

## Supplementary materials

# The effect of individual attitude toward healthy nutrition on adherence to a high-UFA and high-protein diet: results of a randomized controlled trial

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**Supplementary Table S1:** Simple translation of the ATHN questionnaire (24 items)\*

Dimensions	Items (1-4 points scale)
Effectiveness of healthy nutrition	1. Nutrition research helps us to live longer. 2. Only by eating healthily, can we be fit and energetic. 3. Good nutrition is key to a long, and healthy life. 4. True well-being can only be reached with proper nutrition. 5. A healthy diet improves mental well-being also. 6. Many age-related issues could be avoided with a healthier diet. 7. Sensible dietary habits will have positive health effects for everybody. 8. It is certain, that one lives longer with a healthy diet.
Appreciation of healthy nutrition	1. Talking about the "right" diet has become trendy, but the issue is often taken too seriously. (reverse item) 2. Following every piece of advice on healthy eating can be overwhelming and confusing. (reverse item) 3. I am tired of hearing what food I should or should not eat. (reverse item) 4. If we believed everything said about nutrition, we would end up consuming nothing at all. (reverse item) 5. There is too much hype around nutrition. (reverse item) 6. It takes a long time for a healthy diet to show (if any) real effects. (reverse item) 7. Diet recommendations should be viewed with caution. (reverse item) 8. The effort to maintain a healthy diet might not be worth it, since we cannot be sure it benefits us. (reverse item)
Practice of healthy nutrition	1. I avoid consuming anything that could harm my health. 2. I consistently eat a healthy and balanced diet. 3. I place great importance that the things I eat are also healthy. 4. I do not worry if a snack is healthy or not. (reverse item) 5. I eat what I like and I do not particularly care whether it is healthy. (reverse item) 6. I eat what I like, and I do not pay attention to the food's contents. (reverse item) 7. I can confidently say that I eat healthily. 8. I rarely eat unhealthy food.

\*Note: A back translation is necessary for use in English

**Supplementary Table S2:** Cronbach's alpha of ATHN dimensions

Dimension	Cronbach's alpha	Bootstrap 95% CI based on 1000 samples [2.5%; 97.5%]
Effectiveness	0.823	0.792; 0.850
Appreciation	0.838	0.807; 0.864
Practice	0.736	0.679; 0.784

*Legend Supplementary Table S2: n=344. Each dimension contains 8 items. Cronbach's alpha was carried out after reverse items have been recoded.*

**Supplementary Table S3:** Association between age, BMI and ATHN

<i>Predictors</i>	<b>Effectiveness</b>			<b>Appreciation</b>			<b>Practice</b>		
	<i>Estimates</i>	<i>CI</i>	<i>p</i>	<i>Estimates</i>	<i>CI</i>	<i>p</i>	<i>Estimates</i>	<i>CI</i>	<i>p</i>
Intercept	14.11	10.08 – 18.15	<b>&lt;0.001</b>	21.33	14.82 – 27.84	<b>&lt;0.001</b>	14.75	10.66 – 18.83	<b>&lt;0.001</b>
Age (years)	0.08	0.03 – 0.13	<b>0.002</b>	-0.02	-0.11 – 0.06	0.618	0.08	0.02 – 0.13	<b>0.005</b>
BMI (kg/m <sup>2</sup> )	0.00	-0.06 – 0.07	0.890	-0.16	-0.26 – -0.05	<b>0.003</b>	-0.10	-0.17 – -0.04	<b>0.002</b>
Observations	344			344			344		
R <sup>2</sup> / R <sup>2</sup> adjusted	0.027 / 0.021			0.026 / 0.020			0.052 / 0.046		

*Legend Supplementary Table S3: Three linear regression models with ATHN dimensions as outcome; age and BMI were set as independent variables of each model.*

**Supplementary Table S4:** Associations between ATHN and baseline macronutrient intake

<i>Predictors</i>	Protein			Fiber			MUFA			PUFA			SFA			Carbohydrate		
	<i>Estimates</i>	<i>CI</i>	<i>p</i>	<i>Estimates</i>	<i>CI</i>	<i>p</i>	<i>Estimates</i>	<i>CI</i>	<i>p</i>	<i>Estimates</i>	<i>CI</i>	<i>p</i>	<i>Estimates</i>	<i>CI</i>	<i>p</i>	<i>Estimates</i>	<i>CI</i>	<i>p</i>
Intercept	15.20	12.67 – 17.73	<b>&lt;0.001</b>	19.26	13.73 – 24.78	<b>&lt;0.001</b>	13.84	11.92 – 15.76	<b>&lt;0.001</b>	4.70	2.97 – 6.43	<b>&lt;0.001</b>	17.77	15.25 – 20.28	<b>&lt;0.001</b>	41.12	36.15 – 46.09	<b>&lt;0.001</b>
Effectiveness	0.02	-0.11 – 0.14	0.796	-0.11	-0.38 – 0.16	0.411	-0.06	-0.16 – 0.03	0.190	-0.03	-0.11 – 0.05	0.494	0.02	-0.10 – 0.15	0.691	0.08	-0.16 – 0.32	0.527
Appreciation	-0.02	-0.10 – 0.05	0.536	0.06	-0.10 – 0.22	0.479	0.01	-0.05 – 0.06	0.825	0.01	-0.04 – 0.06	0.800	-0.04	-0.11 – 0.04	0.311	0.04	-0.11 – 0.18	0.616
Practice	0.07	-0.05 – 0.20	0.227	0.33	0.07 – 0.60	<b>0.015</b>	0.02	-0.07 – 0.12	0.626	0.12	0.03 – 0.20	<b>0.007</b>	-0.13	-0.25 – 0.00	<b>0.042</b>	-0.17	-0.41 – 0.07	0.162
Observations	344			344			344			344			344			344		
R <sup>2</sup> / R <sup>2</sup> adjusted	0.006 / -0.003			0.023 / 0.014			0.005 / -0.004			0.024 / 0.016			0.020 / 0.011			0.006 / -0.003		

*Legend Supplementary Table S4: Linear regression models with ATHN dimensions as independent variables and each macronutrient intake at baseline as independent variable of each model (n=344).*

**Supplementary Table S5:** Associations between ATHN and macronutrient intake at month 12 in the IG

<i>Predictors</i>	Protein			Fiber			MUFA			PUFA			SFA			Carbohydrate		
	<i>Estimates</i>	<i>CI</i>	<i>p</i>	<i>Estimates</i>	<i>CI</i>	<i>p</i>	<i>Estimates</i>	<i>CI</i>	<i>p</i>	<i>Estimates</i>	<i>CI</i>	<i>p</i>	<i>Estimates</i>	<i>CI</i>	<i>p</i>	<i>Estimates</i>	<i>CI</i>	<i>p</i>
(Intercept )	19.35	15.18 – 23.53	<b>&lt;0.001</b>	15.59	5.71 – 25.46	<b>0.002</b>	12.97	10.01 – 15.93	<b>&lt;0.001</b>	5.26	1.73 – 8.78	<b>0.004</b>	13.44	10.04 – 16.85	<b>&lt;0.001</b>	37.82	32.05 – 43.60	<b>&lt;0.001</b>
Effectiveness	-0.12	-0.33 – 0.08	0.227	0.18	-0.30 – 0.66	0.454	-0.01	-0.16 – 0.13	0.855	0.01	-0.16 – 0.18	0.936	0.12	-0.05 – 0.28	0.159	0.19	-0.09 – 0.47	0.180
Appreciation	0.03	-0.10 – 0.16	0.604	-0.05	-0.36 – 0.25	0.737	-0.06	-0.15 – 0.03	0.216	0.01	-0.09 – 0.12	0.792	-0.02	-0.13 – 0.09	0.712	0.01	-0.17 – 0.19	0.905
Practice	0.08	-0.12 – 0.28	0.427	0.53	0.05 – 1.01	<b>0.031</b>	0.11	-0.04 – 0.25	0.143	0.27	0.09 – 0.44	<b>0.002</b>	-0.17	-0.34 – 0.01	<b>0.038</b>	-0.29	-0.57 – 0.01	<b>0.044</b>
Observations	170			170			170			170			170			170		
R <sup>2</sup> / R <sup>2</sup> adjusted	0.011 / -0.006			0.042 / 0.025			0.017 / -0.000			0.071 / 0.054			0.033 / 0.015			0.028 / 0.010		

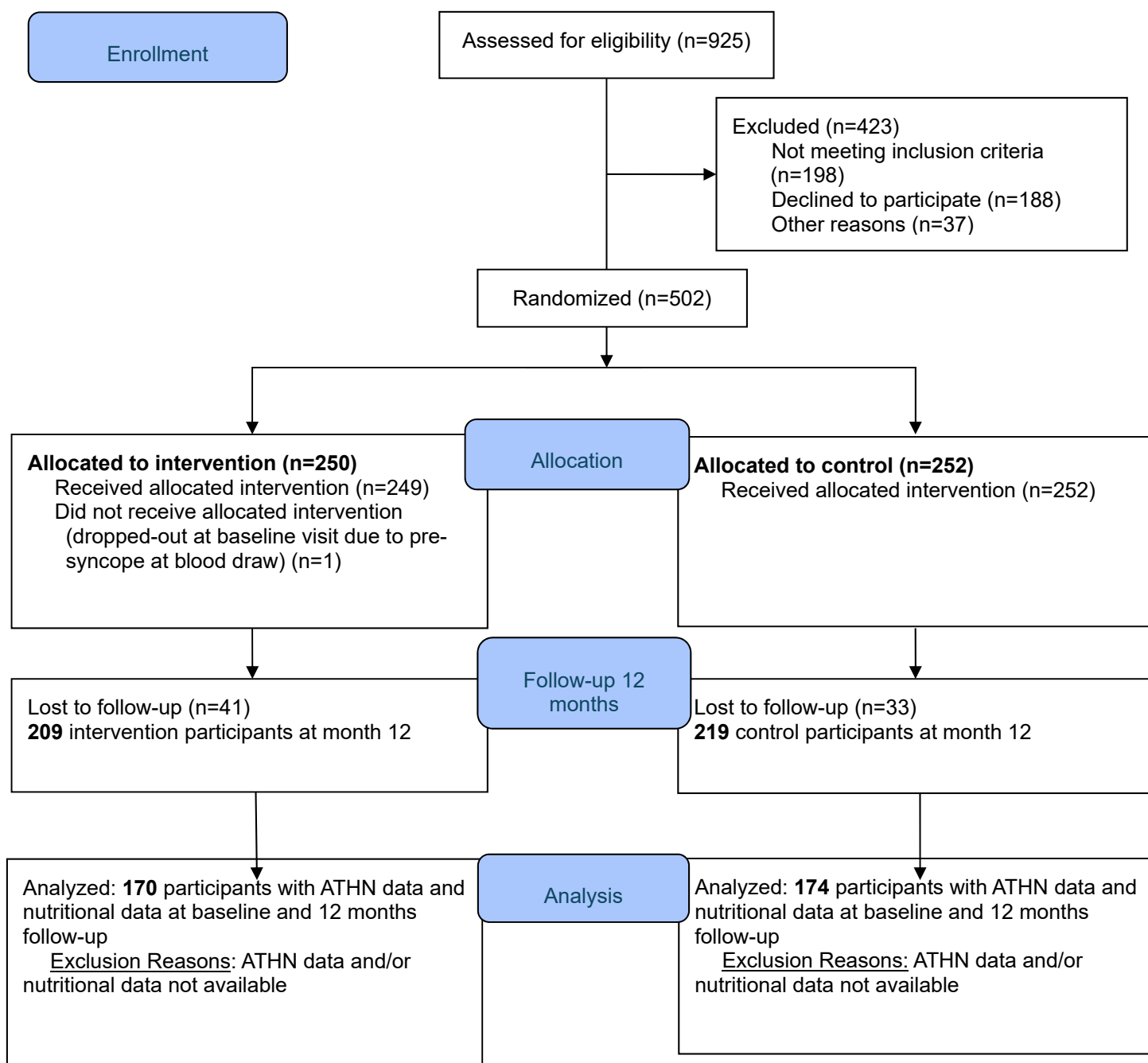
*Legend Supplementary Table S5: Linear regression models with ATHN dimensions as independent variables and each macronutrient intake at month 12 in the IG as independent variable of each model (n=170).*

**Supplementary Table S6:** Associations between ATHN and macronutrient intake at month 12 in the CG

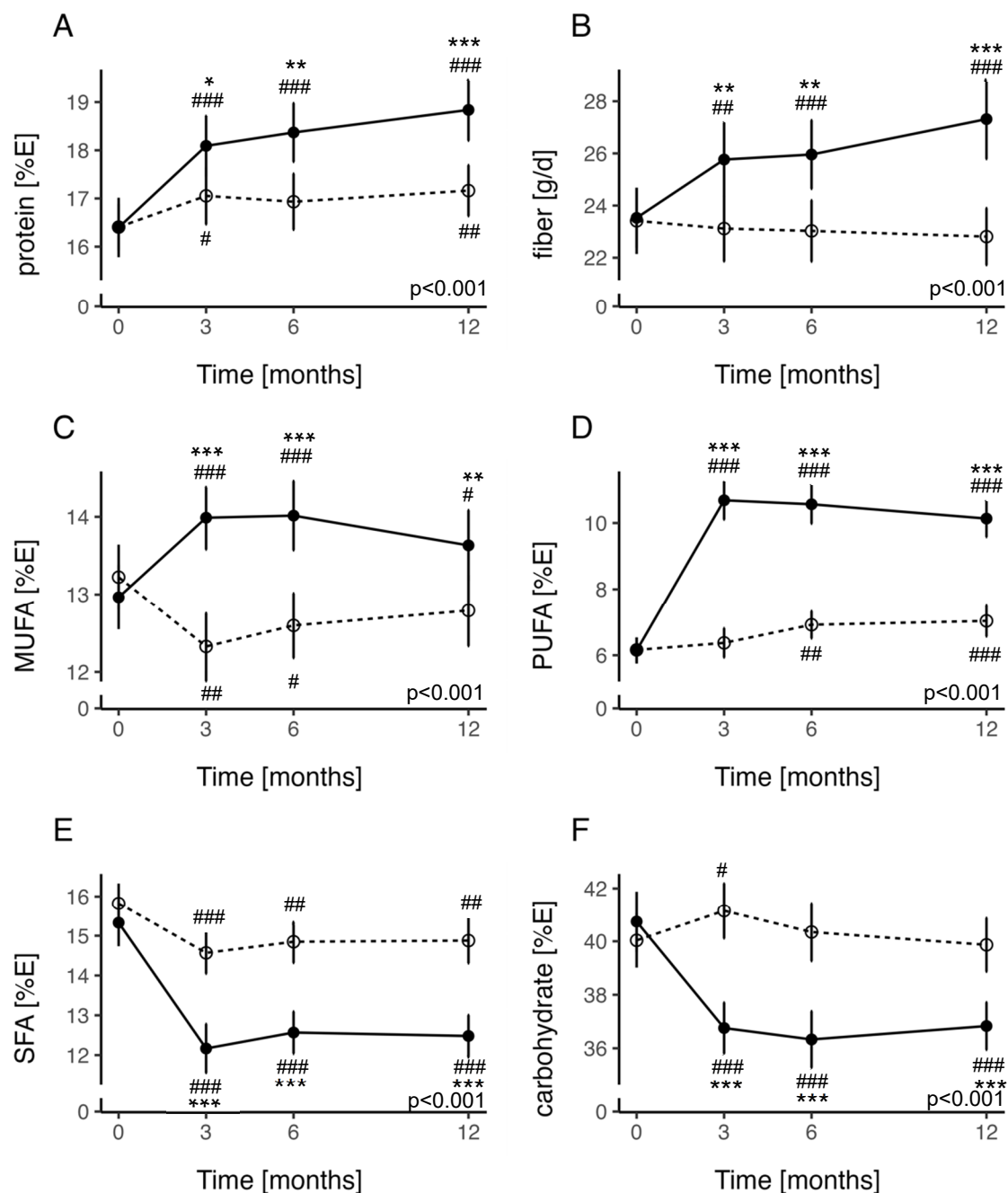
<i>Predictors</i>	Protein			Fiber			MUFA			PUFA			SFA			Carbohydrate		
	<i>Estimates</i>	<i>CI</i>	<i>p</i>	<i>Estimates</i>	<i>CI</i>	<i>p</i>	<i>Estimates</i>	<i>CI</i>	<i>p</i>	<i>Estimates</i>	<i>CI</i>	<i>p</i>	<i>Estimates</i>	<i>CI</i>	<i>p</i>	<i>Estimates</i>	<i>CI</i>	<i>p</i>
(Intercept )	17.05	13.63 – 20.47	<b>&lt;0.001</b>	16.53	9.55 – 23.51	<b>&lt;0.001</b>	13.99	10.99 – 16.98	<b>&lt;0.001</b>	4.27	1.29 – 7.25	<b>0.005</b>	17.50	13.97 – 21.03	<b>&lt;0.001</b>	39.16	32.65 – 45.66	<b>&lt;0.001</b>
Effectiveness	-0.13	-0.30 – 0.03	0.119	0.06	-0.28 – 0.40	0.736	-0.04	-0.18 – 0.11	0.636	-0.03	-0.18 – 0.11	0.673	0.11	-0.06 – 0.28	0.207	0.12	-0.20 – 0.44	0.450
Appreciation	0.01	-0.09 – 0.10	0.915	0.28	0.08 – 0.47	<b>0.006</b>	-0.03	-0.12 – 0.05	0.435	0.10	0.02 – 0.19	<b>0.016</b>	-0.21	-0.31 – 0.11	<b>&lt;0.001</b>	0.16	-0.02 – 0.35	0.081
Practice	0.16	-0.00 – 0.33	0.054	0.06	-0.28 – 0.40	0.728	0.00	-0.14 – 0.14	0.997	0.11	-0.03 – 0.25	0.129	-0.10	-0.27 – 0.07	0.242	-0.26	-0.57 – 0.06	0.110
Observations	174			174			174			174			174			174		
R <sup>2</sup> / R <sup>2</sup> adjusted	0.028 / 0.010			0.055 / 0.039			0.007 / -0.011			0.059 / 0.043			0.111 / 0.095			0.029 / 0.012		

*Legend Supplementary Table S6: Linear regression models with ATHN dimensions as independent variables and each macronutrient intake at month 12 in the CG as independent variable of each model (n=17)*

Supplementary Figure S1: Consort Flow diagram



Supplementary Figure S2: Changes in each macronutrient intake from baseline to month 12



Legend Supplementary Figure F2: Changes in macronutrient intake from baseline to month 12 in IG (black circles) and CG (white circles). Circles indicate mean and error bars show 95% confidence interval. \*\*\*, \*\*, and \* denote  $p$ -values of  $<0.001$ ,  $<0.01$  and  $<0.5$ , respectively, derived from linear mixed model for repeated measures regarding differences of macronutrient intake at each time point between IG and CG. ###, ## and # indicate  $p$ -values of  $<0.001$ ,  $<0.01$  and  $<0.5$ , respectively, regarding differences of macronutrient intake at each time point within the IG and CG compared to baseline.  $P$ -values reported for each model show significant increases in intake of the respective macronutrient over time between IG and CG.