

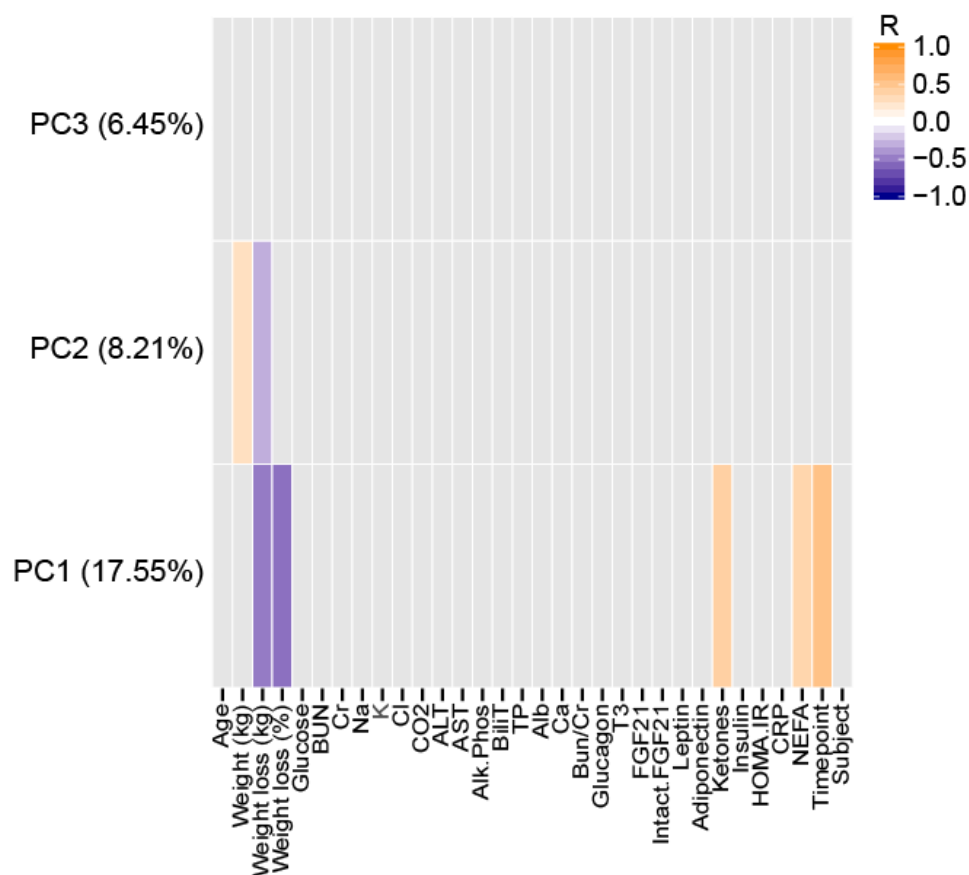


Figure S1. Correlations between lead principle components and clinical covariates. Heat map indicating the degree of correlation (Kendall) between the three lead principle components and clinical covariates. Color denotes the R value ranging from positive (orange) to negative (purple) as shown in the scale key (top right). Covariates related to the duration of fasting (Timepoint, Weight, and Weight loss) correlated with principle components. Measures of circulating ketones and non-esterified fatty acids (NEFA) also correlated positively with the lead principle component.

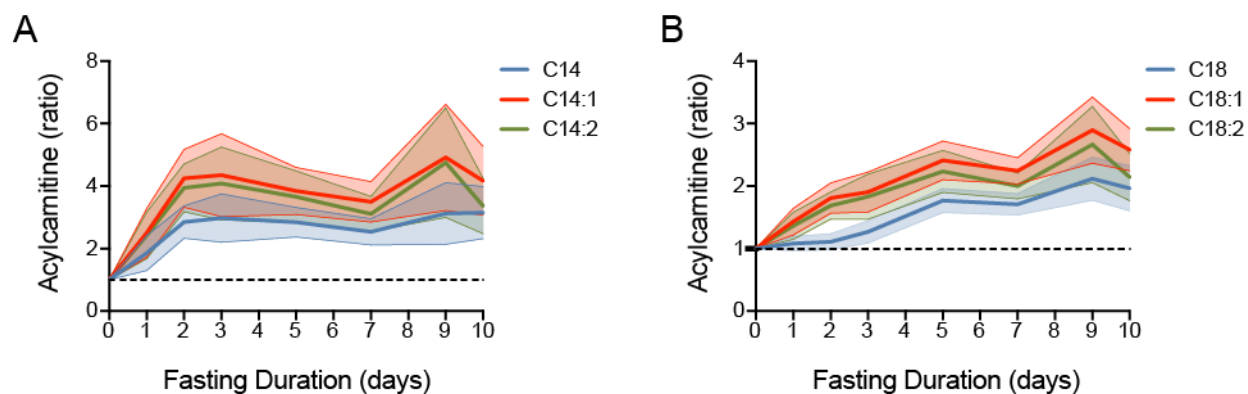


Figure S2. Fasting-mediated changes in acyl carnitines as a function of double bond content.

(A) Acyl carnitines with 14 carbons (C14). Number after colon represents the number of double bonds.

(B) Acyl carnitines with 18 carbons (C18).

For (A) and (B) data expressed relative to baseline (day 0, dotted line). The plots represent the mean with the shading of the same color denoting the SEM.

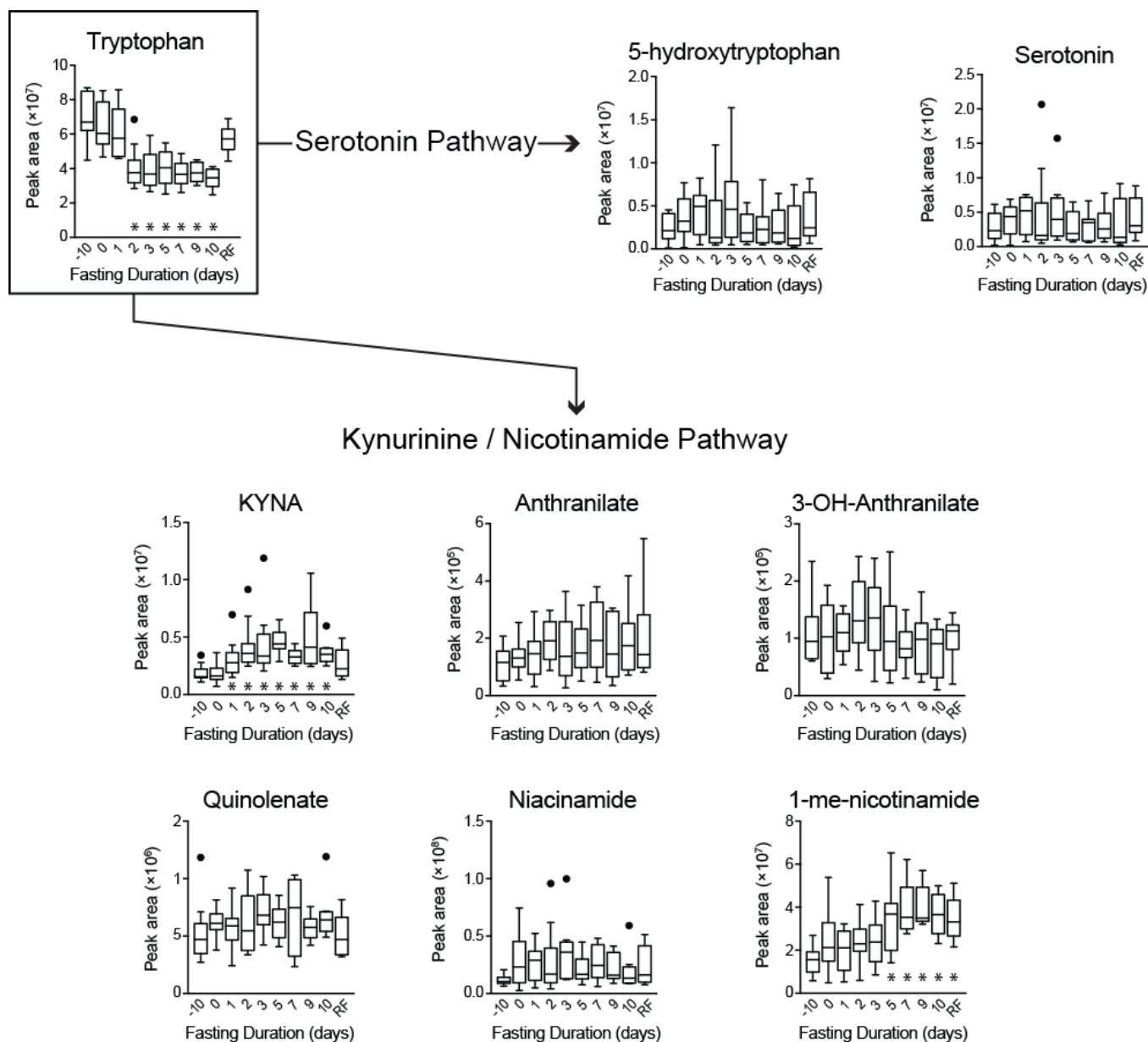


Figure S3. Fasting-mediated changes in tryptophan metabolites. Tryptophan is shown in the top left. Serotonin pathway members are shown at the top right. Metabolites involved in the Kynurinine and Nicotinamide pathways are shown at the bottom of the figure. Individual metabolites are displayed as Tukey plots, arranged according to increasing duration of fasting on the x-axis; RF=refeeding day. *adjusted $p < 0.05$ relative to fasting day 0.

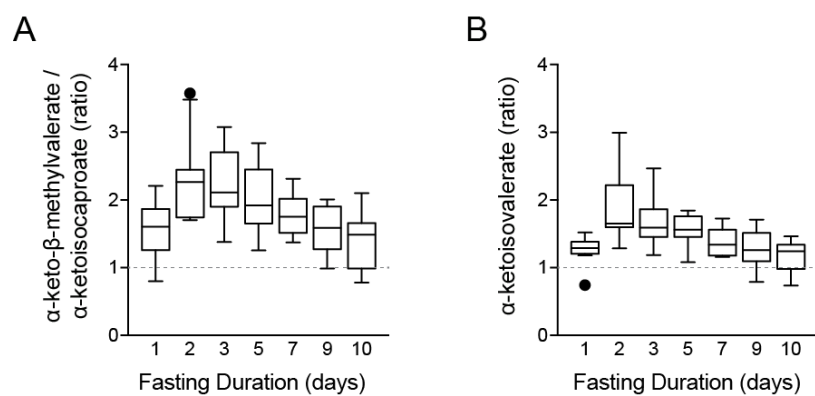


Figure S4. Fasting-mediated changes in branched chain ketoacids that are catabolic products of valine, upstream of β -aminoisobutyric acid (BAIBA).

(A) The peaks for α -keto- β -methylvalerate and α -ketoisocaproate are not separated by the method and thus the cumulative integration of the two are shown. The ratios relative to fasting day 0 (dotted line) are expressed as Tukey box plots.

(B) α -ketoisovalerate measurements expressed as ratios relative to fasting day 0 (dotted line) are expressed as Tukey box plots.

Table S1: Baseline characteristics of study subjects.

	N=12 (mean + SD)	Range
Age (years)	30.7 $\pm$ 8.1	21.8 - 48.3
Male/Female	4/8	N/A
BMI (kg/m²)	26.8 $\pm$ 2.3	22.7 - 29.3
Weight (kg)	77.3 $\pm$ 11.0	62-98
Baseline serum glucose level (mg/dL)	84.3 $\pm$ 6.1	73-97
Baseline Triglycerides (mg/dL)	84.2 $\pm$ 51.9	33-201
Baseline LDL (mg/dL)*	105.7 $\pm$ 33.1	53-151
Baseline HDL (mg/dL)	61.3 $\pm$ 18.5	36-97
Baseline resting energy expenditure (kcal/day)	1346 $\pm$ 184	968-1714

**Calculated*

Table S2 : Change in triacylglycerol (TAG) and cholesterol ester (CE) metabolites between refed day and baseline (represented as log fold change). Number after carbon (C) represents number of carbons and number after colon represents number of double bonds.

Triacylglycerol (TAG) Metabolites	Log fold change	Adjusted p-value
C44:0 TAG	-3.26	0.001
C44:1 TAG	-3.29	0.001
C44:2 TAG	-2.81	0.02
C45:1 TAG	-2.91	0.03
C46:0 TAG	-2.52	0.001
C46:1 TAG	-2.34	5.76E-06
C46:2 TAG	-1.95	0.0001
C46:3 TAG	-1.42	0.01
C46:4 TAG	-----	NS
C47:1 TAG	-1.97	0.01
C47:2 TAG	-2.57	2.61E-05
C48:0 TAG	-----	NS
C48:1 TAG	-2.04	7.48E-08
C48:2 TAG	-1.72	1.22E-08
C48:3 TAG	-1.55	1.14E-05
C48:4 TAG	-1.20	0.01
C48:5 TAG	-----	NS
C49:2 TAG	-1.74	3.22E-09
C49:3 TAG	-1.61	6.14E-08
C50:0 TAG	-----	NS
C50:1 TAG	-0.50	0.04
C50:2 TAG	-----	NS
C50:3 TAG	-0.96	8.18E-07
C50:4 TAG	-1.14	1.70E-06
C50:5 TAG	-0.76	0.03
C50:6 TAG	-----	NS
C51:0 TAG	-----	NS
C51:1 TAG	-0.70	0.01
C51:2 TAG	-0.91	2.69E-06
C51:3 TAG	-1.22	5.24E-09
C52:0 TAG	-----	NS
C52:1 TAG	-----	NS
C52:2 TAG	-----	NS
C52:3 TAG	-----	NS
C52:4 TAG	-0.55	1.83E-05

C52:5 TAG	-0.67	3.00E-05
C52:6 TAG	-0.77	0.0004
C52:7 TAG	-----	NS
C53:2 TAG	-----	NS
C53:3 TAG	-0.76	8.80E-06
C54:1 TAG	-----	NS
C54:2 TAG	-----	NS
C54:3 TAG	-----	NS
C54:4 TAG	-----	NS
C54:5 TAG	-----	NS
C54:6 TAG	-----	NS
C54:7 TAG	-----	NS
C54:8 TAG	-----	NS
C54:9 TAG	0.96	0.04
C54:10 TAG	2.74	1.74E-08
C55:2 TAG	-----	NS
C55:3 TAG	0.68	0.00097468
C56:1 TAG	1.32	0.00422982
C56:2 TAG	-----	NS
C56:3 TAG	-----	NS
C56:4 TAG	-----	NS
C56:5 TAG	0.37	0.01
C56:6 TAG	0.84	2.80E-11
C56:7 TAG	0.65	1.59E-06
C56:8 TAG	1.09	2.49E-12
C56:9 TAG	0.63	0.001
C56:10 TAG	-----	NS
C58:6 TAG	0.43	0.02
C58:7 TAG	0.90	0.001
C58:8 TAG	2.21	1.56E-10
C58:9 TAG	1.69	4.46E-13
C58:10 TAG	2.07	5.63E-17
C58:11 TAG	1.59	2.95E-07
C60:12 TAG	3.20	2.02E-14
Cholesterol Ester Metabolites		
C14:0 CE	-2.44	1.66E-24
C16:0 CE	0.27	6.85E-07
C16:1 CE	-0.57	5.01E-07

C18:0 CE	-----	NS
C18:1 CE	0.17	0.01
C18:2 CE	-----	NS
C18:3 CE	-1.32	1.50E-20
C20:3 CE	-0.32	0.04
C20:4 CE	0.67	2.78E-15
C20:5 CE	-----	NS
C22:4 CE	0.68	0.004
C22:5 CE	1.00	1.95E-10
C22:6 CE	1.46	3.56E-17

Table S3: Metabolites correlated with non-esterified fatty acids (NEFA) and ketone levels during the fast. Number after carbon (C) represents number of carbons and number after colon represents number of double bonds.

Metabolite	Non-esterified fatty acids (NEFA)		Ketones (β -hydroxybutyrate)	
	Log fold change	Adjusted p-value	Log fold change	Adjusted p-value
1-methyladenosine	0.33866022	NS (p=0.05)	0.30450777	0.00929767
1-methylnicotinamide	-----	NS	0.27657127	0.04777216
2-Aminoisobutyric acid	-----	NS	0.19002861	0.01119645
3-Dehydroxycarnitine	-----	NS	0.14375704	0.02343987
6,8-Dihydroxypurine	-----	NS	0.32809176	0.02296014
11-HEPE	0.72512778	0.01336104	0.4539477	0.03728815
12-HETE	1.02250286	2.97E-08	-----	NS
16-HDoHE	0.53475757	0.00074047	-----	NS
5-aminolevulinic acid	0.32139932	0.02286621	-----	NS
5-HETE	0.64806207	3.02E-09	-----	NS
8-HEPE/12-HEPE	1.90862609	1.78E-05	0.89806476	0.01024917
8.11.14-Eicosatrienoic acid	0.77831835	3.73E-12	-----	NS
9-HETE	0.75242912	3.02E-09	-----	NS
ADMA	-----	NS	0.15914291	0.02471806
SDMA	-----	NS	0.15900401	0.02471806
Adipate	0.75424188	0.04812162	-----	NS
Adrenic acid	0.68443548	1.01E-10	-----	NS
Alloisoleucine	0.26892065	0.01734861	0.249681	0.00069086
Alpha-hydroxybutyrate	1.20175803	0.04952739	-----	NS
Aminocaproic acid	0.27842319	0.01753445	0.28238885	0.00020555
Aminoisobutyric acid	0.31478626	0.04819501	-----	NS
Arachidonic acid	0.72321954	3.73E-12	-----	NS
Arginine	-----	NS	0.19094719	0.04643477
Ascorbate	-0.6855961	0.04519246	-----	NS
C2 carnitine	0.32388252	0.01336104	0.23842332	0.01130797
C4-OH carnitine	0.66330864	0.02122275	0.62954553	0.00252063
C5-DC carnitine	0.31120093	0.03205396	0.22338385	0.02242902
C5 carnitine		NS (p=0.05)	0.30019041	0.01124211
C5:1 carnitine	-----	NS	0.29628765	0.01361921
C6 carnitine	0.70652291	0.000994	0.35222634	0.04686161
C10:2 carnitine	0.57434432	0.01027656	-----	NS

C12 carnitine	0.58803698	0.0232027	0.44606984	0.01494216
C12:1 carnitine	0.67253754	0.00189008	0.37408233	0.02935674
C14 carnitine	0.50813446	0.02122275	0.47187972	0.00094728
C14:1 carnitine	0.69415932	0.00334614	0.51699283	0.00308855
C14:2 carnitine	0.81997671	0.00018088	0.4885627	0.00686704
C16 carnitine	-----	NS	0.25989839	0.00938938
C16-OH carnitine	-----	NS	0.68090222	0.00305166
C18:1 carnitine	0.37762406	0.01027656	0.26849053	0.01177968
C18:1-OH carnitine	0.66311899	0.03245329	0.69907345	0.00094728
C18:2 carnitine	0.5698236	8.54E-05	0.30105214	0.01218611
C34:4 PC plasmalogen	0.30143344	0.03872777	-----	NS
C18:0 CE	-----	NS	-0.1121739	0.04909569
C18:1 CE	-----	NS	-0.0692839	0.03728815
C18:3 CE	-----	NS	-0.1619394	0.00252063
C38:2 PE	-----	NS	-0.109513	0.03728815
C36:2 PC	-----	NS	-0.0997957	0.04643477
C38:2 PC	-----	NS	-0.17542	0.02164556
C38:3 PC	-----	NS	-0.1641954	0.04777216
C14:0 LPC	-----	NS	-0.2703807	0.01419011
C16:0 LPC	-----	NS	-0.2149304	0.00252063
C16:1 LPC	-----	NS	-0.2146011	0.02654031
C18:0 LPC	-----	NS	-0.2663782	0.00069086
C18:1 LPC	-----	NS	-0.2106608	0.00500697
C18:2 LPC	-----	NS	-0.2197817	0.00614716
C20:3 LPC	-0.2015829	NS (p=0.05)	-0.2025359	0.00252063
C20:4 LPC	-----	NS	-0.1653591	0.02882216
C20:5 LPC	-----	NS	-0.1884936	0.03932431
C16:0 LPE	-----	NS	-0.2099796	0.04777216
C22:0 LPE	-----	NS	-0.2750651	0.02611187
C34:0 DAG	-0.2575884	0.01027656	-----	NS
C44:0 TAG	-1.5052808	0.04819501	-----	NS
C44:1 TAG	-1.4100827	0.04512014	-----	NS
C46:1 TAG	-0.8019089	0.04512014	-----	NS

C48:1 TAG	-0.6224225	0.02968533	-----	NS
C48:2 TAG	-0.4797718	0.03164543	-----	NS
C49:2 TAG	-0.4846454	0.0454585	-----	NS
C50:3 TAG	-0.3029687	0.03930037	-----	NS
C51:3 TAG	-0.3412828	0.02831304	-----	NS
C58:7 TAG	-----	NS	0.29327887	0.01483136
C58:8 TAG	-----	NS	0.33535093	0.0160093
C58:9 TAG	-----	NS	0.22840169	0.02296014
C60:12 TAG	-----	NS	0.33858975	0.04777216
Capric acid	0.7335661	6.64E-08	-----	NS
Caprylic acid_2	0.31886433	0.02122275	-----	NS
Cholate	-0.1242149	0.0353716	-----	NS
Chenodeoxycholate/ Deoxycholate	-1.7284416	0.02293643	-----	NS
Citrulline	0.25312253	0.0232027	0.15366529	0.04455065
Cortexolone	1.20118116	0.00148526	-----	NS
Cortisol	0.48295895	0.03164543	-----	NS
Creatinine	-----	NS	0.07742883	0.02104672
Dimethylglycine	-----	NS	0.19165326	0.01088894
Docosahexaenoic acid	0.60502091	1.61E-10	-----	NS
Docosapentaenoic acid	0.6648354	7.46E-12	-----	NS
Dodecanedioic acid	1.12619752	1.49E-06	0.57504931	0.00614716
Dodecanoic acid	1.27760595	1.86E-09	-----	NS
Eicosadienoic acid	0.48304353	1.08E-07	-----	NS
Eicosapentaenoic acid	1.02053837	2.15E-13	-----	NS
Erucic acid	0.28613025	0.04819501	-----	NS
Fructose/Glucose/Galactose	-0.1698311	0.0035058		
Gamma-Linolenic acid	1.07620246	1.73E-12	-----	NS
Glycodeoxycholate/ Glycochenodeoxycholate	-1.5864911	0.04767496	-----	NS
Hexadecanedioic acid	0.73064875	0.00058565	0.43841842	0.01130797
Homocysteine	-----	NS	0.60333736	0.04909569
Hydroxyectoine	0.23136576	0.02772418	0.14540484	0.04062066

Imidazoleacetic acid	-----	NS	0.58287388	0.04777216
Isoleucine	0.27933362	0.01503118	0.2756997	0.00020555
Kynurenic acid	0.54762844	0.00111075	0.31507367	0.01544097
L-Alloisoleucine	0.27842319	0.01753445	0.28238885	0.00020555
Leucine	0.27003449	0.01667354	0.24981786	0.00069086
Linoleic acid	0.76975152	1.61E-12	-----	NS
LTB3	0.72829382	1.98E-05	-----	NS
LTB4	0.9022707	8.76E-06	-----	NS
Methyl-hydroxyisobutyric acid	-----	NS	0.12060166	0.03171334
Methionine	-----	NS	0.1477694	0.03728815
Methylmalonate	-0.265945	0.02727469		
Myristic acid	1.1053522	3.73E-12	-----	NS
Myristoleic acid_1	1.01961168	2.49E-09	-----	NS
N-Acetylputrescine	0.23330324	0.03577744	0.19908219	0.00614716
N-carbamoyl-beta-alanine	-----	NS	0.16349843	0.03521979
N6-Acetyl-L-lysine	-----	NS	0.15694805	0.01697369
Oleic acid	0.43711344	3.02E-09	-----	NS
Palmitic acid	0.43877693	2.49E-09	-----	NS
Palmitoleic acid	1.12068884	1.16E-10	-----	NS
Phenylalanine-d8	0.11676504	0.04455704	-----	NS
Proline	-----	NS	0.1607172	0.02844641
Pseudouridine	-----	NS	0.1608296	0.03049254
Pyrrolidonecarboxylic acid	-0.2782451	0.04512014	-----	NS
Pyruvate	-0.5325354	0.01019462	-----	NS
Quinic acid	-----	NS	-2.1005677	0.00614716
Ribothymidine	-----	NS	0.22004347	0.02210108
Stearic acid	0.16533963	0.00728105	-----	NS
Succinate	-0.2644247	0.02286621	-----	NS
Tetradecanedioic acid	1.15875119	9.07E-06	0.57096779	0.0160093
Tryptophan	-0.3441798	6.68E-06	-----	NS
Tyrosine	-----	NS	0.15647293	0.03477138
Urate	0.19758067	0.03930037	-----	NS
Uric acid	-----	NS	0.27371861	0.00127579

Valine	0.19548897	0.04163144	0.2047388	0.00069086
Xanthine	-----	NS	0.53025894	0.01134652
Xylose	-0.2029037	0.00728105	-----	NS

Table S4: Comparative summary of amino acid dynamics relative to classic study. Amino acids measured in this study and compared to classic data from 1969 study by Felig *et al.* (10) Common time-points shown. Row shaded pink denotes the only measurement with directionally discordant results. Rows shaded blue denote amino acid for which one study detected no significant change, while the other study detected a change at one or more timepoints. Glutamine, glutamate, and asparagine were not measured in the Felig study (gray). The other amino acids (white rows) demonstrated directional concordance for one or more time-point. In the case of histidine, the Felig study demonstrated a decline at a later time-point, not captured in our study.

	Felig <i>et al</i> (10)			current study		
	D3	D5	D10	D3	D5	D10
Alanine	↓	↓	↓	↓	↔	↔
Arginine	↔	↔	↔	↔	↔	↔
Asparagine				↔	↑	↔
Glutamate				↓	↓	↓
Glutamine				↔	↔	↓
Glycine	↔	↔	↑	↔	↑	↑
Histidine	↔	↔	↔	↔	↔	↓
Isoleucine	↑	↑	↑	↑	↑	↑
Leucine	↑	↑	↑	↑	↑	↑
Lysine	↑	↑	↑	↑	↑	↑
Methionine	↔	↑	↑	↑	↑	↑
Phenylalanine	↔	↔	↔	↑	↑	↔
Proline	↓	↓	↔	↑	↑	↔
Serine	↔	↔	↑	↔	↔	↔
Threonine	↔	↔	↑	↔	↔	↔
Tryptophan	↓	↓	↓	↓	↓	↓
Tyrosine	↔	↔	↔	↑	↑	↔

Table S5: Metabolites in the seven discrete clusters obtained through an unbiased analysis (depicted in Figure 6).

Cluster	Metabolites
1 (n=77 metabolites)	1,2,4-Trimethylbenzene; 1-Methylguanosine; α -Aminoisobutyric acid; 2-Methylguanosine; 2-O-Methylguanosine; 6,8-Dihydroxypurine; Acetylcysteine; Alloisoleucine; Aminocaproic acid; β -aminoisobutyric acid (BAIBA); Bilirubin; C12 carnitine; C12:1 carnitine; C14 carnitine; C14:1 carnitine; C14:2 carnitine; C16-OH carnitine; C4 carnitine; C5 carnitine; C5:1 carnitine; C6 carnitine; Cortisone; Dimethylglycine; γ -aminobutyric acid (GABA); Hypoxanthine; Isoleucine; Kynurenic acid; L-Alloisoleucine; Leucine; N-carbamoyl-beta-alanine; Spermidine; Valine; Xanthine; Xanthosine; Chenodeoxycholate/deoxycholate; 11-HEPE; 12-HETE; 16-HDoHE; 5-HETE; 8.11.14-Eicosatrienoic acid; 8-HEPE/12-HEPE; 9-HETE; Arachidonic acid; Capric acid; Docosaheptaenoic acid; Docosapentaenoic acid; Dodecanedioic acid; Dodecanoic acid; Eicosadienoic acid; Eicosapentaenoic acid; Gamma-Linolenic acid; Hexadecanedioic acid; Linoleic acid; LTB3; LTB4; Myristic acid; Myristoleic acid_1; Oleic acid; Palmitic acid; Palmitoleic acid; Tetradecanedioic acid; C38:4 PC; C40:6 PC; C38:6 PE; C40:6 PE; C36:2 PS plasmalogen; C22:0 SM; C20:5 CE; C34:1 DAG; C36:2 DAG; C36:3 DAG; C36:4 DAG; C48:5 TAG; C50:6 TAG; C52:7 TAG; C54:9 TAG; Na +C36:2 PS plasmalogen
2 (n=59 metabolites)	1-Methylnicotinamide; 3-Dehydroxycarnitine; Betaine; C16 carnitine; C18 carnitine; C18:1 carnitine; C18:1-OH carnitine; C18:2 carnitine; C2 carnitine; C3-DC carnitine; C4-OH carnitine; Cortexolone; Creatine; Lysine; Methionine; Oxypurinol; Phenylalanine; Proline; Pterin; Tyrosine; Uric acid; Adrenic acid; Caprylic acid_2; Erucic acid; Phenyllactic acid_1; Stearic acid; C36:4 PC-B; C38:6 PC; C40:9 PC; C34:4 PC plasmalogen; C36:1 PS plasmalogen; C36:3 PS plasmalogen; C16:0 Ceramide (d18:1); C16:0 SM; C16:1 SM; C18:0 SM; C18:1 SM; C18:2 SM; C24:0 SM; C24:1 SM; C22:6 CE; C38:5 DAG; C54:10 TAG; C55:2 TAG; C55:3 TAG; C56:5 TAG; C56:6 TAG; C56:7 TAG; C56:8 TAG; C56:9 TAG; C56:10 TAG; C58:6 TAG; C58:7 TAG; C58:8 TAG; C58:9 TAG; C58:10 TAG; C58:11 TAG; C60:12 TAG; Na +C36:1 PS plasmalogen
3 (n=12 metabolites)	Acetylglycine; C8 carnitine; Cortisol; Pipecolic acid; 6-Phosphogluconate; Tauro-Alpha-muricholate/Tauro-Beta-muricholate; Taurochenodeoxycholate; Taurohyodeoxycholate/Tauroursodeoxycholate; C20:4 LPC; C20:4 CE; C22:4 CE; C22:5 CE
4 (n=58 metabolites)	Cotinine; N-Acetylorntithine; NMMA; Proline betaine; C30:0 PC; C30:1 PC; C32:1 PC; C32:2 PC; C34:3 PC; C34:4 PC; C36:0 PC; C36:1 PC; C36:2 PC; C36:3 PC; C38:2 PC; C38:3 PC; C40:10 PC; C34:3 PC plasmalogen; C36:5 PC plasmalogen-A; C32:0 PE; C34:0 PE; C38:2 PE; C34:2 PE plasmalogen; C34:3 PE plasmalogen; C36:2 PE plasmalogen; C36:3 PE plasmalogen; C36:4 PE plasmalogen; C38:3 PE plasmalogen; C40:6 PS; C22:0 Ceramide (d18:1); C14:0 CE; C16:1 CE; C18:3 CE; C32:1 DAG; C34:3 DAG; C44:0 TAG; C44:1 TAG; C44:2 TAG; C45:1 TAG; C46:0 TAG; C46:1 TAG; C46:2 TAG; C47:1 TAG; C47:2 TAG; C48:1 TAG; C48:2 TAG; C48:3 TAG; C49:2 TAG; C49:3 TAG; C50:3 TAG; C50:4 TAG; C51:1 TAG; C51:2 TAG; C51:3 TAG; C52:0 TAG; C52:4 TAG; C52:5 TAG; C53:3 TAG
5 (n=9 metabolites)	C38:5 PE; C34:0 PS; C24:0 Ceramide (d18:1); C36:1 DAG; C46:3 TAG; C48:4 TAG; C50:1 TAG; C50:5 TAG; C52:6 TAG
6 (n=27 metabolites)	3'-O-Methyladenosine; Allantoin; C20 carnitine; C20:4 carnitine; C9 carnitine; cis 4-Hydroxy-proline; Cytosine; Glucose; Guanidoacetic acid; Hydroxyproline; N-acetyltryptophan; C16:0 LPC; C16:1 LPC; C18:0 LPC; C18:1 LPC; C18:2 LPC; C20:3 LPC; C22:6 LPC; C16:0 LPE; C18:0 LPE; C18:1 LPE; C18:2 LPE; C20:4 LPE; C34:2 PE; C42:0 TAG; C49:1 TAG; C51:0 TAG
7 (n=33 metabolites)	1-Methylhistidine; 3-Methylhistidine; 4-Guanidinobutanoic acid; citrulline; D2-Aminooctanoic acid; DL-2-Aminooctanoic acid; Ectoine; Glutamate; Guanine; Homocysteine; Hydroxyectoine; N-a-Acetyarginine; Thiamine; Trimethylamine-N-oxide; Tryptophan; Chenodeoxycholate; Cholate; Deoxycholate; Glycochenodeoxycholate; Glycodeoxycholate; Glycolithocholate; Lithocholate; C14:0 LPC; C20:5 LPC; C22:0 LPE; C34:5 PC plasmalogen; C36:1 PE; C36:2 PE; C36:3 PE; C36:5 PE plasmalogen; C38:5 PE plasmalogen; C38:6 PE plasmalogen; C56:1 TAG

Table S6: Correlations between the seven discrete clusters obtained through an unbiased analysis (depicted in Figure 6) and 13 hormonal variables: non-esterified fatty acids (NEFA), β -hydroxybutyrate, fibroblast growth factor (FGF)21, glucagon, insulin, homeostatic model assessment for insulin resistance (HOMA-IR), adiponectin, T3, leptin, cortisol, cortisone, cortexolone, and 21-deoxycortisol. Spearman's rho and adjusted p-values (false discovery rate) are reported.

Hormonal variables	Cluster 1		Cluster 2		Cluster 3		Cluster 4		Cluster 5		Cluster 6		Cluster 7	
	rho	p	rho	p	rho	p	rho	p	rho	p	rho	p	rho	p
NEFA	0.70	3.21E-11	0.73	2.40E-12	0.39	0.003	-0.67	1.00E-09	-0.30	0.03	-0.53	7.25E-06	-0.64	5.69E-09
β -hydroxybutyrate	0.61	7.38E-08	0.81	5.66E-17	-----	NS	-0.72	6.30E-12	-0.27	0.04	-0.54	4.92E-06	-0.79	1.04E-15
FGF21	-----	NS	0.37	0.005	-----	NS	-0.32	0.01	-----	NS	-----	NS	-----	NS
Glucagon	-----	NS	-----	NS	-----	NS	-----	NS	-----	NS	-----	NS	-0.29	0.03
Insulin	-----	NS	-----	NS	-----	NS	-----	NS	-----	NS	0.32	0.01	0.29	0.03
HOMA-IR	-----	NS	-----	NS	-----	NS	-----	NS	-----	NS	0.40	0.005	0.35	0.02
Adiponectin	-----	NS	-----	NS	-----	NS	-----	NS	-----	NS	-----	NS	-----	NS
T3	-----	NS	-----	NS	-----	NS	-----	NS	-----	NS	0.42	6.78E-04	-----	NS
Leptin	-0.35	0.006	-0.45	1.80E-04	-----	NS	-----	NS	-----	NS	-----	NS	0.45	1.80E-04
Cortisol	0.45	2.21E-05	0.44	3.64E-05	0.46	1.48E-05	-0.31	0.006	-----	NS	-----	NS	-----	NS
Cortisone	0.31	0.007	-----	NS	0.28	0.02	-----	NS	-----	NS	-----	NS	-----	NS
Cortexolone	0.43	5.62E-05	0.52	2.51E-07	0.45	2.21E-05	-0.42	5.99E-05	-0.25	0.03	-0.24	0.04	-0.28	0.02
21-deoxycortisol	-----	NS	0.27	0.02	-----	NS	-0.30	0.009	-0.23	0.048	-----	NS	-----	NS