

[10.1071/RD23096](https://doi.org/10.1071/RD23096)

*Reproduction, Fertility and Development*

### Supplementary Material

#### **Alterations of the gut microbiota and fecal short-chain fatty acids in women undergoing assisted reproduction**

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**Supplemental Table S1: The dietary frequency difference between the two groups (N=72)**

<b>Variables</b>	<b>ART group (n=9)</b>	<b>SP group (n=63)</b>	<b>P value <sup>a</sup></b>
<b>Frequency of meat consumption</b>			0.421
Every day	8 (88.9%)	60 (95.2%)	
5-6 days/week	1 (11.1%)	2 (3.2%)	
3-4 days/week	0 (0.0%)	1 (1.6%)	
1-2 days/week	0 (0.0%)	0 (0.0%)	
None	0 (0.0%)	0 (0.0%)	
<b>Frequency of dairy consumption</b>			0.153
Every day	1 (11.1%)	23 (36.5%)	
5-6 days/week	3 (33.3%)	15 (23.8%)	
3-4 days/week	2 (22.2%)	9 (14.3%)	
1-2 days/week	1 (11.1%)	13 (20.6%)	
None	2 (22.2%)	3 (4.8%)	
<b>Frequency of vegetable consumption</b>			1.000
Every day	9 (100.0%)	61 (96.8%)	
5-6 days/week	0 (0.0%)	1 (1.6%)	
3-4 days/week	0 (0.0%)	1 (1.6%)	
1-2 days/week	0 (0.0%)	0 (0.0%)	
None	0 (0.0%)	0 (0.0%)	
<b>Frequency of fruit consumption</b>			0.339
Every day	4 (44.4%)	27 (42.9%)	
5-6 days/week	1 (11.1%)	12 (19.0%)	
3-4 days/week	1 (11.1%)	8 (12.7%)	
1-2 days/week	2 (22.2%)	16 (25.4%)	
None	1 (11.1%)	0 (0.0%)	
<b>Frequency of egg consumption</b>			0.628
Every day	5 (55.6%)	31 (49.2%)	
5-6 days/week	2 (22.2%)	12 (19.0%)	
3-4 days/week	2 (22.2%)	7 (11.1%)	
1-2 days/week	0 (0.0%)	11 (17.5%)	
None	0 (0.0%)	2 (3.2%)	
<b>Frequency of fish and shrimp consumption</b>			0.859
Every day	0 (0.0%)	6 (9.5%)	
5-6 days/week	0 (0.0%)	4 (4.8%)	
3-4 days/week	3 (33.3%)	15 (23.8%)	
1-2 days/week	5 (55.6%)	27 (42.9%)	
None	1 (11.1%)	12 (19.0%)	

Note: <sup>a</sup> means using the chi-square test or Fisher's exact method

**Continue Supplemental Table S1: The dietary frequency difference between the two groups (N=72)**

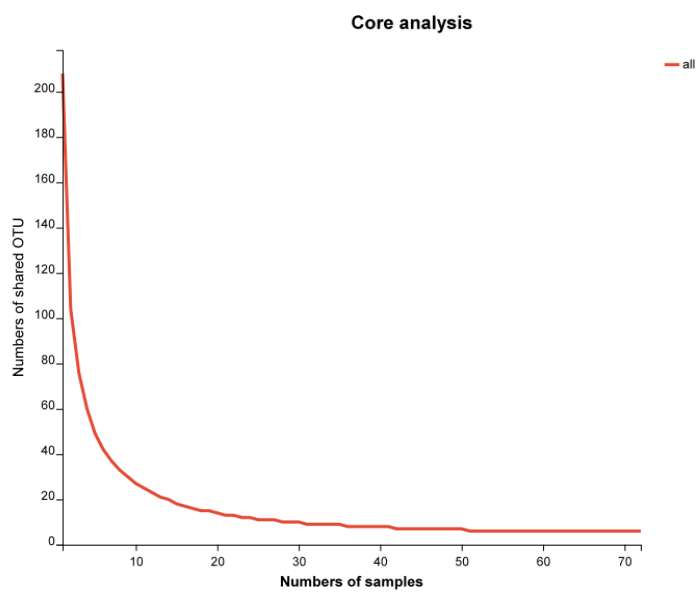
<b>Variables</b>	<b>ART group (n=9)</b>	<b>SP group (n=63)</b>	<b>P value <sup>a</sup></b>
<b>Frequency of nuts consumption</b>			0.134
Every day	0 (0.0%)	6 (9.5%)	
5-6 days/week	0 (0.0%)	0 (0.0%)	
3-4 days/week	0 (0.0%)	8 (12.7%)	
1-2 days/week	4 (44.4%)	8 (12.7%)	
None	5 (55.6%)	41 (65.1%)	
<b>Frequency of soy products consumption</b>			0.320
Every day	3 (33.3%)	7 (11.1%)	
5-6 days/week	0 (0.0%)	3 (4.8%)	
3-4 days/week	2 (22.2%)	27 (42.9%)	
1-2 days/week	4 (44.4%)	25 (39.7%)	
None	0 (0.0%)	1 (1.6%)	

Note: <sup>a</sup> means using the chi-square test or Fisher's exact method

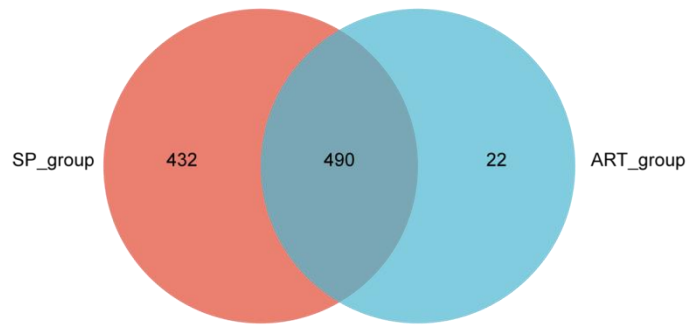
**Supplemental Table S2: Differences in microbial alpha diversity between the two groups**

	<b>ART group (n=9)</b>	<b>SP group (n=63)</b>	<b>P value <sup>a</sup></b>
Sobs index	165.78±60.27	212.86±59.40	0.026
Ace index	207.64±60.25	260.68±71.72	0.036
Chao index	213.74±57.20	259.24±72.12	0.057
Shannon index	2.80±0.67	3.18±0.05	0.130
Simpson index	0.15±0.11	0.10±0.05	0.158
Coverage index	1.00±0.00	1.00±0.00	0.123

Note: <sup>a</sup> means using Wilcoxon rank-sum test-at the operational taxonomic unit (OTU) level



**Supplemental Fig. S1: Core analysis**



**Supplemental Fig. S2:** Venn diagram