

Chapter 12

- 12-1. $F = 5.69$, $p = 0.012$, significant at the 5 percent level; the Tukey-Kramer confidence interval are (2.55, 26.29) for the difference between the selective shunt group and the nonselective shunt I group and (0.09, 22.84) for the difference between the selective shunt group and the nonselective shunt II group. Both of the intervals fail to contain zero, suggesting that the selective shunt group differs significantly from both the nonselective shunt groups; the Tukey-Kramer confidence interval is (-15.18, 9.27) for the difference between the two nonselective shunt groups. This difference is not significant, since this interval contains zero.
- 12-3. We could have controlled for physical activity by blocking the subjects by two or three levels of physical activity; the control group of no intervention may have not been considered because of the difficulty for not offering anything to moderately obese female employees; it would have been better to confirm the actual use of memberships before analyzing the data.
- 12-4. $MSW = 1.0429$ ($df = 62$), $MSB = 26.2475$ ($df = 4$), $F = 25.168$; significantly different.
- 12-5. Degrees of freedoms are 2, 2, 4 and 18 for smoking status, lighting conditions, interaction and error, respectively; $F = 0.213$ for interaction, which is not significant; $F = 12.896$ for smoking status, significant; $F = 45.276$ for lighting conditions, significant.