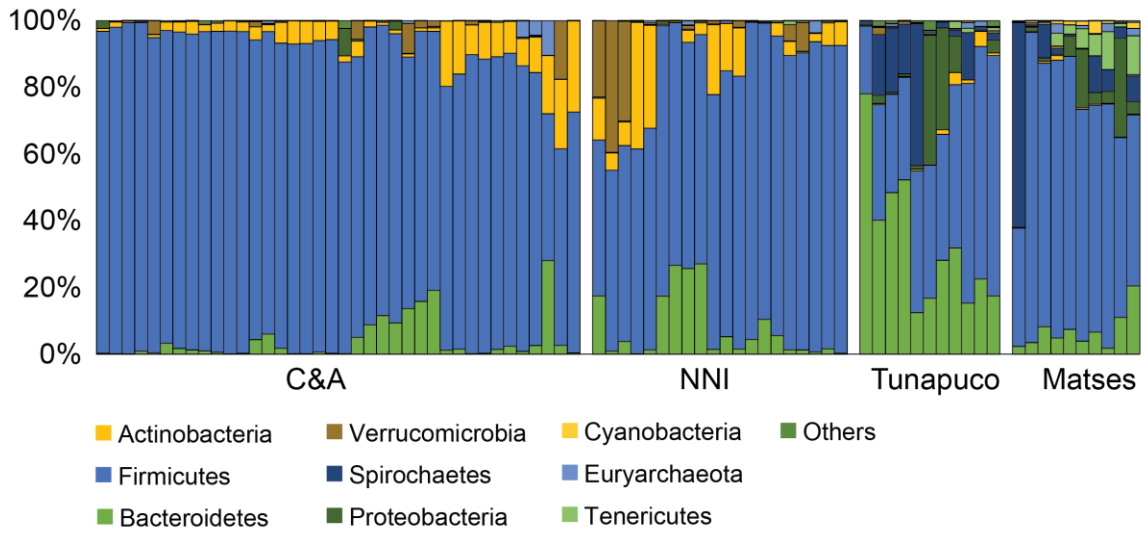


**Figure S1, related to Figure 1. Prevalence of (A) Self-reported T2D and (B) BMI categories (calculated from Height, Weight measurements), among the C&A and NNI participants.**



**Figure S2, related to Figure 2. Phylum level relative abundance plots.** Comparison of gut microbiome taxonomic profiles at the Phylum level, between the C&A participants, and previously published NNI and native South American populations [S1].

**Table S1, related to Figure 1. Sample metadata and 16S rRNA read statistics for the C&A participants.** Metadata and read statistics for the NNI participants is available from [S1].

Sample	Sex	Age (yrs)	BMI	Antibiotics	Cigarettes	T2D	Soda	No: of Seqs
CA01	M	55	31	Y	Y	N	Y	54,539
CA02	F	55	40.8	N	N	Y	Y	43,018
CA03	F	27	35	N	Y	N	Y	41,243
CA04	M	30	33.1	N	N	N	Y	38,605
CA05	F	84	27.3	Y	N	Y	N	36,928
CA06	F	51	44.2	N	Y	N	Y	46,416
CA08	F	33	38	N	N	N	Y	43,928
CA09	F	29	48.3	N	Y	N	Y	42,631
CA12	F	43	32.3	N	N	Y	DietSoda	30,708
CA13	F	20	27.3	Y	Y	N	Y	31,807
CA14	M	21	25.2	N	Y	N	Y	23,262
CA15	F	34	28.2	N	N	Y	DietSoda	22,106
CA16	M	45	39.1	N	N	Y	DietSoda	35,301
CA17	M	39	40.3	N	Y	Y	DietSoda	34,959
CA18	M	69	36.3	Y	Y	N	Y	30,756
CA19	F	68	40.3	N	N	N	Y	43,783
CA20	F	54	26.1	N	N	N	Y	29,947
CA21	F	65	40.7	N	N	Y	Y	45,291
CA22	F	41	26.2	N	N	Y	Y	43,989
CA23	F	65	24.7	N	N	Y	DietSoda	42,413
CA24	M	55	31.8	Y	Y	N	N	34,551
CA25	M	65	30	N	N	Y	Y	39,595
CA26	M	56	42.1	Y	N	Y	Y	34,310
CA27	M	55	44	N	N	Y	Y	48,032
CA28	F	55	36.3	N	Y	Y	Y	38,316
CA29	F	45	24.9	Y	Y	N	Y	34,788
CA30	M	55	37.4	N	N	Y	Y	34,210
CA31	M	62	30	Y	N	N	Y	47,325
CA32	F	44	43.7	Y	Y	Y	Y	30,709

**Table S1. (cont.)**

Sample	Sex	Age (yrs)	BMI	Antibiotics	Cigarettes	T2D	Soda	No: of Seqs
CA33	F	69	35	N	N	Y	DietSoda	27,232
CA34	F	44	33.4	Y	N	N	DietSoda	46,388
CA35	F	49	28	Y	Y	N	Y	41,187
CA36	M	66	29.6	N	N	Y	Y	38,130
CA37	F	50	32.6	N	N	Y	Y	46,855
CA38	F	29	47.4	N	N	N	DietSoda	43,219
CA39	F	29	31.9	Y	Y	N	Y	29,277
CA40	M	55	35.1	Y	N	Y	DietSoda	40,530
CA41	F	55	36.1	N	Y	N	N	35,989

**Table S2, related to Figure 1. Diet summaries generated from a three day food journal obtained from the C&A participants. (See spreadsheet.)**

**Table S3, related to Figure 3. Assembly and annotation statistics for the C&A and NNI shotgun metagenomic datasets. NNI shotgun metagenomic data was originally generated as part of Obregon-Tito, A. J. et al. 2015 [S1]. (See spreadsheet.)**

**Table S4, related to Figure 4. Filtered metabolite table for C&A and NNI individuals. Missing values are depicted as 'NA'. Samples with \* correspond to children, and were excluded from comparative analyses. (See spreadsheet.)**

**Table S5, related to Figure 4. Diet and metabolite correlation analysis within the C&A individuals**

Variable	Pathway	Metabolite Name	<i>P</i>	FDR Adjusted <i>P</i>
Number of Beverages	Phenylalanine and Tyrosine Metabolism	3-hydroxyphenylacetate	0.000498	0.099545
	Dipeptide	histidylproline	0.000533	0.099545
	Lysine Metabolism	2-aminoadipate	0.000578	0.099545
Count Milk Consumption	Secondary Bile Acid Metabolism	lithocholate	0.000122	0.063122
Percent meals with processed Protein	Arginine and Proline Metabolism	N-acetylproline	0.000139	0.07193
If Alcohol consumed	Fatty Acid Metabolism	2-aminooctanoate	3.66E-05	0.011097
	Fatty Acid Metabolism	2-aminoheptanoate	4.29E-05	0.011097
If Caffeinated drinks consumed	Primary Bile Acid Metabolism	glycochenodeoxycholate	2.87E-05	0.007427
	Xenobiotics	metoprolol	2.87E-05	0.007427

**Table S6, related to Figure 4. Metabolite-taxa correlation analysis within the C&A individuals (See spreadsheet.)**

### Supplemental References

**S1.** Obregon-Tito, A.J., Tito, R.Y., Metcalf, J., Sankaranarayanan, K., Clemente, J.C., Ursell, L.K., Zech Xu, Z., Van Treuren, W., Knight, R., Gaffney, P.M., et al. (2015). Subsistence strategies in traditional societies distinguish gut microbiomes. *Nat Commun* 6.