APPENDIX 2

STATISTICS

P11.16-1999 HMR Weight
Made by: Esa Wallius
Date: 30MAY00

General Linear Models Procedure
Class Level Information

Class	Levels	Values
TREAT	5	HMR 10 HMR 100 HMR 30 Morphine Veh

Number of observations in data set = 40

Analysis of variance

Dependent Variable: WEIGHT

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	45.2500000	11.3125000	0.05	0.9945
Error	35	7492.2500000	214.0642857		
Corrected Total	39	7537.5000000			

R-Square	C.V.	Root MSE	WEIGHT Mean
0.006003	4.872918	14.6309	300.250

Source	DF	Type III SS	Mean Square	F Value	Pr > F
TREAT	4	45.2500000	11.3125000	0.05	0.9945

General Linear Models Procedure

Level of TREAT	N	WEIGHT Mean	WEIGHT SD
HMR 10	8	298.875000	9.2185760
HMR 100	8	299.625000	13.4476498
HMR 30	8	301.500000	19.4422221
Morphine	8	301.500000	16.3707055
Veh	8	299.750000	12.5896783

Diagnostics: Checking the assumption of normal distribution of residuals

Univariate Procedure

Variable=RSTUDENT

Moments

N	40	Sum Wgts	40
Mean	-0.00101	Sum	-0.04037
Std Dev	1.042319	Variance	1.086429
Skewness	-0.07689	Kurtosis	0.210512
USS	42.37076	CSS	42.37072
CV	-103275	Std Mean	0.164805
T:Mean=0	-0.00612	Pr>|T|	0.9951
Num ^= 0	40	Num > 0	22
M(Sign)	2	Pr>=|M|	0.6358
Sgn Rank	0	Pr>=|S|	1.0000
W:Normal	0.992005	Pr<W	0.9952

Quantiles(Def=5)

100% Max	2.462505	99%	2.462505
75% Q3	0.601818	95%	1.64138
50% Med	0.031508	90%	1.359963
25% Q1	-0.67056	10%	-1.29079
0% Min	-2.65	5%	-1.57105
		1%	-2.65
Range	5.112504		
Q3-Q1	1.272379		
Mode	-1.29079		

Extremes

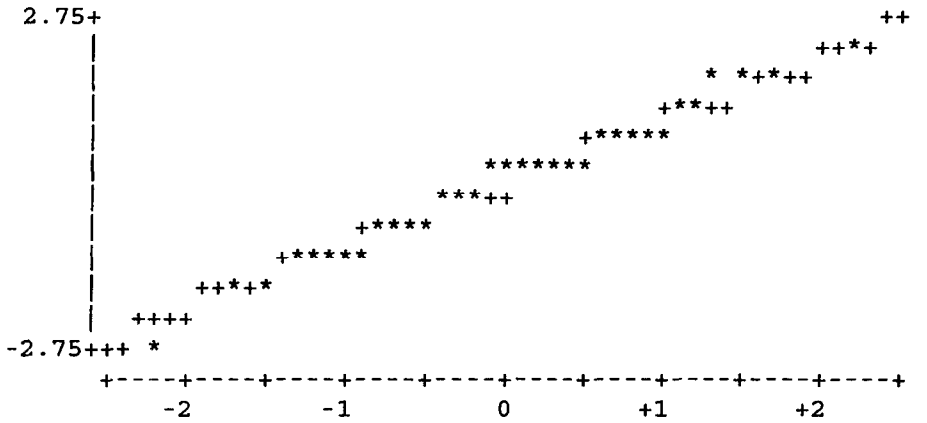
Lowest	Obs	Highest	Obs
-2.65(	12)	1.213734(	16)
-1.61605(	37)	1.506192(	3)
-1.52605(	25)	1.595961(	38)
-1.29079(	32)	1.686799(	29)
-1.29079(	26)	2.462505(	28)

```
Stem Leaf                     #             Boxplot
   2 5                        1                |
   2                                           |
   1 567                      3                |
   1 022                      3                |
   0 56679                    5             +-----+
   0 0002223334              10             *-----*
  -0 4100                     4             |  +  |
  -0 876665                   6             +-----+
  -1 33211                    5                |
  -1 65                       2                |
  -2
  -2 6                        1                0
     ----+----+----+----+
```

Univariate Procedure

Variable=RSTUDENT

Normal Probability Plot



P11.16-1999 HMR Plantar
Made by: Esa Wallius
Date: 30MAY00

General Linear Models Procedure
Class Level Information

Class	Levels	Values
TREAT	5	HMR 10 HMR 100 HMR 30 Morphine Veh

Number of observations in data set = 40

General Linear Models Procedure
Repeated Measures Analysis of Variance
Repeated Measures Level Information

Dependent Variable	BASELINE	T1H	T2H	T4H
Level of TIME	1	2	3	4

Applied to Orthogonal Components:
Test for Sphericity: Mauchly's Criterion = 0.9102189
Chisquare Approximation = 3.172256 with 5 df Prob > Chisquare = 0.6734

Tests of Hypotheses for Between Subjects Effects

Source	DF	Type III SS	Mean Square	F Value	Pr > F
TREAT	4	37.94461	9.48615	1.86	0.1392
Error	35	178.34865	5.09568		

Univariate Tests of Hypotheses for Within Subject Effects

Source: TIME

DF	Type III SS	Mean Square	F Value	Pr > F	Adj Pr > F G - G	Adj Pr > F H - F
3	25.01753727	8.33917909	4.46	**0.0054**	0.0064	0.0054

Source: TIME*TREAT

DF	Type III SS	Mean Square	F Value	Pr > F	Adj Pr > F G - G	Adj Pr > F H - F
12	40.53785153	3.37815429	1.81	**0.0559**	0.0603	0.0559

Source: Error(TIME)

DF	Type III SS	Mean Square
105	196.12812439	1.86788690

Greenhouse-Geisser Epsilon = 0.9456
Huynh-Feldt Epsilon = 1.1553

P11.16-1999 HMR Plantar
Made by: Esa Wallius
Date: 30MAY00

Diagnostics: Checking the assumption of normal distribution of residuals

Univariate Procedure

Variable=RSTUDENT

Moments

N	40	Sum Wgts	40
Mean	0.000457	Sum	0.018287
Std Dev	1.036006	Variance	1.073308
Skewness	0.044894	Kurtosis	-0.31257
USS	41.85903	CSS	41.85902
CV	226611	Std Mean	0.163807
T:Mean=0	0.002791	Pr>|T|	0.9978
Num ^= 0	40	Num > 0	19
M(Sign)	-1	Pr>=|M|	0.8746
Sgn Rank	6	Pr>=|S|	0.9369
W:Normal	0.978093	Pr<W	0.7259

Quantiles(Def=5)

100% Max	2.435641	99%	2.435641
75% Q3	0.599301	95%	1.634559
50% Med	-0.10048	90%	1.372905
25% Q1	-0.57424	10%	-1.4386
0% Min	-1.90889	5%	-1.82074
		1%	-1.90889
Range	4.344534		
Q3-Q1	1.173543		
Mode	-0.16566		

Extremes

Lowest	Obs	Highest	Obs
-1.90889(	3)	1.308662(	4)
-1.82624(	19)	1.437147(	23)
-1.81524(	16)	1.612712(	20)
-1.58338(	30)	1.656405(	13)
-1.29382(	26)	2.435641(	32)

```
Stem Leaf                     #             Boxplot
   2 4                        1                0
   1 67                       2                |
   1 334                      3                |
   0 55666899                 8             +-----+
   0 22344                    5             |  +  |
  -0 44322211                 8             *-----*
  -0 76655                    5             +-----+
  -1 3330                     4                |
  -1 9886                     4                |
     ----+----+----+----+
```

Normal Probability Plot

```
 2.25+                                                  ++*++
     |                                            *+*++
     |                                       +***+
     |                                  ******
 0.25+                            +****
     |                       ****+*
     |                  +***+
     |             ++****
-1.75+   *  ++*+* *
      +----+----+----+----+----+----+----+----+----+----+
          -2        -1         0        +1        +2
```

P11.16-1999 HMR Tailflick
Made by: Esa Wallius
Date: 30MAY00

General Linear Models Procedure
Class Level Information

Class	Levels	Values
TREAT	5	HMR 10 HMR 100 HMR 30 Morphine Veh

Number of observations in data set = 40

P11.16-1999 HMR Tailflick
Made by: Esa Wallius
Date: 30MAY00

General Linear Models Procedure
Repeated Measures Analysis of Variance
Repeated Measures Level Information

Dependent Variable	BASELINE	T1H	T2H	T4H
Level of TIME	1	2	3	4

Applied to Orthogonal Components:
Test for Sphericity: Mauchly's Criterion = 0.8262053
Chisquare Approximation = 6.4379783 with 5 df Prob > Chisquare = 0.2659

Tests of Hypotheses for Between Subjects Effects

Source	DF	Type III SS	Mean Square	F Value	Pr > F
TREAT	4	32.568792	8.142198	7.77	0.0001
Error	35	36.657847	1.047367		

Univariate Tests of Hypotheses for Within Subject Effects

Source: TIME

DF	Type III SS	Mean Square	F Value	Pr > F	Adj Pr > F G - G	Adj Pr > F H - F
3	47.88369444	15.96123148	32.33	**0.0001**	0.0001	0.0001

Source: TIME*TREAT

DF	Type III SS	Mean Square	F Value	Pr > F	Adj Pr > F G - G	Adj Pr > F H - F
12	53.96359722	4.49696644	9.11	**0.0001**	0.0001	0.0001

Source: Error(TIME)

DF	Type III SS	Mean Square
105	51.83826389	0.49369775

Greenhouse-Geisser Epsilon = 0.8878
Huynh-Feldt Epsilon = 1.0776

Diagnostics: Checking the assumption of normal distribution of residuals

Univariate Procedure

Variable=RSTUDENT

Moments

N	40	Sum Wgts	40
Mean	0.003797	Sum	0.151885
Std Dev	1.035069	Variance	1.071367
Skewness	0.284895	Kurtosis	-0.35811
USS	41.78389	CSS	41.78331
CV	27259.22	Std Mean	0.163659
T:Mean=0	0.023202	Pr>|T|	0.9816
Num ^= 0	40	Num > 0	19
M(Sign)	-1	Pr>=|M|	0.8746
Sgn Rank	-12	Pr>=|S|	0.8742
W:Normal	0.979321	Pr<W	0.7648

Quantiles(Def=5)

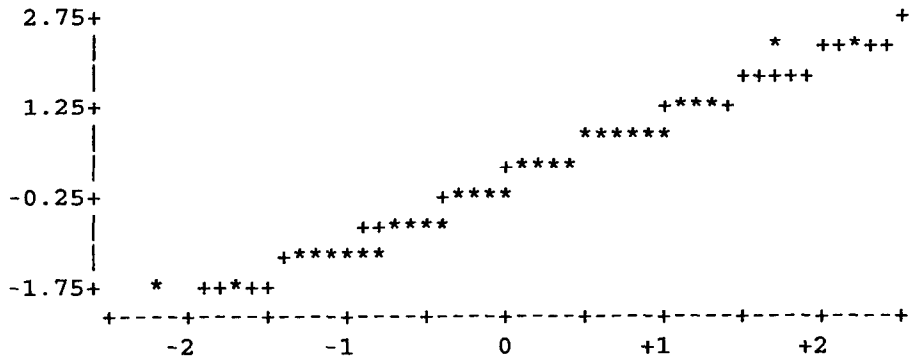
100% Max	2.491371	99%	2.491371
75% Q3	0.817454	95%	1.762424
50% Med	-0.11202	90%	1.339883
25% Q1	-0.80783	10%	-1.26743
0% Min	-1.94264	5%	-1.53528
		1%	-1.94264
Range	4.434015		
Q3-Q1	1.62528		
Mode	-1.53528		

Extremes

Lowest	Obs	Highest	Obs
-1.94264(	3)	1.256922(	15)
-1.53528(	14)	1.422845(	4)
-1.53528(	13)	1.422845(	7)
-1.33259(	39)	2.102002(	36)
-1.20227(	5)	2.491371(	32)

```
Stem Leaf                     #             Boxplot
   2 5                        1                |
   2 1                        1                |
   1                                           |
   1 000344                   6                |
   0 66889                    5             +-----+
   0 223334                   6             |  +  |
  -0 4333221                  7             *-----*
  -0 97665                    5             +-----+
  -1 322110                   6                |
  -1 955                      3                |
     ----+----+----+----+
```

Normal Probability Plot



P11.16-1999 HMR Tailflick
Made by: Esa Wallius
Morphine excluded from the analysis
Date: 30MAY00

General Linear Models Procedure
Class Level Information

Class	Levels	Values
TREAT	4	HMR 10 HMR 100 HMR 30 Veh

Number of observations in data set = 32

General Linear Models Procedure
Repeated Measures Analysis of Variance
Repeated Measures Level Information

Dependent Variable	BASELINE	T1H	T2H	T4H
Level of TIME	1	2	3	4

Applied to Orthogonal Components:
Test for Sphericity: Mauchly's Criterion = 0.8832444
Chisquare Approximation = 3.317652 with 5 df Prob > Chisquare = 0.6511

Tests of Hypotheses for Between Subjects Effects

Source	DF	Type III SS	Mean Square	F Value	Pr > F
TREAT	3	2.205729	0.735243	0.68	0.5732
Error	28	30.393403	1.085479		

Univariate Tests of Hypotheses for Within Subject Effects

Source: TIME

DF	Type III SS	Mean Square	F Value	Pr > F	Adj Pr > F G - G	Adj Pr > F H - F
3	9.68614583	3.22871528	8.03	**0.0001**	0.0001	0.0001

Source: TIME*TREAT

DF	Type III SS	Mean Square	F Value	Pr > F	Adj Pr > F G - G	Adj Pr > F H - F
9	3.29697917	0.36633102	0.91	**0.5199**	0.5152	0.5199

Source: Error(TIME)

DF	Type III SS	Mean Square
84	33.78298611	0.40217841

Greenhouse-Geisser Epsilon = 0.9297
Huynh-Feldt Epsilon = 1.1536

Diagnostics: Checking the assumption of normal distribution of residuals

Univariate Procedure

Variable=RSTUDENT

Moments

N	32	Sum Wgts	32
Mean	0.008096	Sum	0.259072
Std Dev	1.04808	Variance	1.098471
Skewness	0.477155	Kurtosis	-0.07429
USS	34.0547	CSS	34.0526
CV	12945.66	Std Mean	0.185276
T:Mean=0	0.043697	Pr>|T|	0.9654
Num ^= 0	32	Num > 0	15
M(Sign)	-1	Pr>=|M|	0.8601
Sgn Rank	-14	Pr>=|S|	0.7982
W:Normal	0.972655	Pr<W	0.6333

Quantiles(Def=5)

100% Max	2.538593	99%	2.538593
75% Q3	0.704431	95%	2.127346
50% Med	-0.17222	90%	1.427172
25% Q1	-0.80626	10%	-1.16211
0% Min	-1.9613	5%	-1.33541
		1%	-1.9613
Range	4.499898		
Q3-Q1	1.510692		
Mode	0.287147		

Extremes

Lowest	Obs	Highest	Obs
-1.9613(	3)	0.972286(	17)
-1.33541(	31)	1.427172(	4)
-1.20335(	5)	1.427172(	7)
-1.16211(	18)	2.127346(	28)
-1.10745(	21)	2.538593(	24)

```
Stem Leaf                     #             Boxplot
   2 5                        1                |
   2 1                        1                |
   1                                           |
   1 0044                     4                |
   0 6689                     4             +-----+
   0 23334                    5             |  +  |
  -0 43331                    5             *-----*
  -0 97665                    5             +-----+
  -1 322110                   6                |
  -1                                           |
  -2 0                        1                |
     ----+----+----+----+
```

Normal Probability Plot

```
 2.75+                                                  *  ++
     |                                              *   ++++
     |                                           +++++
     |                                       ++*+*
     |                                  ***** *
 0.25+                            +**+*
     |                        +****
     |                    ++****
     |            * *+**+**
     |     * +++++
-2.25+  ++++
      +----+----+----+----+----+----+----+----+----+----+
          -2        -1         0        +1        +2
```