

Pain Relief Experiment

An experiment was done with males who had just had dental surgery. There are two factors of interest; drug (codeine or placebo) and acupuncture (needles at inactive sites, needles at active sites). Because different people have different pain tolerances, 32 subjects were grouped in to blocks according to their pain tolerance (the first block consisted of 4 men with the lowest pain tolerance, the second block consisted of 4 men with the next lowest pain tolerance, ..., the eighth block consisted of 4 men with the highest pain tolerance). The experimenters randomly assigned one man from each pain tolerance block to each of the four treatment combinations. After 2 hours the pain relief was assessed for each subject (higher scores indicate more effective pain relief).

Response: Pain relief (higher score indicates greater pain relief)

Conditions:

Factor 1: Drug – Codeine and Placebo

Factor 2: Acupuncture – Inactive and Active

Nuisance Factor: Pain tolerance (Block)

Experimental material: 32 males after dental surgery.

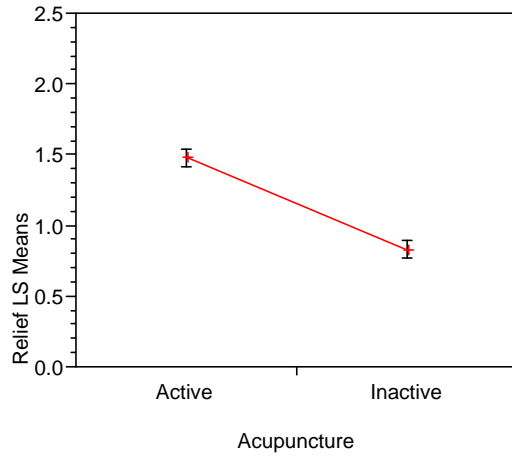
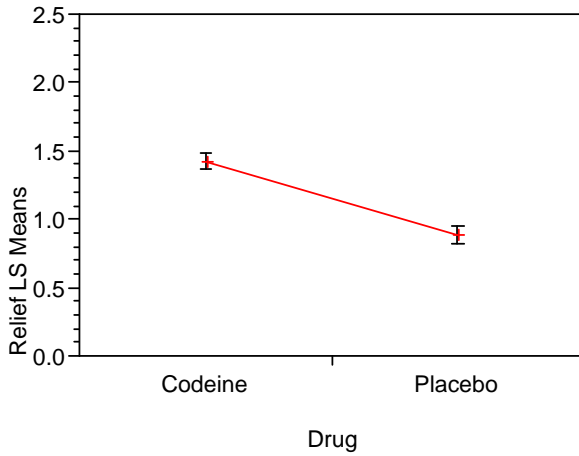
Data:

Block	Treatment Combinations			
	Placebo/Inactive	Codeine/Inactive	Placebo/Active	Codeine/Active
1	0.0	0.5	0.6	1.2
2	0.3	0.6	0.7	1.3
3	0.4	0.8	0.8	1.6
4	0.4	0.7	0.9	1.5
5	0.6	1.0	1.5	1.9
6	0.9	1.4	1.6	2.3
7	1.0	1.8	1.7	2.1
8	1.2	1.7	1.6	2.4

Treatment of Post-operative Dental Pain Plots of Factor Means and Interaction Plots

Drug	
Level	Mean
Codeine	1.42500
Placebo	0.88750

Acupuncture	
Level	Mean
Active	1.48125
Inactive	0.83125



Drug*Acupuncture	
Level	Mean
Codeine,Active	1.7875
Codeine,Inactive	1.0625
Placebo,Active	1.1750
Placebo,Inactive	0.6000

