

**Homework #2**

**DUE 4 October in class**

---

Recall the anticipatory timing experiment from Homework # 1. In this homework, you will fit **one** general linear model to these data. Use a transformation of the outcome, as you did in Homework #1.

1. Fit one General Linear Model to these data: use **one** covariance structure (the one you feel is most appropriate based on your EDA from HW # 1) and begin with the mean structure you feel is most appropriate based on your EDA from HW #1, consistent with the scientific goals of the study. (See the questions stated in HW #1(a).) **Do not** consider any other covariance structures, but **do** test and remove non-significant covariate effects as you feel is appropriate. You **do not** need to carry out any diagnostics; we will not have covered diagnostics fully before this homework is due.
2. Pick two ages at which to compare genders, e.g. compare male 40 year olds to female 40 year olds and then also compare male 8 year olds to female 8 year olds. (You can use the LSMEANS statement with the DIFF and AT options in PROC MIXED to do each of these comparisons.)
3. Write an abstract (one-half to one page, single spaced) with the following sections: Background, Methods, Results, Conclusions. The abstract should summarize the data, your analysis, the interpretation of your results, and overall conclusions.

**For your final model only**, turn in both your SAS code and your output along with the abstract.

If you would like to look at a few published abstracts to get ideas on how to write your abstract, consider the following two papers (both available on-line through the Bio-Med Library):

Nakamura K, Harasaki H, Fukumura F, Fukamachi K, Whalen RL. “Comparison of pulsatile and non-pulsatile cardiopulmonary bypass on regional renal blood flow in sheep,” *Scandinavian Cardiovascular Journal*, 2004; **38**(1): 59-63.

Wu G, Sanderson B, Bittner V. “The 6-minute walk test: How important is the learning effect?,” *American Heart Journal*, 2003; **146**(1): 129-133.