anti-anxiety effect of nicotine: anti-frustrative effects  
behavioral (psychological) effect or pharmacological effect.

Nicotine lengthens latency effect. longer latency for reinfersment  
Acetaldehyde shortened or inc. - enhanced response rate -  
changing behavior to maximize reinforcing effect.

FR, DRL ratios - for drugs - non-frustrative reward studies  
using drugs.

Goal  
1) Optimal dose ratio - maximal levels A & N?

2) A, N produces physical dependence?

3) pharmacology of beh. effect.

4) testing nicotine analogues interaction w/ Acetaldehyde?

carbamoyl  
Zalsobinal - carbonyl to cross b-b effect.

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