The MEANS Procedure

Variable	Label	N	Mean	Std Error
Age		20	31.2000000	1.6068930
height	Body Height in meter	20	1.6985500	0.0174095
Bw	Body Weight in kg	20	78.2735000	4.7481884
FM	Fat Mass in kg	20	24.5854434	3.0162289
FatContent	Fraction of body fat	20	0.2999621	0.0248354
BMI	Body Mass Index	20	27.0312479	1.4905646
REE	Resting energy expenditure in kcal/d	20	1510.29	61.3744038

Obs	MissPattern	Effect	Dependent	Diet	LSMean	StdErr	Probt	ProbtDiff
1	1	Diet	Intake	PROC	2651.387500	53.381011	<.0001	0.7478
2	1	Diet	Intake	UNPROC	2627.001500	53.381011	<.0001	_
3	1	Diet	FQ	PROC	0.852948	0.001793	<.0001	0.0020
4	1	Diet	FQ	UNPROC	0.844735	0.001793	<.0001	_
5	1	Diet	TotalEE	PROC	2336.168292	18.996656	<.0001	0.0555
6	1	Diet	TotalEE	UNPROC	2283.676002	18.996656	<.0001	_
7	1	Diet	TotalRQ	PROC	0.903090	0.003399	<.0001	<.0001
8	1	Diet	TotalRQ	UNPROC	0.871770	0.003399	<.0001	_
9	1	Diet	EEsedentary	PROC	1581.466207	16.873302	<.0001	0.0844
10	1	Diet	EEsedentary	UNPROC	1539.579431	16.873302	<.0001	_
11	1	Diet	SPA	PROC	754.702085	17.556249	<.0001	0.6708
12	1	Diet	SPA	UNPROC	744.096570	17.556249	<.0001	_
13	2	Diet	SMR	PROC	1531.627587	19.157205	<.0001	0.8107
14	2	Diet	SMR	UNPROC	1525.161709	18.840535	<.0001	_

Obs	MissPattern	Dependent	Parameter	Estimate	StdErr	tValue	Probt
1	1	Intake	Proc vs Unproc	24.386000	75.492150	0.32	0.7478
2	1	FQ	Proc vs Unproc	0.008213	0.002535	3.24	0.0020
3	1	TotalEE	Proc vs Unproc	52.492290	26.865329	1.95	0.0555
4	1	TotalRQ	Proc vs Unproc	0.031319	0.004807	6.52	<.0001
5	1	EEsedentary	Proc vs Unproc	0.029088	0.016571	1.76	0.0844
6	1	SPA	Proc vs Unproc	0.007365	0.017242	0.43	0.6708
7	2	SMR	Proc vs Unproc	0.004490	0.018659	0.24	0.8107

Obs	Effect	Dependent	Diet	LSMean	StdErr	Probt	ProbtDiff
1	Diet	AveEI	PROC	2963.421805	74.339174	<.0001	0.0003
2	Diet	AveEI	UNPROC	2490.789962	74.339174	<.0001	_
3	Diet	FQ	PROC	0.854372	0.002176	<.0001	0.9301
4	Diet	FQ	UNPROC	0.854646	0.002176	<.0001	_
5	Diet	RQrevised	PROC	0.900320	0.006488	<.0001	<.0001
6	Diet	RQrevised	UNPROC	0.841585	0.006488	<.0001	_
7	Diet	RCO2	PROC	476.708820	6.935946	<.0001	<.0001
8	Diet	RCO2	UNPROC	419.858850	6.935946	<.0001	_
9	Diet	DLWEEadjEB	PROC	2546.273677	39.294793	<.0001	0.0064
10	Diet	DLWEEadjEB	UNPROC	2374.952365	39.294793	<.0001	_

Obs	Dependent	Parameter	Estimate	StdErr	tValue	Probt
1	AveEI	Ultra vs Unproce	472.631842	105.131469	4.50	0.0003
2	FQ	Ultra vs Unproce	-0.000274	0.003077	-0.09	0.9301
3	RQrevised	Ultra vs Unproce	0.058734	0.009176	6.40	<.0001
4	RCO2	Ultra vs Unproce	56.849971	9.808910	5.80	<.0001
5	DLWEEadjEB	Ultra vs Unproce	171.321313	55.571229	3.08	0.0064

The MEANS Procedure

Diet	N Obs	Variable	N	Mean	Std Error	Pr > |t|
PROC	19	DLW_ChamberEE	19	190.9504675	73.4211127	0.0181
		EI_DLW	19	417.1481275	121.2797586	0.0029
UNPROC	19	DLW_ChamberEE	19	70.2923037	75.1810359	0.3622
		EI_DLW	19	115.8375979	111.4900081	0.3126

Obs	Effect	Dependent	Diet	LSMean	StdErr	Probt	ProbtDiff
1	Diet	AvgDailyMET	PROC	1.50883419	0.00304357	<.0001	0.4465
2	Diet	AvgDailyMET	UNPROC	1.50549582	0.00313530	<.0001	_

Obs	Name	BaseLineMean	BaseLineSE	ProcessedMean	ProcessedSE	UnProcessedMean	UnProcessedSE	ProVsUnpro	ProVsUnproSE	ProVsUnpro_Pvalue	ProVsBaseLine	ProVsBaseLineSE	ProVsBaseLine_P
1	Glucose	90.450000	0.910971	88.600	0.9110	87.950	0.9110	0.6500	1.288	0.61680	-1.8500	1.288	0.
2	Cholesterol, Total	154.900000	2.975359	152.300	2.9754	137.250	2.9754	15.0500	4.208	0.00097	-2.6000	4.208	0.
3	Triglycerides	72.300000	3.073607	61.950	3.0736	58.600	3.0736	3.3500	4.347	0.44565	-10.3500	4.347	0.
4	HDL Cholesterol	58.200000	0.843561	55.014	0.8762	48.250	0.8436	6.7645	1.216	0.00000	-3.1855	1.216	0.
5	LDL	82.300000	2.858301	84.436	2.9690	77.150	2.8583	7.2855	4.121	0.08534	2.1355	4.121	0.
6	Uric Acid	4.920000	0.082324	4.490	0.0823	4.850	0.0823	-0.3600	0.116	0.00371	-0.4300	0.116	0.
7	Hgb A1C	4.975000	0.029093	5.020	0.0291	5.000	0.0302	0.0199	0.042	0.63853	0.0450	0.041	0.
8	Thyroid Stimulating Hormone	2.220368	0.145735	2.624	0.1403	2.463	0.1403	0.1610	0.198	0.42231	0.4031	0.202	0.
9	Free T3	3.168658	0.061578	3.200	0.0593	3.031	0.0593	0.1690	0.084	0.05113	0.0313	0.085	0.
10	FT4 (Free Thyroxine)	1.189737	0.023579	1.220	0.0227	1.270	0.0227	-0.0500	0.032	0.12786	0.0303	0.033	0.

Obs	Name	BaseLineMean	BaseLineSE	ProcessedMean	ProcessedSE	UnProcessedMean	UnProcessedSE	ProVsUnpro	ProVsUnproSE	ProVsUnpro_Pvalue	ProVsBaseLine	ProVsBaseLineSE	ProVsBaseLine_P
11	T4	6.820234	0.127145	6.890	0.1224	6.841	0.1322	0.0489	0.180	0.78767	0.0698	0.176	0.(
12	T3	112.579474	2.354580	111.735	2.2668	103.845	2.2668	7.8900	3.206	0.01863	-0.8445	3.268	0.(
13	C-React Prot. High Sensitivi	2.670000	0.294017	2.365	0.3054	1.545	0.3176	0.8201	0.441	0.07165	-0.3046	0.424	0.(
14	C-Peptide, Sensitive	2.185000	0.063657	2.140	0.0637	1.940	0.0637	0.2000	0.090	0.03234	-0.0450	0.090	0.(
15	Free Fatty Acids,Serum	0.408500	0.039875	0.384	0.0399	0.555	0.0399	-0.1715	0.056	0.00425	-0.0245	0.056	0.(
16	Insulin	11.930000	0.932782	11.287	1.0188	8.888	0.9806	2.3988	1.381	0.09125	-0.6433	1.381	0.(
17	HOMA IR	2.754049	0.250692	2.502	0.2738	1.944	0.2636	0.5574	0.371	0.14221	-0.2523	0.371	0.(
18	HOMA Beta	151.587968	9.855304	158.595	10.7643	129.392	10.3610	29.2033	14.59	0.05320	7.0071	14.59	0.(

Obs	Dependent	BaseLineMean	BaseLineSE	ProcessedMean	ProcessedSE	UnProcessedMean	UnProcessedSE	ProVsUnpro	ProVsUnproSE	ProVsUnpro_Pvalue	ProVsBaseLine	ProVsBaseLineSE	ProVsBaseLine_P
1	Adiponectin	7272.580000	653.808284	8011.59	653.81	4620.70	653.81	3390.89	924.6	0.00075	739.00	924.6	0
2	TotalGIP	79.658274	5.429531	67.90	5.43	64.28	5.43	3.62	7.679	0.64009	-11.76	7.679	0
3	activeGIP	27.372800	2.764957	20.00	2.76	18.23	2.76	1.76	3.910	0.65433	-7.38	3.910	0
4	FGF21	397.095395	59.180794	289.48	59.18	361.59	59.18	-72.11	83.69	0.39430	-107.62	83.69	0
5	ActiveGhrelin	61.424709	3.484003	54.11	3.48	48.28	3.48	5.83	4.927	0.24381	-7.32	4.927	0
6	Leptin	44342	1691.273494	45114.31	1691.27	40431.98	1691.27	4682.33	2392	0.05765	772.41	2392	0
7	PYY	28.882000	1.850469	25.07	1.85	34.26	1.85	-9.19	2.617	0.00116	-3.81	2.617	0
8	Resistin	13494	374.583927	12420.83	374.58	12052.23	374.58	368.60	529.7	0.49078	-1073.43	529.7	0
9	PAI1	4016.548050	504.303517	4603.98	504.30	4706.35	504.30	-102.38	713.2	0.88662	587.43	713.2	0
10	ActiveGLP1	1.877960	0.193759	1.25	0.19	1.57	0.19	-0.32	0.274	0.25369	-0.63	0.274	0
11	Glucagon	11.970250	0.824312	11.02	0.82	9.77	0.82	1.25	1.166	0.28949	-0.95	1.166	0

The GLM Procedure

Class Level Information		
Class	Levels	Values
study_id	20	ADL001 ADL002 ADL003 ADL004 ADL005 ADL006 ADL007 ADL008 ADL009 ADL010 ADL012 ADL013 ADL014 ADL015 ADL016 ADL017 ADL018 ADL019 ADL020 ADL021
Diet	2	Processed Unprocessed

Number of Observations Read	40
Number of Observations Used	40

The GLM Procedure

Dependent Variable: Matsuda Matsuda index

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	20	112.0820037	5.6041002	5.25	0.0003
Error	19	20.2731860	1.0670098		
Corrected Total	39	132.3551897			

R-Square	Coeff Var	Root MSE	Matsuda Mean
0.846827	24.55877	1.032962	4.206080

Source	DF	Type I SS	Mean Square	F Value	Pr > F
study_id	19	108.9140502	5.7323184	5.37	0.0003
Diet	1	3.1679535	3.1679535	2.97	0.1011

Source	DF	Type III SS	Mean Square	F Value	Pr > F
study_id	19	108.9140502	5.7323184	5.37	0.0003
Diet	1	3.1679535	3.1679535	2.97	0.1011

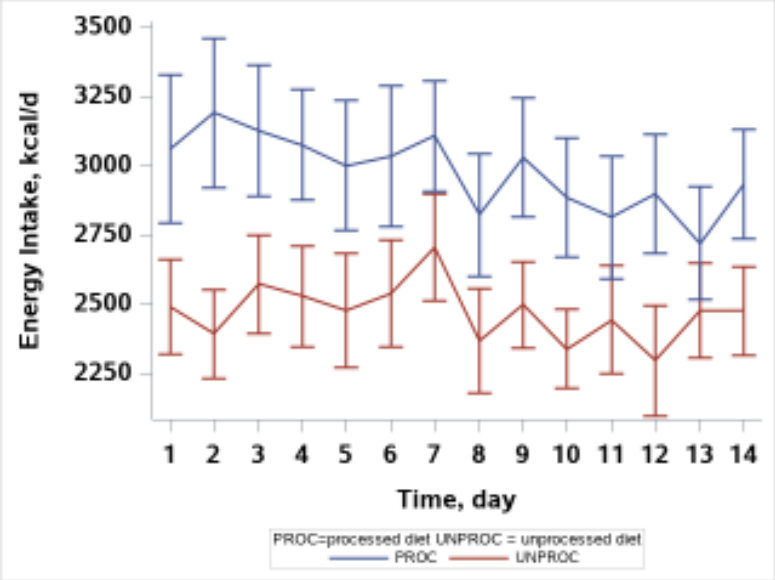
The GLM Procedure
Least Squares Means

Diet	Matsuda LSMEAN	Standard Error	H0:LSMEAN=0 Pr > |t|	H0:LSMean1=LSMean2 Pr > |t|
Processed	3.92465724	0.23097725	<.0001	0.1011
Unprocessed	4.48750300	0.23097725	<.0001	

Obs	Dependent	Parameter	Estimate	StdErr	tValue	Probt
1	AveEI	Proc Vs Unproc	507.732429	105.732749	4.80	0.0001
2	Carb	Proc Vs Unproc	280.281176	54.096833	5.18	<.0001
3	Prot	Proc Vs Unproc	-2.350620	12.147417	-0.19	0.8486
4	Fat	Proc Vs Unproc	229.775193	53.450028	4.30	0.0004
5	AveSugars	Proc Vs Unproc	-3.248321	5.605519	-0.58	0.5691
6	AveFiber	Proc Vs Unproc	2.736214	3.280674	0.83	0.4146
7	AveSodium	Proc Vs Unproc	1210.620393	233.806541	5.18	<.0001

Obs	Effect	Dependent	Period	LSMean	StdErr	Probt	ProbtDiff
1	Period	AveEI	PROC	2978.259500	74.764344	<.0001	0.0001
2	Period	AveEI	UNPROC	2470.527071	74.764344	<.0001	_
3	Period	Carb	PROC	1386.573974	38.252237	<.0001	<.0001
4	Period	Carb	UNPROC	1106.292797	38.252237	<.0001	_
5	Period	Prot	PROC	489.572780	8.589521	<.0001	0.8486
6	Period	Prot	UNPROC	491.923400	8.589521	<.0001	_
7	Period	Fat	PROC	1102.087350	37.794877	<.0001	0.0004
8	Period	Fat	UNPROC	872.312157	37.794877	<.0001	_

Obs	Effect	Dependent	Period	LSMean	StdErr	Probt	ProbtDiff
9	Period	AveSugars	PROC	93.306393	3.963700	<.0001	0.5691
10	Period	AveSugars	UNPROC	96.554714	3.963700	<.0001	_
11	Period	AveFiber	PROC	48.514536	2.319787	<.0001	0.4146
12	Period	AveFiber	UNPROC	45.778321	2.319787	<.0001	_
13	Period	AveSodium	PROC	5817.305679	165.326191	<.0001	<.0001
14	Period	AveSodium	UNPROC	4606.685286	165.326191	<.0001	_



The MEANS Procedure

PROC=processed diet UNPROC = unprocessed diet	N Obs	Variable	N	Mean	Std Error
PROC	20	Carb	20	1386.57	105.1055090
		Prot	20	489.5727803	34.1654733
		Fat	20	1102.09	75.0474395
UNPROC	20	Carb	20	1106.29	81.8794350
		Prot	20	491.9234002	31.1218972
		Fat	20	872.3121571	59.6034763

The CORR Procedure

2 Variables:	deltaEI BMI

Simple Statistics						
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
deltaEI	20	507.73243	472.85123	10155	-176.10643	1572
BMI	20	27.03125	6.66601	540.62496	18.04959	42.45881

Pearson Correlation Coefficients, N = 20 Prob > |r| under H0: Rho=0		
	deltaEI	BMI
deltaEI	1.00000	0.10607 0.6563
BMI	0.10607 0.6563	1.00000

The GLM Procedure

Class Level Information		
Class	Levels	Values
StudyID	20	ADL001 ADL002 ADL003 ADL004 ADL005 ADL006 ADL007 ADL008 ADL009 ADL010 ADL012 ADL013 ADL014 ADL015 ADL016 ADL017 ADL018 ADL019 ADL020 ADL021
Period	2	PROC UNPROC

Number of Observations Read	40
Number of Observations Used	40

The GLM Procedure

Dependent Variable: AveEI

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	20	24786540.39	1239327.02	11.42	<.0001
Error	19	2062106.61	108531.93		
Corrected Total	39	26848647.00			

R-Square	Coeff Var	Root MSE	AveEI Mean
0.923195	12.40702	329.4418	2655.285

Source	DF	Type I SS	Mean Square	F Value	Pr > F
StudyID	19	22684743.94	1193933.89	11.00	<.0001
Period	1	2101796.44	2101796.44	19.37	0.0003

Source	DF	Type III SS	Mean Square	F Value	Pr > F
StudyID	19	22684743.94	1193933.89	11.00	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Period	1	2101796.44	2101796.44	19.37	0.0003

The GLM Procedure
Least Squares Means

Period	AveEI LSMEAN	Standard Error	H0:LSMEAN=0 Pr > |t|	H0:LSMean1=LSMean2 Pr > |t|
PROC	2884.51190	73.66544	<.0001	0.0003
UNPROC	2426.05837	73.66544	<.0001	

The GLM Procedure

Dependent Variable: AveEI

Parameter	Estimate	Standard Error	t Value	Pr > |t|
Proc Vs Unproc	458.453536	104.178658	4.40	0.0003

The GLM Procedure

Class Level Information		
Class	Levels	Values
DietOrder	2	PU UP
Gender	2	Female Male

Number of Observations Read	20
Number of Observations Used	20

The GLM Procedure

Dependent Variable: deltaEI

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	295086.442	147543.221	0.63	0.5423
Error	17	3953090.984	232534.764		
Corrected Total	19	4248177.426			

R-Square	Coeff Var	Root MSE	deltaEI Mean
0.069462	94.97494	482.2186	507.7324

Source	DF	Type I SS	Mean Square	F Value	Pr > F
DietOrder	1	2133.3517	2133.3517	0.01	0.9248
Gender	1	292953.0900	292953.0900	1.26	0.2773

Source	DF	Type III SS	Mean Square	F Value	Pr > F
DietOrder	1	23563.8804	23563.8804	0.10	0.7541
Gender	1	292953.0900	292953.0900	1.26	0.2773

The GLM Procedure

Class Level Information		
Class	Levels	Values
StudyID	20	ADL001 ADL002 ADL003 ADL004 ADL005 ADL006 ADL007 ADL008 ADL009 ADL010 ADL012 ADL013 ADL014 ADL015 ADL016 ADL017 ADL018 ADL019 ADL020 ADL021
Period	2	PROC UNPROC

Number of Observations Read	560
Number of Observations Used	560

The GLM Procedure

Dependent Variable: EI energy intake in kcal/d

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	22	387234348.0	17601561.3	94.04	<.0001
Error	537	100513500.1	187176.0		
Corrected Total	559	487747848.2			

R-Square	Coeff Var	Root MSE	EI Mean
0.793923	15.88017	432.6384	2724.393

Source	DF	Type I SS	Mean Square	F Value	Pr > F
StudyID	19	347923342.8	18311754.9	97.83	<.0001
Period	1	36090910.7	36090910.7	192.82	<.0001
DaysOnDiet	1	2503637.8	2503637.8	13.38	0.0003
DaysOnDiet*Period	1	716456.8	716456.8	3.83	0.0509

Source	DF	Type III SS	Mean Square	F Value	Pr > F
StudyID	19	347923342.8	18311754.9	97.83	<.0001
Period	1	12886268.2	12886268.2	68.85	<.0001
DaysOnDiet	1	2503637.8	2503637.8	13.38	0.0003
DaysOnDiet*Period	1	716456.8	716456.8	3.83	0.0509

Parameter	Estimate	Standard Error	t Value	Pr > |t|

Parameter	Estimate	Standard Error	t Value	Pr > |t|
slope of Unprocessed	-7.7138154	6.41385824	-1.20	0.2296
slope of Processed	-25.4599714	6.41385824	-3.97	<.0001
diff in slope	-17.7461560	9.07056531	-1.96	0.0509

Obs	Meal	Effect	Dependent	Period	LSMean	StdErr	Probt	ProbtDiff
1	Breakfast	Period	AveEI	PROC	743.023286	29.729065	<.0001	0.0083
2	Breakfast	Period	AveEI	UNPROC	619.279821	29.729065	<.0001	_
3	Breakfast	Period	Carb	PROC	369.819094	16.530982	<.0001	0.0103
4	Breakfast	Period	Carb	UNPROC	303.202396	16.530982	<.0001	_
5	Breakfast	Period	Prot	PROC	114.553966	3.707132	<.0001	0.6058
6	Breakfast	Period	Prot	UNPROC	117.305566	3.707132	<.0001	_
7	Breakfast	Period	Fat	PROC	257.756168	11.857847	<.0001	0.0002
8	Breakfast	Period	Fat	UNPROC	182.041491	11.857847	<.0001	_
9	Breakfast	Period	EnergyDensity	PROC	1.821223	0.062169	<.0001	<.0001
10	Breakfast	Period	EnergyDensity	UNPROC	1.073884	0.062169	<.0001	_
11	Dinner	Period	AveEI	PROC	919.262250	32.328595	<.0001	0.1672
12	Dinner	Period	AveEI	UNPROC	853.600250	32.328595	<.0001	_
13	Dinner	Period	Carb	PROC	417.892180	18.323819	<.0001	0.1967
14	Dinner	Period	Carb	UNPROC	383.220042	18.323819	<.0001	_
15	Dinner	Period	Prot	PROC	183.485550	5.079755	<.0001	0.4210
16	Dinner	Period	Prot	UNPROC	177.576354	5.079755	<.0001	_
17	Dinner	Period	Fat	PROC	301.974007	12.633564	<.0001	0.0078
18	Dinner	Period	Fat	UNPROC	248.883459	12.633564	<.0001	_
19	Dinner	Period	EnergyDensity	PROC	1.325962	0.058374	<.0001	0.0210
20	Dinner	Period	EnergyDensity	UNPROC	1.118314	0.058374	<.0001	_
21	Lunch	Period	AveEI	PROC	971.487929	34.280032	<.0001	0.0003
22	Lunch	Period	AveEI	UNPROC	758.698893	34.280032	<.0001	_
23	Lunch	Period	Carb	PROC	391.085497	17.558384	<.0001	0.0002
24	Lunch	Period	Carb	UNPROC	276.920345	17.558384	<.0001	_
25	Lunch	Period	Prot	PROC	171.623842	4.043937	<.0001	0.0015
26	Lunch	Period	Prot	UNPROC	192.787968	4.043937	<.0001	_
27	Lunch	Period	Fat	PROC	398.271528	19.849065	<.0001	<.0001
28	Lunch	Period	Fat	UNPROC	240.969265	19.849065	<.0001	_
29	Lunch	Period	EnergyDensity	PROC	1.407042	0.056090	<.0001	0.0069
30	Lunch	Period	EnergyDensity	UNPROC	1.166733	0.056090	<.0001	_
31	Snack	Period	AveEI	PROC	295.840821	32.819004	<.0001	0.8609
32	Snack	Period	AveEI	UNPROC	287.594429	32.819004	<.0001	_
33	Snack	Period	Carb	PROC	143.458885	17.453199	<.0001	0.9117
34	Snack	Period	Carb	UNPROC	146.232187	17.453199	<.0001	_
35	Snack	Period	Prot	PROC	24.875312	2.944088	<.0001	0.4959
36	Snack	Period	Prot	UNPROC	21.984298	2.944088	<.0001	_
37	Snack	Period	Fat	PROC	127.511411	19.283767	<.0001	0.7636
38	Snack	Period	Fat	UNPROC	119.191837	19.283767	<.0001	_
39	Snack	Period	EnergyDensity	PROC	0.205975	0.027335	<.0001	0.5948
40	Snack	Period	EnergyDensity	UNPROC	0.226891	0.027335	<.0001	_

The GLM Procedure

Class Level Information		
Class	Levels	Values
StudyID	20	ADL001 ADL002 ADL003 ADL004 ADL005 ADL006 ADL007 ADL008 ADL009 ADL010 ADL012 ADL013 ADL014 ADL015 ADL016 ADL017 ADL018 ADL019 ADL020 ADL021
Period	2	PROC UNPROC

Number of Observations Read	40
Number of Observations Used	40

The GLM Procedure

Dependent Variable: EnergyDensity

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	20	1.70472996	0.08523650	1.80	0.1031
Error	19	0.90014042	0.04737581		
Corrected Total	39	2.60487038			

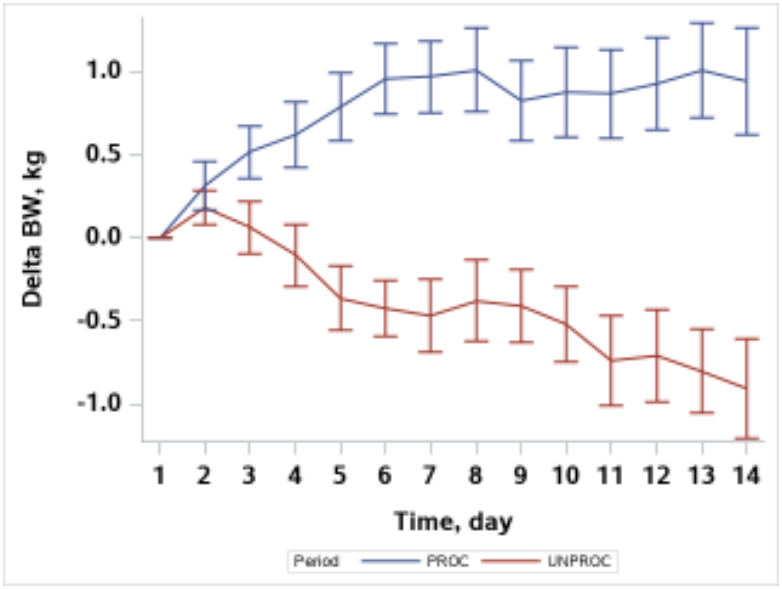
R-Square	Coeff Var	Root MSE	EnergyDensity Mean
0.654439	17.73340	0.217660	1.227401

Source	DF	Type I SS	Mean Square	F Value	Pr > F
StudyID	19	0.96172071	0.05061688	1.07	0.4434
Period	1	0.74300925	0.74300925	15.68	0.0008

Source	DF	Type III SS	Mean Square	F Value	Pr > F
StudyID	19	0.96172071	0.05061688	1.07	0.4434
Period	1	0.74300925	0.74300925	15.68	0.0008

The GLM Procedure
Least Squares Means

Period	EnergyDensity LSMEAN	Standard Error	H0:LSMEAN=0 Pr > |t|	H0:LSMean1=LSMean2 Pr > |t|
PROC	1.36369162	0.04867022	<.0001	0.0008
UNPROC	1.09110966	0.04867022	<.0001	



The CORR Procedure

2 With Variables:	DeltaDeltaBW DeltaDeltaFFM
3 Variables:	DeltaSodium DeltaEI BMI

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
DeltaDeltaBW	20	1.84650	1.97525	36.93000	-1.64000	5.60000	difference between body weight change on processed diet vs. unprocess diet, kg over 2 wk
DeltaDeltaFFM	19	1.17680	2.22757	22.35911	-3.77655	4.79297	difference between fat free mass change on processed diet vs. unprocess diet, kg over 2 wk
DeltaSodium	20	1211	1046	24212	-371.12929	2984	difference between sodium intake on processed diet vs. unprocess diet, mg/d
DeltaEI	20	507.73243	472.85123	10155	-176.10643	1572	difference between energy intake on processed diet vs. unprocess diet, kcal/d
BMI	20	27.03125	6.66601	540.62496	18.04959	42.45881	

Pearson Correlation Coefficients
Prob > |r| under H0: Rho=0
Number of Observations

	DeltaSodium	DeltaEI	BMI
DeltaDeltaBW **difference between body weight change on processed diet vs. unprocess diet, kg over 2 wk**	0.64071 0.0023 20	0.80324 <.0001 20	0.01006 0.9664 20
DeltaDeltaFFM **difference between fat free mass change on processed diet vs. unprocess diet, kg over 2 wk**	0.63233 0.0037 19	0.81607 <.0001 19	-0.13252 0.5886 19

The MEANS Procedure

DietForRate	N Obs	Variable	Label	N	Mean	Std Error
Ultraproc	20	DeltaFM71	fat mass change between day 7 and day 1 during the diet period in kg	20	0.1443132	0.1303830
		DeltaFM141	fat mass change between day 7 and day 1 during the diet period in kg	20	0.4309849	0.1161300
Unproc	20	DeltaFM71	fat mass change between day 7 and day 1 during the diet period in kg	20	-0.0946391	0.1273388
		DeltaFM141	fat mass change between day 7 and day 1 during the diet period in kg	19	-0.2795781	0.1298412

The MEANS Procedure

Variable	Label	N	Mean	Std Error	Pr > |t|
DeltaBWProcessed	body weight change during processed diet period, kg over 2 wk	20	0.9380000	0.3218569	0.0089
DeltaBWUnproc	body weight change during unprocessed diet period, kg over 2 wk	20	-0.9085000	0.3005961	0.0070
DeltaFMProcessed	fat mass change during processed diet period, kg over 2 wk	20	0.4309849	0.1161300	0.0015
DeltaFMUnproc	fat mass change during unprocessed diet period, kg over 2 wk	19	-0.2795781	0.1298412	0.0451
DeltaFFMProcessed	fat free mass change during processed diet period, kg over 2 wk	20	0.5070151	0.2837603	0.0899
DeltaFFMUnproc	fat free mass change during unprocessed diet period, kg over 2 wk	19	-0.5977903	0.3194065	0.0776

Original (cf article)

The MEANS Procedure

Variable	N	Mean	Std Error	Pr > |t|
deltaBWProc	20	0.7789077	0.2832346	0.0127
deltaBWUnProc	20	-1.0666154	0.3072829	0.0026
deltaFMProc	20	0.4746473	0.1288584	0.0016
deltaFMUnProc	20	-0.2916081	0.1322275	0.0399
deltaFFMProc	20	0.3042604	0.2653401	0.2657
deltaFFMUnProc	20	-0.7750073	0.2918787	0.0156

"Adjusted" (August 2019)

The MEANS Procedure

Variable	Label	N	Mean	Std Error	Pr > |t|
BCEBProcessed	energy balance calculated from body composition change during prodcessed diet	19	306.5887691	85.4173681	0.0021
BCEBUnproc	energy balance calculated from body composition change during unprocessed diet	18	-219.7900703	87.7018456	0.0227
EIDLWEB_BCEBProcessed	difference in energy balances calculated from DLW vs. body composition during processed diet, kcal/d	19	110.5593584	110.9412543	0.3322
EIDLWEB_BCEBUnproc	difference in energy balances calculated from DLW vs. body composition during unprocessed diet, kcal/d	18	381.9063143	92.0026351	0.0007

The GLM Procedure

Class Level Information

Class	Levels	Values
subjectID	15	ADL001 ADL002 ADL003 ADL004 ADL005 ADL006 ADL007 ADL008 ADL009 ADL010 ADL012 ADL013 ADL014 ADL015 ADL021

Class Level Information		
Class	Levels	Values
Diet	3	BaseLine UltraPro Unproces

Number of Observations Read	38
Number of Observations Used	38

The GLM Procedure

Dependent Variable: PDFF_BHT2T1 percentage of liver fat

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	16	0.00164594	0.00010287	4.30	0.0011
Error	21	0.00050239	0.00002392		
Corrected Total	37	0.00214833			

R-Square	Coeff Var	Root MSE	PDFF_BHT2T1 Mean
0.766149	43.54188	0.004891	0.011233

Source	DF	Type I SS	Mean Square	F Value	Pr > F
subjectID	14	0.00160919	0.00011494	4.80	0.0007
Diet	2	0.00003675	0.00001837	0.77	0.4765

Source	DF	Type III SS	Mean Square	F Value	Pr > F
subjectID	14	0.00156084	0.00011149	4.66	0.0008
Diet	2	0.00003675	0.00001837	0.77	0.4765

The GLM Procedure
Least Squares Means

Diet	PDFF_BHT2T1 LSMEAN	Standard Error	Pr > |t|
BaseLine	0.01188422	0.00126289	<.0001
UltraPro	0.01118824	0.00160917	<.0001
Unproces	0.00947633	0.00152201	<.0001

The GLM Procedure

Dependent Variable: PDFF_BHT2T1 percentage of liver fat

Parameter	Estimate	Standard Error	t Value	Pr > |t|
Ultra vs BaseLine	-0.00069598	0.00204556	-0.34	0.7371
UnPro vs BaseLine	-0.00240788	0.00197773	-1.22	0.2369

The GLM Procedure

Class Level Information		
Class	Levels	Values
subjectID	20	ADL001 ADL002 ADL003 ADL004 ADL005 ADL006 ADL007 ADL008 ADL009 ADL010 ADL012 ADL013 ADL014 ADL015 ADL016 ADL017 ADL018 ADL019 ADL020 ADL021
Diet	2	Processed Unprocessed

Number of Observations Read	80
Number of Observations Used	80

The GLM Procedure

Dependent Variable: UCPExcreted 24-hour urinary C-peptide excretion in nmol/d

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	20	35133748263	1756687413	5.44	<.0001
Error	59	19040162216	322714614		
Corrected Total	79	54173910479			

R-Square	Coeff Var	Root MSE	UCPExcreted Mean
0.648536	51.51985	17964.26	34868.61

Source	DF	Type I SS	Mean Square	F Value	Pr > F
subjectID	19	33864709662	1782353140	5.52	<.0001
Diet	1	1269038601	1269038601	3.93	0.0520

Source	DF	Type III SS	Mean Square	F Value	Pr > F
subjectID	19	33864709662	1782353140	5.52	<.0001
Diet	1	1269038601	1269038601	3.93	0.0520

Parameter	Estimate	Standard Error	t Value	Pr > |t|
Processed vs Unprocessed	7965.67198	4016.93051	1.98	0.0520

The GLM Procedure
Least Squares Means

Diet	UCPExcreted LSMEAN	Standard Error	H0:LSMEAN=0 Pr > |t|	H0:LSMean1=LSMean2 Pr > |t|
Processed	38851.4507	2840.3988	<.0001	0.0520
Unprocessed	30885.7788	2840.3988	<.0001	

The GLM Procedure

Class Level Information		
Class	Levels	Values
SubID	20	ADL001 ADL002 ADL003 ADL004 ADL005 ADL006 ADL007 ADL008 ADL009 ADL010 ADL012 ADL013 ADL014 ADL015 ADL016 ADL017 ADL018 ADL019 ADL020 ADL021
Diet	2	PROC UNPROC

Number of Observations Read	80
Number of Observations Used	76

The GLM Procedure

Dependent Variable: DexcomGlucose average blood glucose concentration during the diet period in mg/dl

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	20	7860.05172	393.00259	6.14	<.0001
Error	55	3517.86546	63.96119		
Corrected Total	75	11377.91717			

R-Square	Coeff Var	Root MSE	DexcomGlucose Mean
0.690816	8.214423	7.997574	97.36015

Source	DF	Type I SS	Mean Square	F Value	Pr > F
SubID	19	7683.453329	404.392280	6.32	<.0001
Diet	1	176.598387	176.598387	2.76	0.1023

Source	DF	Type III SS	Mean Square	F Value	Pr > F
SubID	19	7734.850076	407.097372	6.36	<.0001
Diet	1	176.598387	176.598387	2.76	0.1023

The GLM Procedure
Least Squares Means

Diet	DexcomGlucose LSMEAN	Standard Error	H0:LSMEAN=0 Pr > |t|	H0:LSMean1=LSMean2 Pr > |t|
PROC	99.0874407	1.2858004	<.0001	0.1023
UNPROC	96.0116274	1.3294732	<.0001	

The GLM Procedure

Class Level Information		
Class	Levels	Values
study_id	18	ADL001 ADL002 ADL003 ADL004 ADL005 ADL006 ADL007 ADL008 ADL009 ADL010 ADL012 ADL013 ADL014 ADL016 ADL017 ADL018 ADL019 ADL020
Diet	2	Ultraproc Unproc

Number of Observations Read	64
Number of Observations Used	64

The GLM Procedure

Dependent Variable: pleasant sum of pleasant VAS at three meals

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	18	80515.4825	4473.0824	3.43	0.0004
Error	45	58732.7519	1305.1723		
Corrected Total	63	139248.2344			

R-Square	Coeff Var	Root MSE	pleasant Mean
0.578215	18.61176	36.12717	194.1094

Source	DF	Type I SS	Mean Square	F Value	Pr > F
study_id	17	77447.31771	4555.72457	3.49	0.0004
Diet	1	3068.16479	3068.16479	2.35	0.1322

Source	DF	Type III SS	Mean Square	F Value	Pr > F
study_id	17	76998.49936	4529.32349	3.47	0.0004
Diet	1	3068.16479	3068.16479	2.35	0.1322

The GLM Procedure
Least Squares Means

Diet	pleasant LSMEAN	Standard Error	H0:LSMEAN=0 Pr > |t|	H0:LSMean1=LSMean2 Pr > |t|
Ultraproc	202.296973	6.146737	<.0001	0.1322
Unproc	187.914950	7.128661	<.0001	

The GLM Procedure

Dependent Variable: pleasant sum of pleasant VAS at three meals

Parameter	Estimate	Standard Error	t Value	Pr > |t|
Ultra vs Unprocess	14.3820225	9.38025274	1.53	0.1322

Obs	Effect	Dependent	Diet	LSMean	StdErr	Probt	ProbtDiff
1	Diet	pleasant	Ultraproc	67.432324	2.048912	<.0001	0.1322
2	Diet	pleasant	Unproc	62.638317	2.376220	<.0001	_

The GLM Procedure

Class Level Information		
Class	Levels	Values
study_id	18	ADL001 ADL002 ADL003 ADL004 ADL005 ADL006 ADL007 ADL008 ADL009 ADL010 ADL012 ADL013 ADL014 ADL016 ADL017 ADL018 ADL019 ADL020
Diet	2	Ultraproc Unproc

Number of Observations Read	64
Number of Observations Used	64

The GLM Procedure

Dependent Variable: familiar sum of familiar VAS at three meals

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	18	115175.4502	6398.6361	2.23	0.0150
Error	45	128981.1592	2866.2480		
Corrected Total	63	244156.6094			

R-Square	Coeff Var	Root MSE	familiar Mean
0.471728	24.79478	53.53735	215.9219

Source	DF	Type I SS	Mean Square	F Value	Pr > F
study_id	17	114220.7760	6718.8692	2.34	0.0116
Diet	1	954.6742	954.6742	0.33	0.5667

Source	DF	Type III SS	Mean Square	F Value	Pr > F
study_id	17	113854.5886	6697.3287	2.34	0.0119
Diet	1	954.6742	954.6742	0.33	0.5667

The GLM Procedure
Least Squares Means

Diet	familiar LSMEAN	Standard Error	H0:LSMEAN=0	H0:LSMean1=LSMean2
			Pr > |t|	Pr > |t|
Ultraproc	221.666979	9.108935	<.0001	0.5667
Unproc	213.644507	10.564061	<.0001	

The GLM Procedure

Level of Diet	N	familiar	
		Mean	Std Dev
Ultraproc	35	220.057143	60.2157605
Unproc	29	210.931034	65.3435597

The GLM Procedure

Dependent Variable: familiar sum of familiar VAS at three meals

Parameter	Estimate	Standard Error	t Value	Pr > |t|
Ultra vs Unprocess	8.02247191	13.9007266	0.58	0.5667

Obs	Effect	Dependent	Diet	LSMean	StdErr	Probt	ProbtDiff
1	Diet	familiar	Ultraproc	73.888993	3.036312	<.0001	0.5667
2	Diet	familiar	Unproc	71.214836	3.521354	<.0001	_

The GLM Procedure

Class Level Information		
Class	Levels	Values
subjectID	17	ADL002 ADL003 ADL004 ADL005 ADL006 ADL007 ADL008 ADL009 ADL010 ADL012 ADL013 ADL014 ADL016 ADL017 ADL018 ADL019 ADL020
Diet	2	Ultraproc Unproc

Number of Observations Read	93
Number of Observations Used	93

The GLM Procedure

Dependent Variable: HungryAve average VAS for hungry

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	18	9054.73401	503.04078	5.41	<.0001
Error	74	6879.87839	92.97133		
Corrected Total	92	15934.61239			

R-Square	Coeff Var	Root MSE	HungryAve Mean
0.568243	26.02420	9.642164	37.05077

Source	DF	Type I SS	Mean Square	F Value	Pr > F
subjectID	16	8974.247356	560.890460	6.03	<.0001
Diet	1	78.882465	78.882465	0.85	0.3600
EI	1	1.604188	1.604188	0.02	0.8958

Source	DF	Type III SS	Mean Square	F Value	Pr > F
subjectID	16	8687.656948	542.978559	5.84	<.0001
Diet	1	43.519261	43.519261	0.47	0.4960
EI	1	1.604188	1.604188	0.02	0.8958

The GLM Procedure

Dependent Variable: SatisfiedAve average of satisfied VAS

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	18	10906.34882	605.90827	7.26	<.0001
Error	74	6176.58830	83.46741		
Corrected Total	92	17082.93711			

R-Square	Coeff Var	Root MSE	SatisfiedAve Mean
0.638435	15.88525	9.136050	57.51279

Source	DF	Type I SS	Mean Square	F Value	Pr > F
subjectID	16	10364.02066	647.75129	7.76	<.0001
Diet	1	347.30682	347.30682	4.16	0.0449
EI	1	195.02134	195.02134	2.34	0.1306

Source	DF	Type III SS	Mean Square	F Value	Pr > F
subjectID	16	9976.959963	623.559998	7.47	<.0001
Diet	1	55.199924	55.199924	0.66	0.4187
EI	1	195.021336	195.021336	2.34	0.1306

The GLM Procedure

Dependent Variable: FullnessAve Average VAS for fullness

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	18	11507.86735	639.32596	7.32	<.0001
Error	74	6463.49557	87.34453		
Corrected Total	92	17971.36292			

R-Square	Coeff Var	Root MSE	FullnessAve Mean
0.640345	16.45309	9.345830	56.80289

Source	DF	Type I SS	Mean Square	F Value	Pr > F
subjectID	16	11255.53523	703.47095	8.05	<.0001
Diet	1	145.00675	145.00675	1.66	0.2016
EI	1	107.32537	107.32537	1.23	0.2712

Source	DF	Type III SS	Mean Square	F Value	Pr > F
subjectID	16	10476.86349	654.80397	7.50	<.0001
Diet	1	16.34528	16.34528	0.19	0.6666
EI	1	107.32537	107.32537	1.23	0.2712

The GLM Procedure

Dependent Variable: EatingCapacityAve average VAS for eating capacity

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	18	9257.89995	514.32778	5.46	<.0001
Error	74	6971.60817	94.21092		
Corrected Total	92	16229.50812			

R-Square	Coeff Var	Root MSE	EatingCapacityAve Mean
0.570436	22.42734	9.706231	43.27856

Source	DF	Type I SS	Mean Square	F Value	Pr > F
subjectID	16	9039.870164	564.991885	6.00	<.0001
Diet	1	215.413783	215.413783	2.29	0.1348
EI	1	2.616007	2.616007	0.03	0.8681

Source	DF	Type III SS	Mean Square	F Value	Pr > F
subjectID	16	8816.849844	551.053115	5.85	<.0001
Diet	1	124.796937	124.796937	1.32	0.2535
EI	1	2.616007	2.616007	0.03	0.8681

The GLM Procedure
Least Squares Means

Diet	HungryAve LSMEAN	Standard Error	H0:LSMEAN=0 Pr > |t|	H0:LSMean1=LSMean2 Pr > |t|
Ultraproc	36.2785623	1.6164427	<.0001	0.4960
Unproc	38.0079444	1.6416195	<.0001	

Diet	SatisfiedAve LSMEAN	Standard	H0:LSMEAN=0	H0:LSMean1=LSMean2

Diet	SatisfiedAve LSMEAN	Standard Error	H0:LSMEAN=0 Pr > |t|	H0:LSMean1=LSMean2 Pr > |t|
Ultraproc	58.2001932	1.5315961	<.0001	0.4187
Unproc	56.2525049	1.5554514	<.0001	

Diet	FullnessAve LSMEAN	Standard Error	H0:LSMEAN=0 Pr > |t|	H0:LSMean1=LSMean2 Pr > |t|
Ultraproc	57.1868195	1.5667643	<.0001	0.6666
Unproc	56.1269647	1.5911673	<.0001	

Diet	EatingCapacityAve LSMEAN	Standard Error	H0:LSMEAN=0 Pr > |t|	H0:LSMean1=LSMean2 Pr > |t|
Ultraproc	42.1652317	1.6271831	<.0001	0.2535
Unproc	45.0937784	1.6525271	<.0001	

The GLM Procedure

Dependent Variable: HungryAve average VAS for hungry

Parameter	Estimate	Standard Error	t Value	Pr > |t|
Ultra vs. Unprocess	-1.72938209	2.52769530	-0.68	0.4960

The GLM Procedure

Dependent Variable: SatisfiedAve average of satisfied VAS

Parameter	Estimate	Standard Error	t Value	Pr > |t|
Ultra vs. Unprocess	1.94768823	2.39501737	0.81	0.4187

The GLM Procedure

Dependent Variable: FullnessAve Average VAS for fullness

Parameter	Estimate	Standard Error	t Value	Pr > |t|
Ultra vs. Unprocess	1.05985474	2.45001119	0.43	0.6666

The GLM Procedure

Dependent Variable: EatingCapacityAve average VAS for eating capacity

Parameter	Estimate	Standard Error	t Value	Pr > |t|
Ultra vs. Unprocess	-2.92854675	2.54449045	-1.15	0.2535

The GLM Procedure

Class Level Information		
Class	Levels	Values
SubjectID	20	ADL001 ADL002 ADL003 ADL004 ADL005 ADL006 ADL007 ADL008 ADL009 ADL010 ADL012 ADL013 ADL014 ADL015 ADL016 ADL017 ADL018 ADL019 ADL020 ADL021
FoodType	2	Processed Unprocessed

Number of Observations Read	555
Number of Observations Used	555

The GLM Procedure

Dependent Variable: MassRateDaily average mass eating rate, g/min

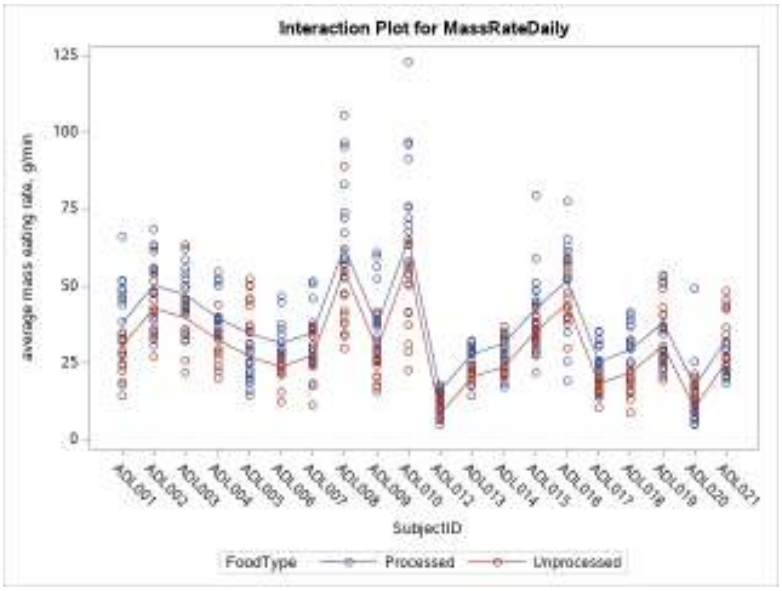
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	20	95094.6538	4754.7327	41.75	<.0001
Error	534	60820.7908	113.8966		
Corrected Total	554	155915.4446			

R-Square	Coeff Var	Root MSE	MassRateDaily Mean
0.609912	31.53499	10.67224	33.84252

Source	DF	Type I SS	Mean Square	F Value	Pr > F
SubjectID	19	87570.04706	4608.94985	40.47	<.0001
FoodType	1	7524.60670	7524.60670	66.07	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
SubjectID	19	87789.80157	4620.51587	40.57	<.0001
FoodType	1	7524.60670	7524.60670	66.07	<.0001

Parameter	Estimate	Standard Error	t Value	Pr > |t|
Process vs Unproc	7.36595561	0.90623869	8.13	<.0001



The GLM Procedure

Dependent Variable: ElRateDaily average energy eating rate, kcal/min

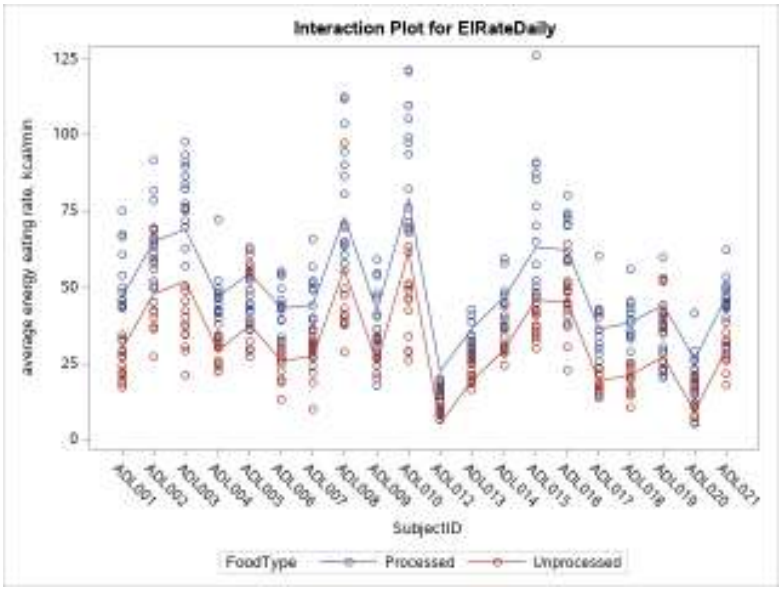
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	20	160933.3192	8046.6660	53.04	<.0001
Error	534	81013.1301	151.7100		
Corrected Total	554	241946.4493			

R-Square	Coeff Var	Root MSE	ElRateDaily Mean
0.665161	30.33270	12.31706	40.60654

Source	DF	Type I SS	Mean Square	F Value	Pr > F
SubjectID	19	120098.4867	6320.9730	41.66	<.0001
FoodType	1	40834.8325	40834.8325	269.16	<.0001

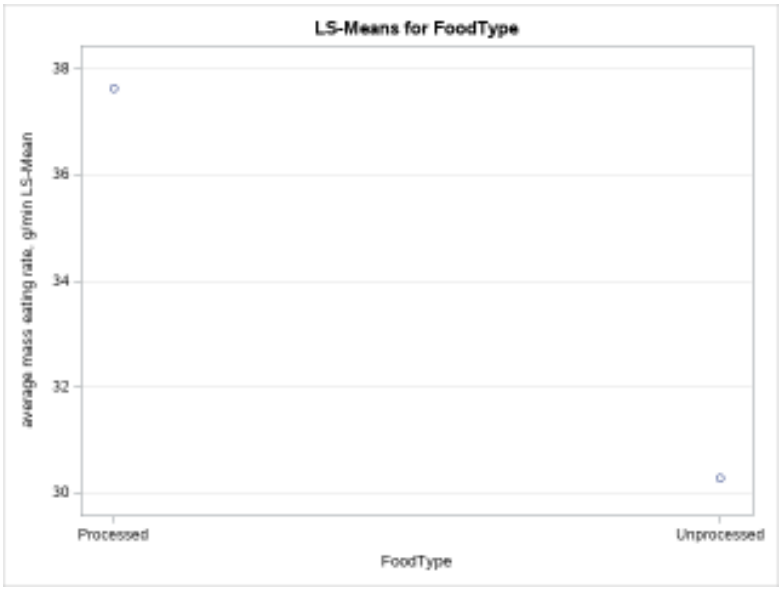
Source	DF	Type III SS	Mean Square	F Value	Pr > F
SubjectID	19	120576.6514	6346.1395	41.83	<.0001
FoodType	1	40834.8325	40834.8325	269.16	<.0001

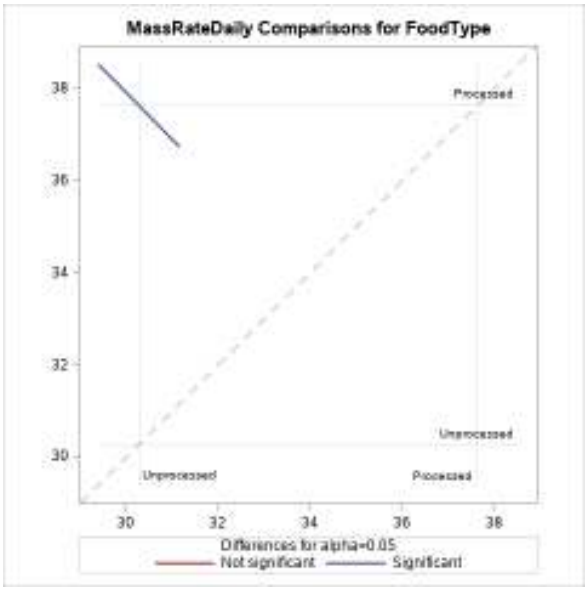
Parameter	Estimate	Standard Error	t Value	Pr > |t|
Process vs Unproc	17.1594192	1.04590990	16.41	<.0001



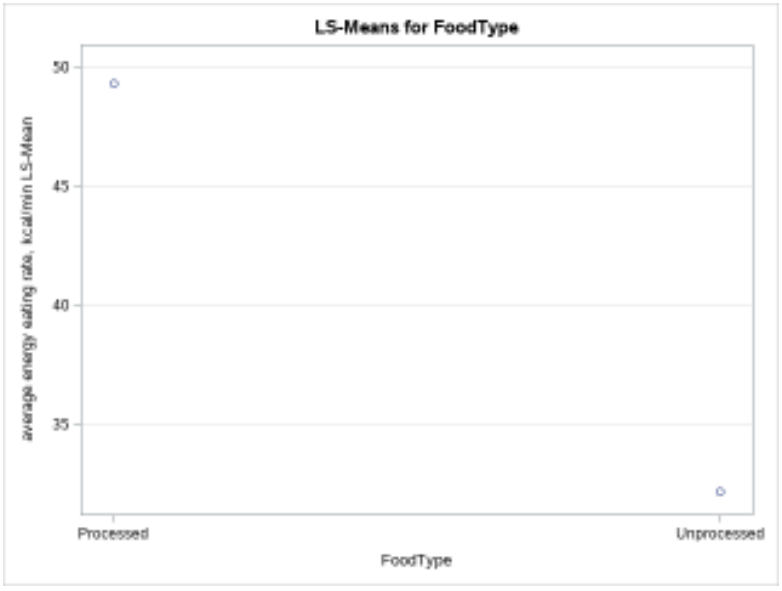
The GLM Procedure
Least Squares Means

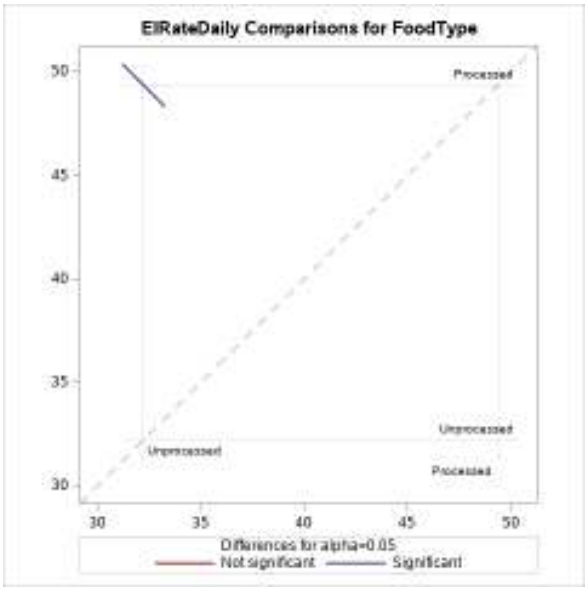
FoodType	MassRateDaily LSMEAN	Standard Error	H0:LSMEAN=0 Pr > |t|	H0:LSMean1=LSMean2 Pr > |t|
Processed	37.6340927	0.6426217	<.0001	<.0001
Unprocessed	30.2681371	0.6389703	<.0001	





FoodType	EIRateDaily LSMEAN	Standard Error	H0:LSMEAN=0 Pr > |t|	H0:LSMean1=LSMean2 Pr > |t|
Processed	49.3555269	0.7416637	<.0001	<.0001
Unprocessed	32.1961077	0.7374496	<.0001	





The CORR Procedure

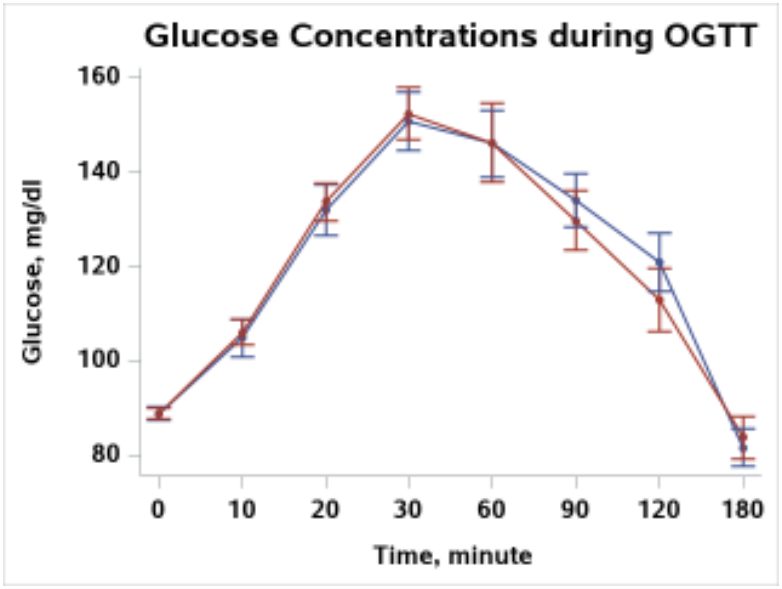
2 Variables:	DeltaElrate DeltaEl

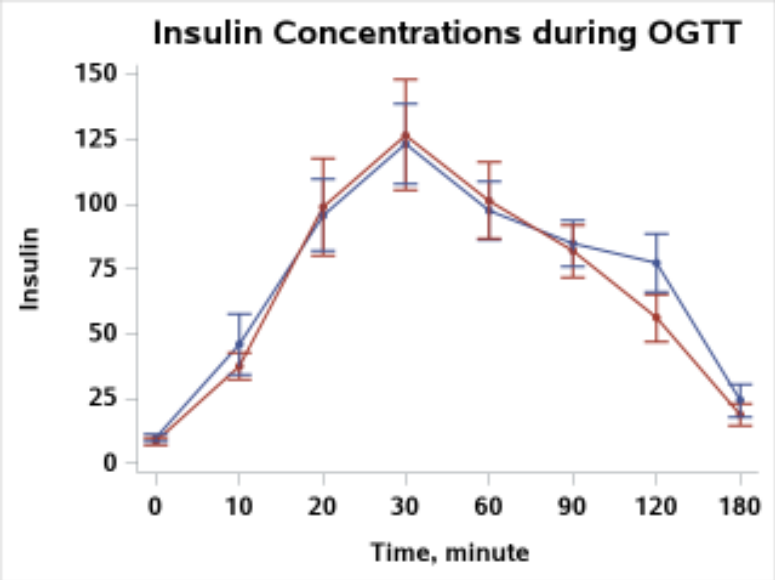
Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
DeltaElrate	20	17.26416	12.64345	345.28325	-3.07463	46.51854
DeltaEl	20	498.73460	439.31186	9975	-386.64143	1229

Pearson Correlation Coefficients, N = 20
Prob > |r| under H0: Rho=0

	DeltaElrate	DeltaEl
DeltaElrate	1.00000	0.44980 0.0466
DeltaEl	0.44980 0.0466	1.00000





Insulin Concentrations during OGTT

Obs	diet	_TYPE_	_FREQ_	GluMean_Mean	GluCV_Mean	GluMean_StdErr	GluCV_StdErr	GluMean_LCLM	GluCV_LCLM	GluMean_UCLM	GluCV_UCLM
1		0	40	95.5708	19.2372	1.37945	0.47626	92.7806	18.2739	98.361	20.2006
2	PROC	1	20	96.5124	19.1336	2.08465	0.63544	92.1492	17.8036	100.876	20.4635
3	UNPROC	1	20	94.6293	19.3409	1.83652	0.72543	90.7854	17.8226	98.473	20.8593