data steer;

input PER SEQ DIET $ STEER NDF x1 x2;

datalines;

1 1 A 1 50 0 0

1 1 A 2 55 0 0

1 2 B 1 44 0 0

1 2 B 2 51 0 0

1 3 C 1 35 0 0

1 3 C 2 41 0 0

1 4 A 1 54 0 0

1 4 A 2 58 0 0

1 5 B 1 50 0 0

1 5 B 2 55 0 0

1 6 C 1 41 0 0

1 6 C 2 46 0 0

2 1 B 1 61 1 0

2 1 B 2 63 1 0

2 2 C 1 42 0 1

2 2 C 2 45 0 1

2 3 A 1 55 -1 -1

2 3 A 2 56 -1 -1

2 4 C 1 48 1 0

2 4 C 2 51 1 0

2 5 A 1 57 0 1

2 5 A 2 59 0 1

2 6 B 1 56 -1 -1

2 6 B 2 58 -1 -1

3 1 C 1 53 0 1

3 1 C 2 57 0 1

3 2 A 1 57 -1 -1

3 2 A 2 59 -1 -1

3 3 B 1 47 1 0

3 3 B 2 50 1 0

3 4 B 1 51 -1 -1

3 4 B 2 54 -1 -1

3 5 C 1 51 1 0

3 5 C 2 55 1 0

3 6 A 1 58 0 1

3 6 A 2 61 0 1

;

run;

/\* Best Fitting Model: CSH \*/

/\* Full model with carryover covariates \*/

proc mixed data= steer;

class per seq diet steer;

model ndf = per diet seq x1 x2 / ddfm=kr;

repeated per / subject=steer(seq) type=csh r rcorr;

lsmeans diet / pdiff adjust=tukey;

title 'Full Model, CSH, With covariates';

run;

/\* Reduced Model without carry-over covariates \*/

proc mixed data= steer;

class per seq diet steer;

model ndf = per diet seq / ddfm=kr;

repeated per / subject=steer(seq) type=csh;

lsmeans diet / pdiff adjust=tukey;

title 'Reduced model, CSH, Without covariates';

run;