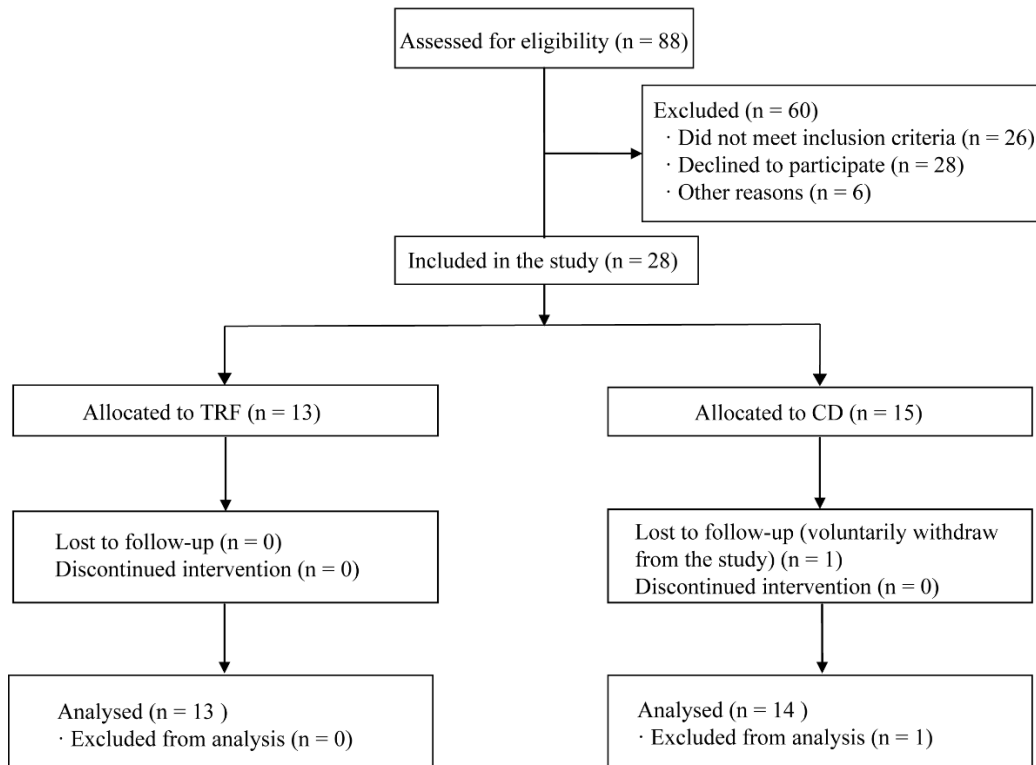


## Supplementary Material

Supplementary Figure 1.



**Supplementary Figure 1. Study flow diagram.**

**Supplementary Table 1. Important biochemical indicators and reference value**

Variable	Reference value
Serum creatinine ( $\mu\text{mol/L}$ )	41 - 81
Blood urea nitrogen ( $\text{mmol/L}$ )	3.10 - 8.80
Uric acid ( $\mu\text{mol/L}$ )	155 - 357 (female), 208 - 428 (male)
Cystatin-C ( $\text{mg/L}$ )	0.54 - 1.15
Albumin ( $\text{g/L}$ )	40.0 - 55.0
Total protein ( $\text{g/L}$ )	65.0 - 85.0
Alanine transaminase ( $\text{U/L}$ )	7 - 40
Aspartate transaminase ( $\text{U/L}$ )	13 - 35
Total cholesterol ( $\text{mmol/L}$ )	3.38 - 5.2
Triglycerides ( $\text{mmol/L}$ )	0.55 - 1.7
Low-density lipoprotein ( $\text{mmol/L}$ )	0.00 - 3.37
High-density lipoprotein ( $\text{mmol/L}$ )	> 1.15

Interleukin 6 (pg/mL)	0.00 - 7.00
Tumor necrosis factor alpha (pg/ml)	≤ 8.10
C-reactive protein (mg/L)	0.00 - 6.00

**Supplementary Table 2. Different intestinal flora between the two groups, before and after treatment**

	<b>Microbiota</b>	<b>LAD</b>	<b>p-value</b>
Before intervention	<i>Erysipelotrichaceae</i>	2.85	<b>0.031</b>
	<i>Clostridium_XVIII</i>	3.02	<b>0.003</b>
	<i>Erysipelotrichales</i>	2.85	<b>0.031</b>
	<i>Erysipelotrichia</i>	2.85	<b>0.031</b>
After intervention	<i>Lachnospiracea_incertae_sedis</i>	4.03	<b>0.047</b>
	<i>Akkermansia</i>	4.56	<b>0.028</b>
	<i>Ruminococcaceae</i>	4.27	<b>0.029</b>
	<i>Alphaproteobacteria</i>	3.41	<b>0.028</b>
	<i>Oscillibacter</i>	3.98	<b>0.027</b>
	<i>Verrucomicrobiae</i>	4.52	<b>0.028</b>
	<i>Clostridia</i>	4.75	<b>0.015</b>
	<i>Lachnospiraceae</i>	4.57	<b>0.013</b>
	<i>Verrucomicrobiales</i>	4.48	<b>0.028</b>
	<i>Clostridiales</i>	4.75	<b>0.015</b>
	<i>Verrucomicrobiaceae</i>	4.49	<b>0.028</b>
	<i>Anaerotruncus</i>	2.21	<b>0.016</b>
<i>Verrucomicrobia</i>	4.46	<b>0.028</b>	

*p* values < 0.05 are in boldface.

**Supplementary Table 3. Walking steps for patients in both groups**

<b>Step count</b>	<b>TRF (n = 13)</b>	<b>CD (n = 14)</b>	<b>p-value</b>
Weekday step count 1	8339(3,988, 9,782)	5399(4,059, 10,000)	0.770
Weekday step count 2	7500(3,173, 10,000)	4250(2,875, 10,000)	0.559
Weekend step count	8565(5,696, 10,500)	6741(4,009, 11,426)	0.733

Data are shown as medians (25th-75th interquartiles). TRF: time-restricted feeding; CD: control diet.

**Supplementary Table 4. Discomfort symptoms VAS scores for both groups**

<b>Symptoms</b>	<b>6 weeks</b>			<b>12 weeks</b>		
	<b>TRF (n = 13)</b>	<b>CD (n = 14)</b>	<b>p-value</b>	<b>TRF (n = 13)</b>	<b>CD (n = 14)</b>	<b>p-value</b>
hunger	4.0 (0.5, 5.0)	1.0 (0.8, 4.0)	0.167	3.0 (1.5, 6.0)	1.0 (0.0, 3.3)	<b>0.041</b>
fatigue	2.0 (0.0, 5.0)	1.0 (0.0, 3.3)	0.458	2.0 (0.0, 4.0)	2.0 (0.0, 4.3)	0.980
satiety	4.0 (2.5, 4.5)	1.5 (0.8, 3.0)	0.055	2.0 (0.0, 2.5)	1.0 (0.0, 2.3)	0.312

flatulence	0.0 (0.0, 3.0)	1.5 (0.0, 3.3)	0.202	0.0 (0.0, 2.5)	0.5 (0.0, 2.0) *	0.662
nausea	0.0 (0.0, 1.5)	0.5 (0.0, 1.0)	0.311	0.0 (0.0, 0.0)	0.0 (0.0, 0.0)	0.387
vomiting	0.0 (0.0, 0.0)	0.0 (0.0, 1.0)	0.222	0.0 (0.0, 0.0)	0.0 (0.0, 0.0)	0.657
constipation	0.0 (0.0, 5.0)	0.5 (0.0, 2.5)	0.753	0.0 (0.0, 0.0)	0.0 (0.0, 2.3)	0.506
diarrhea	0.0 (0.0, 0.5)	0.0 (0.0, 0.3)	0.268	0.0 (0.0, 0.0)	0.0 (0.0, 1.0)	0.268
bad breath	0.0 (0.0, 1.5)	1.0 (0.8, 3.3)	0.133	0.0 (0.0, 1.0)	1.0 (0.0, 2.0)	0.133
dry mouth	2.0 (0.0, 5.0)	1.0 (0.0, 2.3)	0.278	0.0 (0.0, 2.5)	0.5 (0.0, 1.0) *	0.957
dizziness	0.0 (0.0, 4.0)	0.0 (0.0, 1.0)	0.750	0.0 (0.0, 0.5)	0.0 (0.0, 1.0)	0.507
headache	0.0 (0.0, 1.5)	0.0 (0.0, 1.0)	0.809	0.0 (0.0, 0.0)	0.0 (0.0, 1.0)	0.809
weakness	1.0 (0.0, 5.5)	0.0 (0.0, 1.0)	0.066	0.0 (0.0, 1.5)	0.0 (0.0, 1.3)	0.954
irritability	0.0 (0.0, 3.0)	0.0 (0.0, 1.0)	0.502	0.0 (0.0, 1.5)	0.0 (0.0, 2.0)	0.338
unhappiness	0.0 (0.0, 3.5)	0.0 (0.0, 1.0)	0.377	0.0 (0.0, 1.5)	0.0 (0.0, 1.0)	0.593
depression	0.0 (0.0, 1.5)	0.0 (0.0, 0.3)	0.815	0.0 (0.0, 0.5)	0.0 (0.0, 1.0)	0.900
anxiety	0.0 (0.0, 1.5)	0.0 (0.0, 1.0)	0.975	0.0 (0.0, 1.5)	0.0 (0.0, 1.0)	0.718
overeating	0.0 (0.0, 1.5)	0.0 (0.0, 1.5)	0.505	0.0 (0.0, 2.0)	0.0 (0.0, 1.0)	0.935

Data are shown as medians (25th-75th interquartiles). VAS: visual analogue scale; TRF: time-restricted feeding; CD: control diet. \* represents a significant difference between the CD group before and after 6 and 12 weeks. *p* values < 0.05 are in boldface.