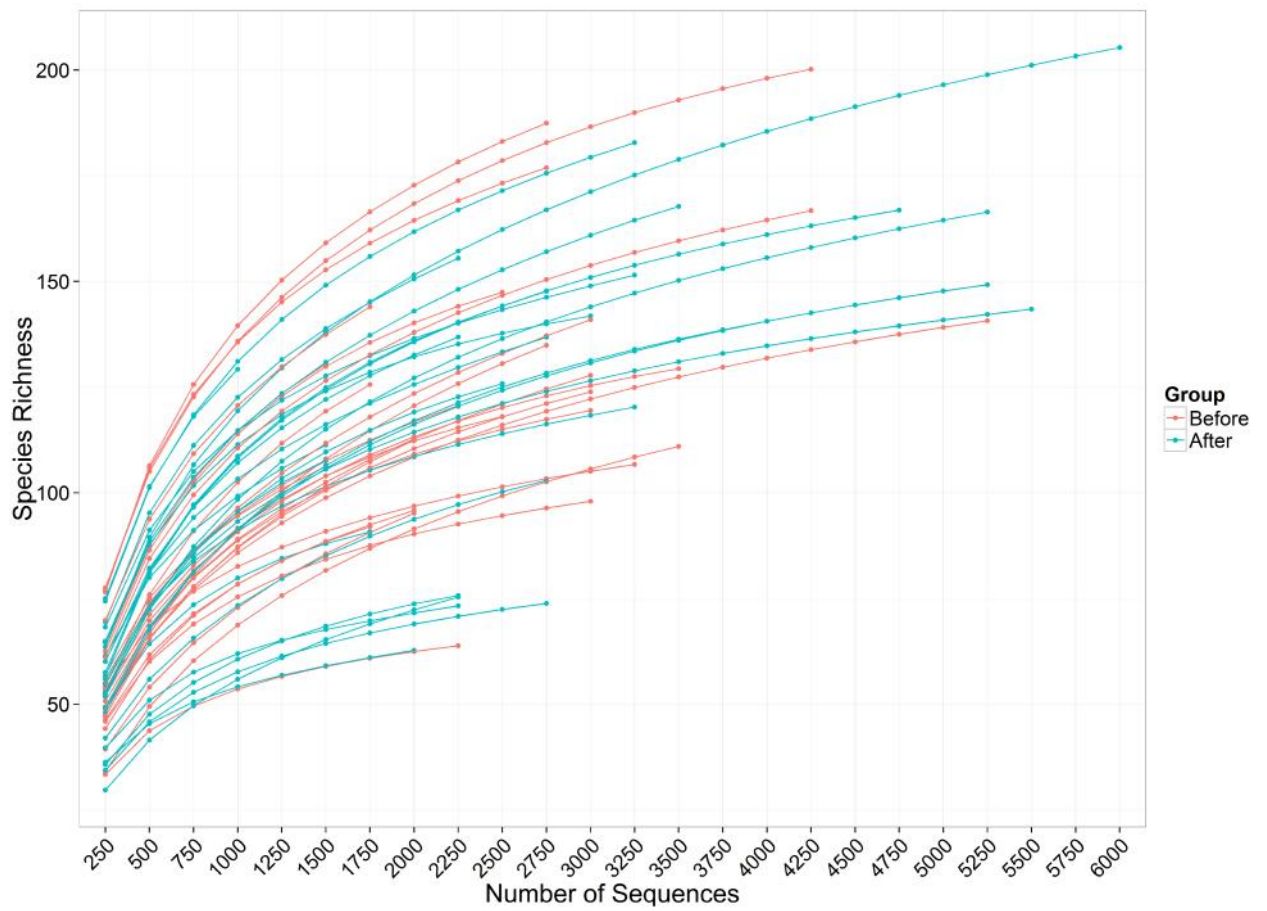


Table S1. Gastrointestinal symptoms in healthy subjects before (HS) and after (HSB) two months of diet intervention with 100 g/day of durum wheat and whole-grain barley pasta containing 3% (wt/wt) of β -glucans.

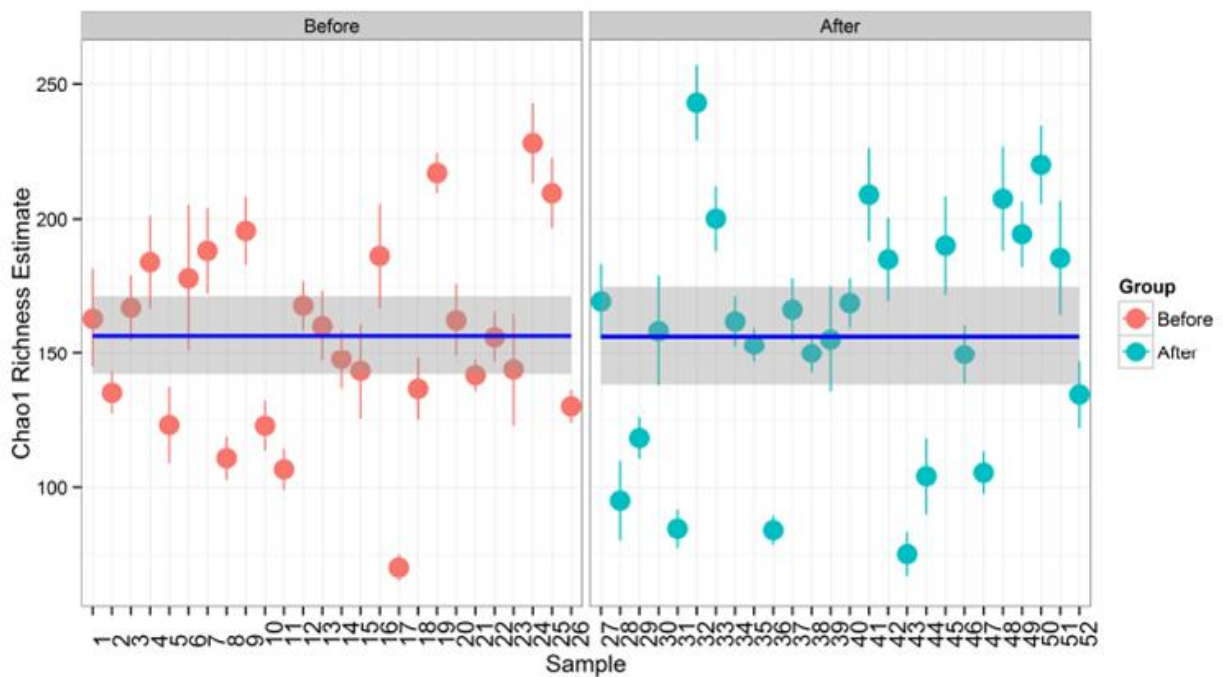
Symptom	HS	HSB	p Value
Bloating	0.68 ± 0.18	0.72 ± 0.24	0.91
Meteorism	0.56 ± 0.16	0.6 ± 0.15	0.90
Constipation	0.84 ± 0.14	0.64 ± 0.25	0.54
Satiety	1 ± 0.12	1 ± 0.35	1.00
Diarrhea	0.28 ± 0.084	0.36 ± 0.19	0.76
Reflux	0.32 ± 0.075	0.24 ± 0.083	0.72
Flatulence	0.52 ± 0.18	0.48 ± 0.15	0.89

Data were subjected to one-way analysis of variance (ANOVA), and pair comparison of treatment means was achieved by Tukey's procedure and Student's t-test was performed.

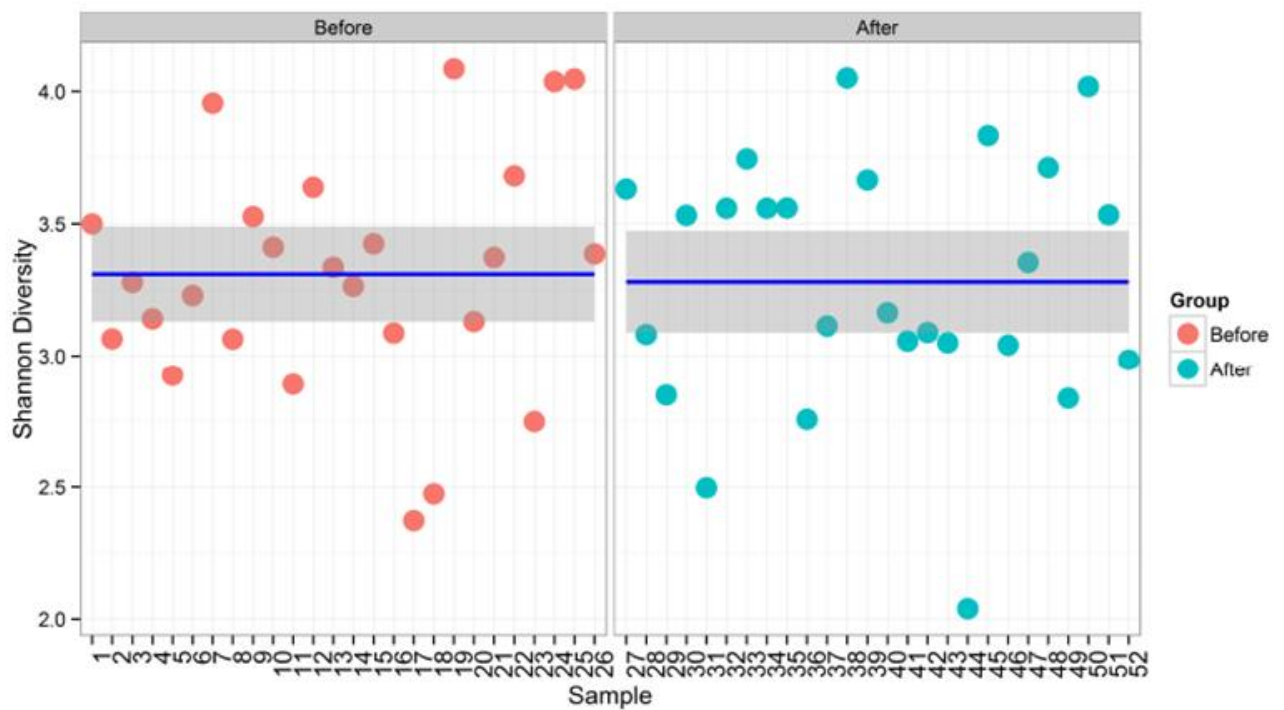
Supplemental Figure 1. Rarefaction curve based on 16S rRNA gene sequences of metabolically active bacteria found on fecal samples of healthy subjects before (before) and after two months of diet intervention (after) with durum wheat flour and whole-grain barley Pasta.



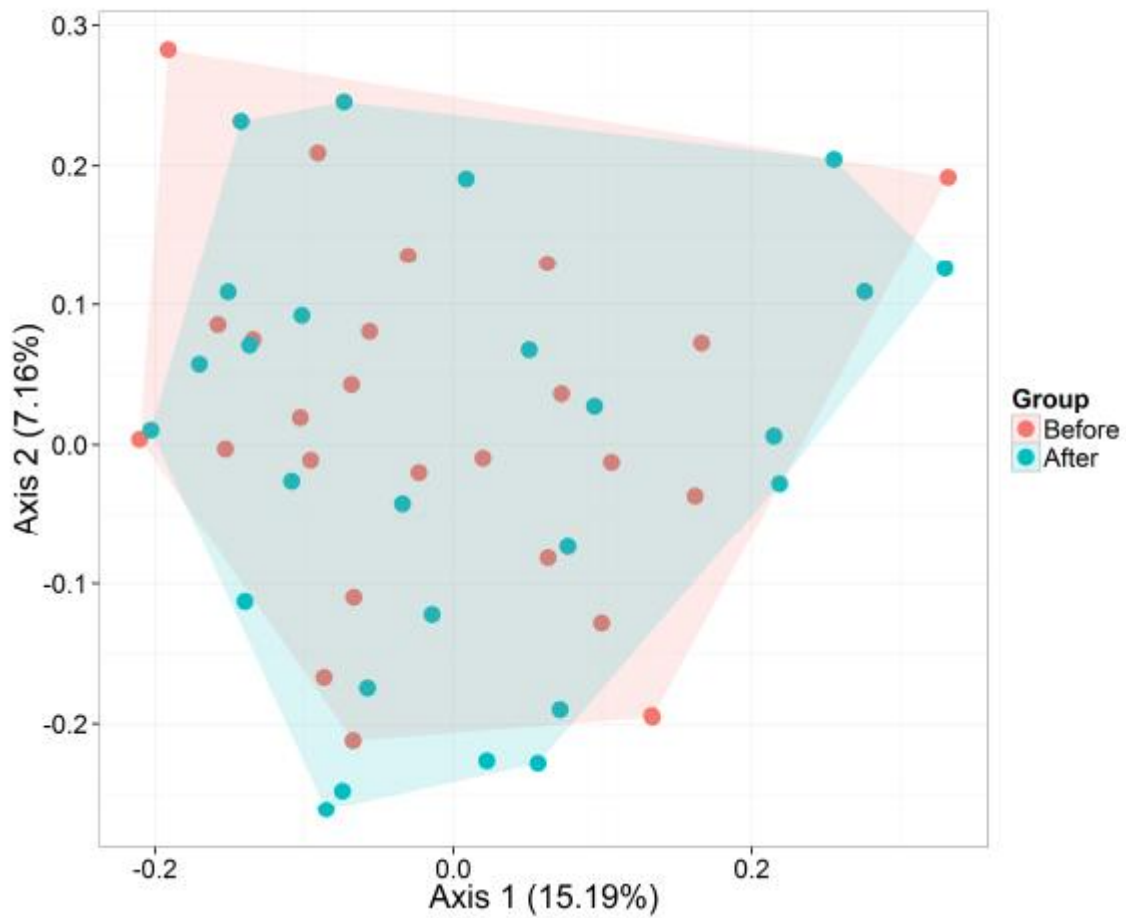
Supplemental Figure 2A. Chao1 richness within the 16S rRNA gene sequences of metabolically active bacteria found on fecal samples of healthy subjects before (before, samples numerated 1-26) and after two months of diet intervention (after, 27-52) with durum wheat flour and whole-grain barley Pasta. The mean value (and confidence interval) in each group also are illustrated.



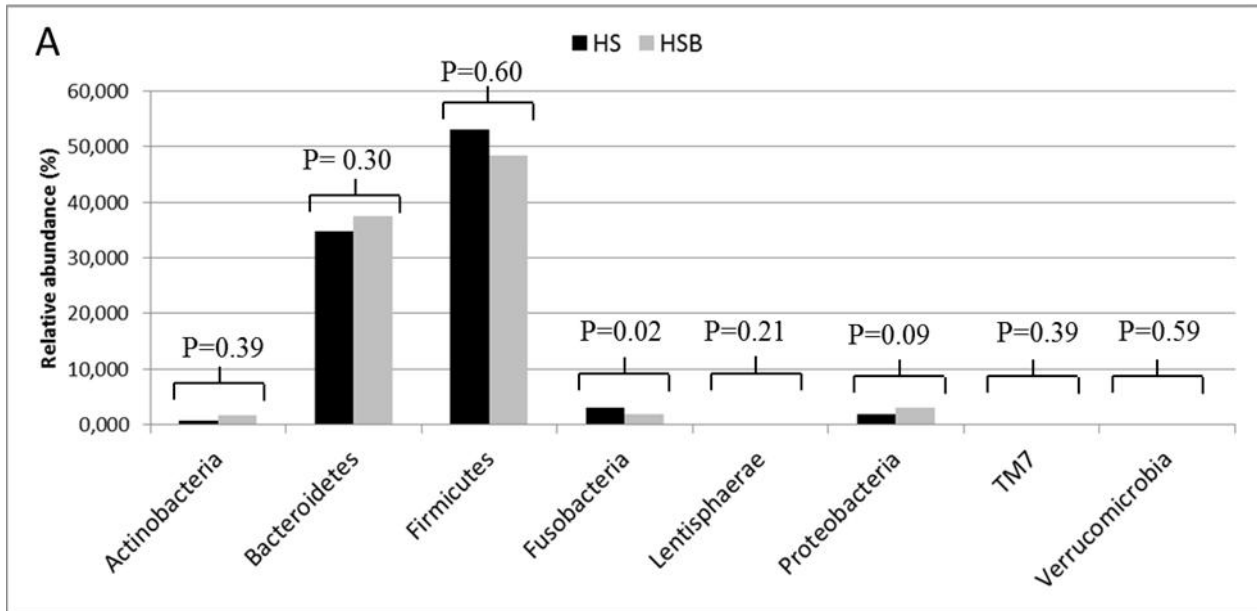
Supplemental Figure 2B. Shannon diversity within the 16S rRNA gene sequences of metabolically active bacteria found on fecal samples of healthy subjects before (before, samples numerated 1-26) and after two months of diet intervention (after, 27-52) with durum wheat flour and whole-grain barley Pasta. The mean value in each group also are illustrated.



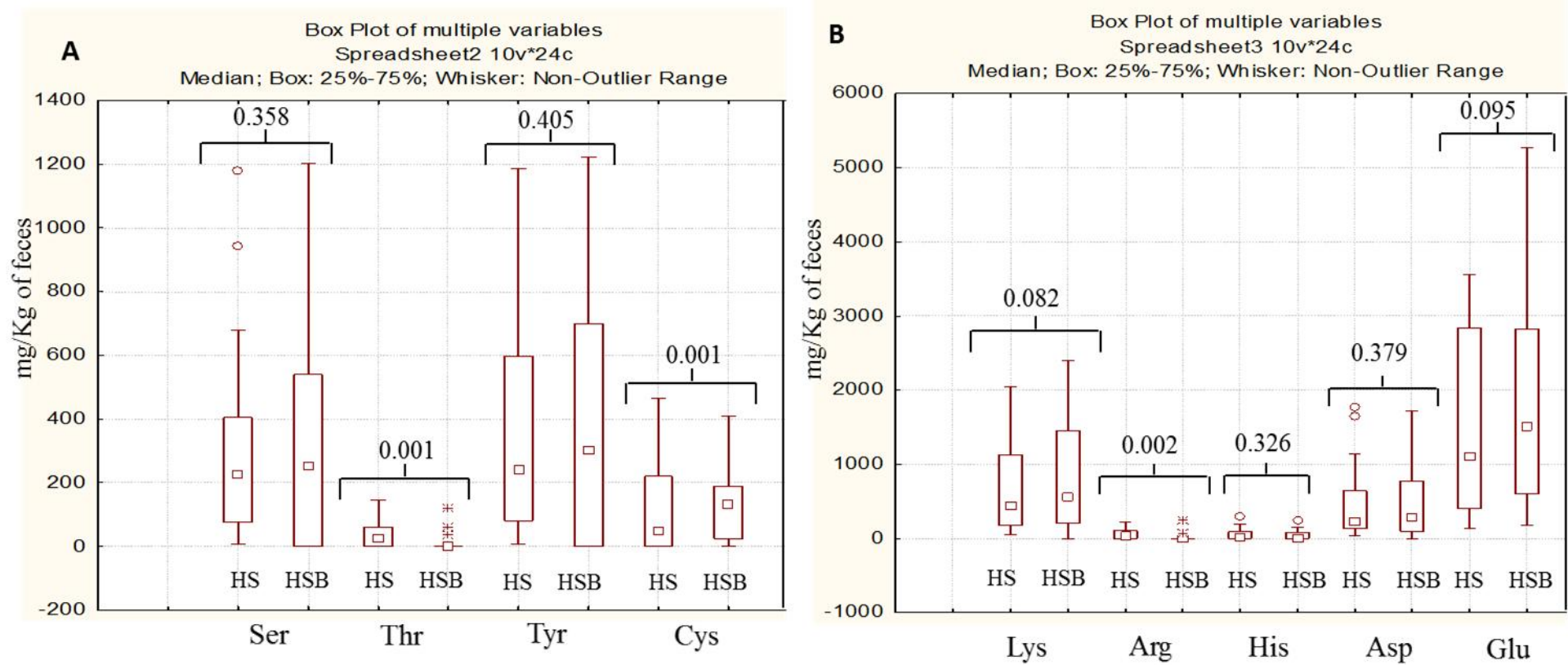
Supplemental Figure 3. Principle Coordinate Analysis (PCoA) of metabolically active bacteria. PCoA was based on unweighted UniFrac analysis of all 16S rRNA gene sequences found on fecal samples of healthy subjects before (HS) and after two months of diet intervention (HSB) with durum wheat flour and whole-grain barley Pasta.

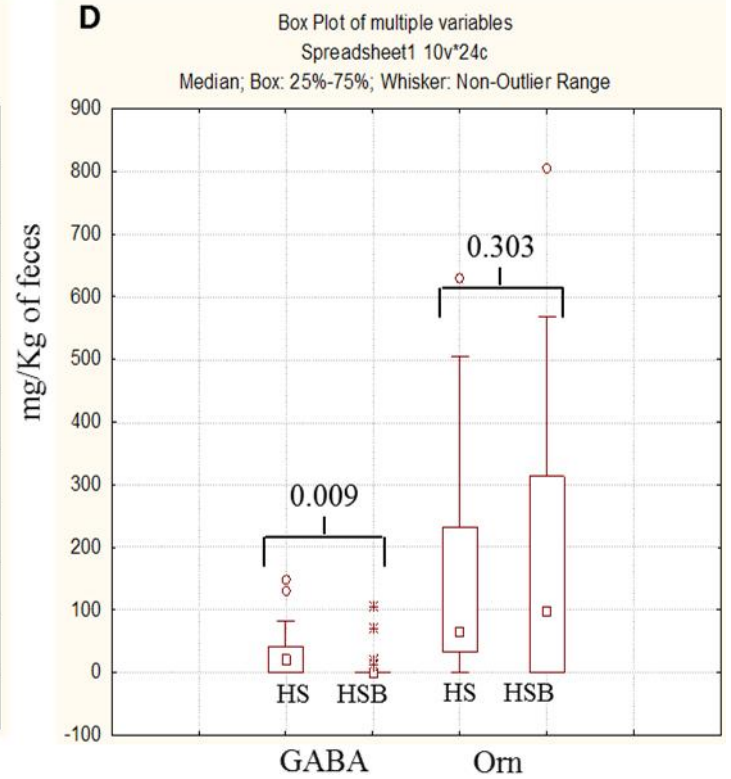
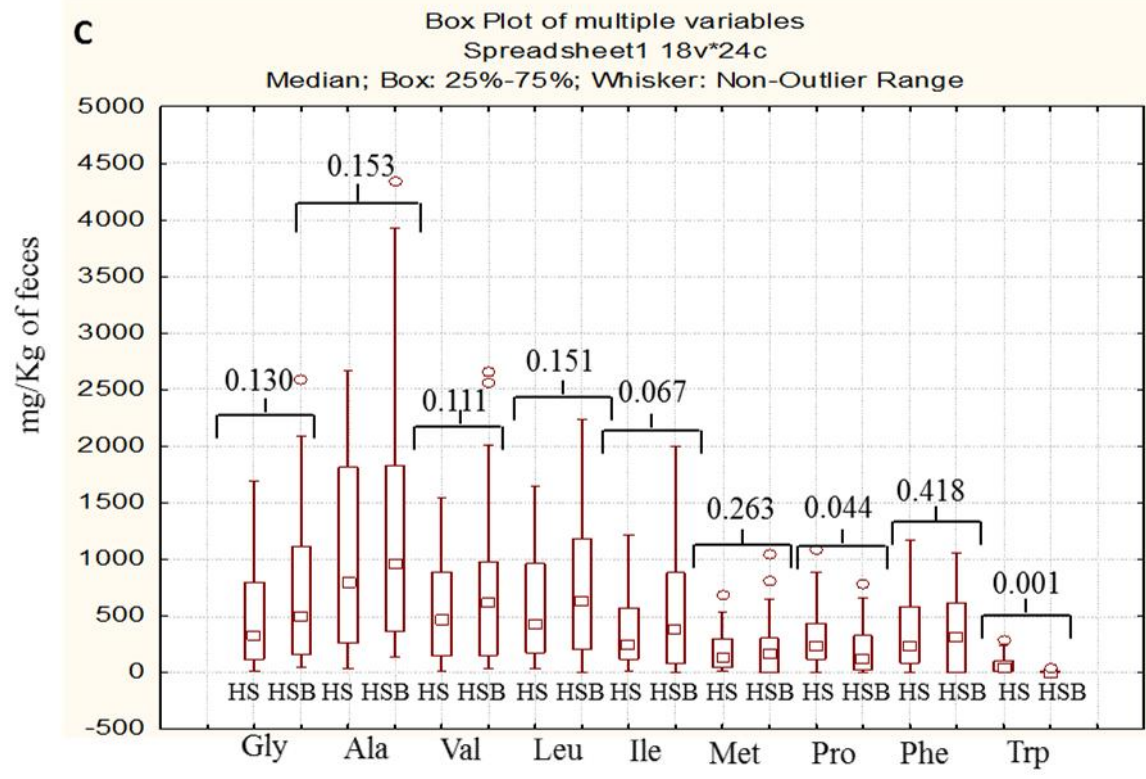


Supplemental Figure 4. Relative abundance (%) of total metabolically active bacteria found at the phylum level on fecal samples of healthy subjects before (HS) and after (HSB) two months of diet intervention with durum wheat flour and whole-grain barley Pasta.

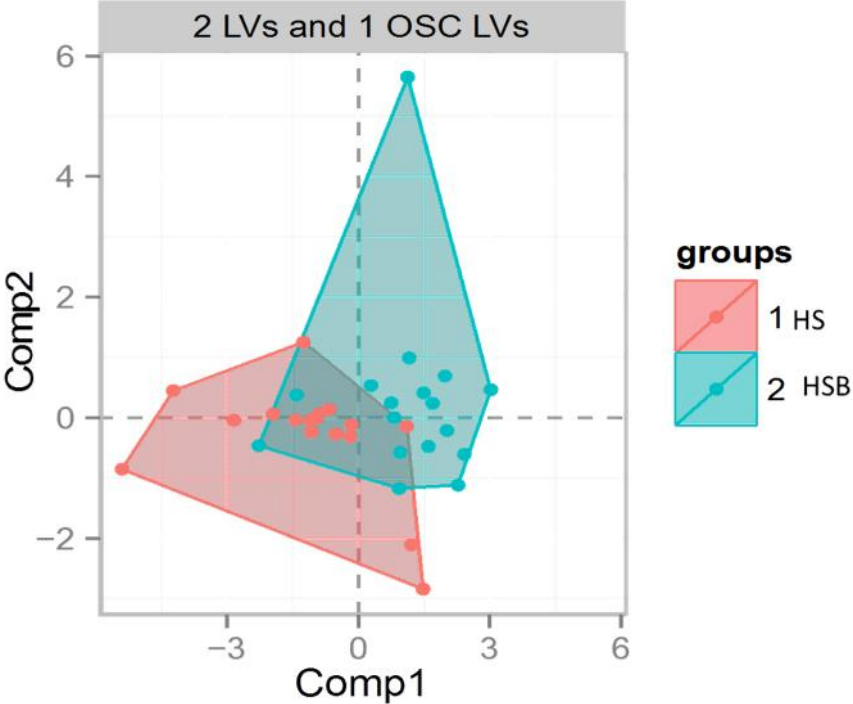


Supplemental Figure 5. Box plot based on free amino acids found in fecal samples of healthy subjects before (HS) and after (HS) two months of diet intervention with durum wheat flour and whole-grain barley Pasta. A, polar uncharged; B, polar charged; C, nonpolar; D, non-proteinogenic amino acids.





Supplemental Figure 6. PLS-DA models based on volatile organic compounds found in fecal samples of healthy subjects before (HS) and after (HS) two months of diet intervention with durum wheat flour and whole-grain barley Pasta.



Supplemental Figure 7. Score plots of the two principal components (PC) after principal component analysis (PCA) of volatile organic metabolites of the fecal samples of healthy subjects before (HS) and after (HS) two months of diet intervention with durum wheat flour and whole-grain barley Pasta.

