

A cereal dataset was analyzed for nutritional value in particular fiber and caloric content. The 77 brands of cereals were re-classified by fiber content where cereals with 2 grams/serving were classified as “Low” and everything else as “High” . The question of interest is whether the caloric content of cereals differ amongst the two groups of fiber content.

Figure 1. summarizes the findings of the two different analysis that were conducted. The Figure 1a. is a Marginal model where pooled standard deviation is used between the two groups, under the assumption that standard deviation is not different between the two groups. Figure 1b. on the left, is a result of a linear model that assumes standard deviation of calories by group is different across the two groups. The consequence of using pooled vs unpooled standard deviation, is different Confidence Interval for caloric content because the standard error of prediction is different.

However, either model shows that there is no difference in the mean caloric content between “Low” and “High” fiber content cereal ($t=0.067, p=0.95$). Fiber is non-digestible therefore it has virtually no “nutritional” value to add to caloric content

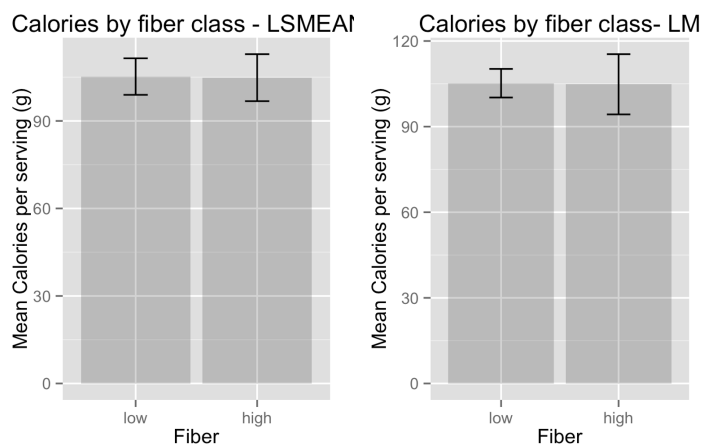


Figure 1. a. Left: Marginal Model 1.b. Right: Linear Model