Supplemental Methods 1: Multiple Imputation Analysis

With multiply-imputed data, TRE was still associated with a significant loss in body weight and fat mass relative to the non-TRE group and also with a significant loss in body weight, fat mass, and visceral fat relative to TRE baseline (all $p<0.05$). With the multiply-imputed data, decline in lean mass also differed between groups [significant for percent change ($p=0.04$), trending toward significance for absolute change ($p=0.06$)]. As the multiply-imputing missing data did not substantially alter the results, the results section describes participants who completed the study**.**

Methods: Multiple imputation was used to address the issue of missing data. The 12-week values for weight, fat mass, lean mass, and visceral fat were estimated for the two TRE group members who dropped out after the 6 week time point and did not complete the study. To perform the imputations, we used the following measures as predictors of the missing data: baseline gender, baseline age, baseline BMI, baseline HOMA-IR, baseline fat mass, baseline lean mass, baseline visceral fat, baseline weight, and 6-week weight. Multiple imputation was conducted using PROC MI in SAS 9.4 (SAS, Institute Inc.). The expectation-maximization (EM) algorithm was used for maximum likelihood estimation. Forty imputations were done. Linear regressions were done separately for each imputation and then summarized using PROC MIANALYZE. Given that these imputed values did not significantly change our study results, the results of participants who completed the study are presented in the main document

Results:

	TRE (N=13)			Non-TRE (N=9)			Group diff.
	Mean	SD	P value	Mean	SD	P value	P value
Weight loss (absolute change: kg)	3.03	1.90	<.0001	0.80	1.75	0.21	0.0043
Weight loss (percent change: %)	3.21	1.94	<.0001	0.87	1.93	0.21	0.0046
Fat mass loss (absolute change: g)	1692.37	1751.64	0.0005	916.56	1492.37	0.10	0.27
Fat mass loss (percent change: %)	3.97	3.33	<.0001	2.82	4.90	0.12	0.51
Lean mass loss (absolute change: g)	1288.47	1681.19	0.0058	100.00	1180.33	0.81	0.0631
Lean mass loss (percent change: %)	2.67	3.62	0.0082	-0.06	2.20	0.94	0.0394
Visceral fat mass loss (absolute change: g)	314.52	384.64	0.0032	-31.00	185.05	0.63	0.0120
Visceral fat mass loss (percent change: %)	13.62	15.24	0.0013	-7.95	26.87	0.40	0.0158

SAS code:

```
* multiple imputation;
proc mi data=mydata seed=31415926 nimpute=40 out=mi;
  em maxiter=500;
  var female Age BMI_base BMI_6_weeks HOMA_base Weight_base Weight_6_weeks Fat_mass_base Lean_mass_base
visceral_fat_base
Weight_12_weeks Fat_mass_12_weeks Lean_mass_12_weeks visceral_fat_12_weeks;
run;


* change from baseline to 12 weeks, comparing TRE vs non-TRE group;
proc sort data=mi; by _imputation_; run;
%macro OneOutcome(myvar);
proc reg data=mi;
  by _imputation_;
  model &myvar = trt/covb;
  ods output ParameterEstimates = Est CovB = Cov;
run;
```

```
proc mianalyze parms=Est covb(effectvar=stacking)=Cov;
modeleffects trt;
 run;
 %mend  OneOutcome;
 %OneOutcome(weight_absolute_loss);
 %OneOutcome(weight_percent_loss);
 %OneOutcome(fatmass_absolute_loss);
 %OneOutcome(fatmass_percent_loss);
 %OneOutcome(leanmass_absolute_loss);
 %OneOutcome(leanmass_percent_loss);
 %OneOutcome(visceralfat_absolute_loss);
 %OneOutcome(visceralfat_percent_loss);


 * change from baseline to 12 weeks within the TRE group;
 data trt; set mi; where trt=1; run;
 %macro OneOutcome(myvar);
 proc reg data=trt;
   by _imputation_;
   model &myvar = /covb;
   ods output ParameterEstimates = Est CovB = Cov;
 run;

 proc mianalyze parms=Est covb(effectvar=stacking)=Cov;
   modeleffects Intercept;
 run;
 %mend  OneOutcome;
 %OneOutcome(weight_absolute_loss);
 %OneOutcome(weight_percent_loss);
 %OneOutcome(fatmass_absolute_loss);
 %OneOutcome(fatmass_percent_loss);
 %OneOutcome(leanmass_absolute_loss);
 %OneOutcome(leanmass_percent_loss);
 %OneOutcome(visceralfat_absolute_loss);
 %OneOutcome(visceralfat_percent_loss);
```

Supplemental Materials 2: Inclusion/Exclusion of first participant assigned to TRE

Separate analyses were performed including and excluding the first participant, who was assigned to TRE to test the feasibility of the intervention. Excluding this participant had no material effect on the results of analyses, so we present findings included all participants who completed the study.