

Supplementary Online Content

Liu S, D'Amico D, Shankland E, et al. Effect of urolithin A supplementation on muscle endurance and mitochondrial health in older adults: a randomized clinical trial. *JAMA Netw Open*. 2022;5(1):e2144279. doi:10.1001/jamanetworkopen.2021.44279

eTable. No Impact on Muscle Size During the Study Intervention Period

eFigure 1. Change in TA ATPmax

eFigure 2. Percent Change in Number of Muscle Contractions in Skeletal Muscle

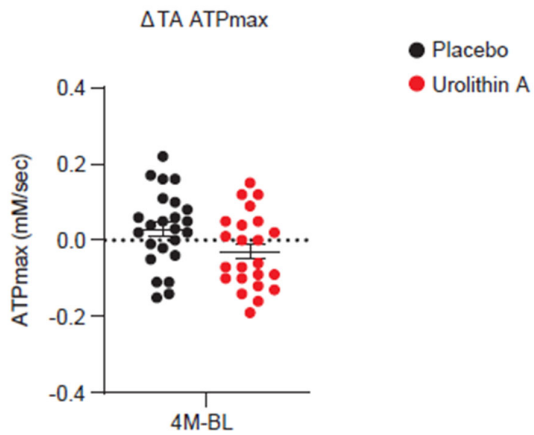
eFigure 3. UA Bioavailability in the Study Population

eFigure 4. UA Impact on Plasma Acylcarnitine and Ceramide Levels

This supplementary material has been provided by the authors to give readers additional information about their work.

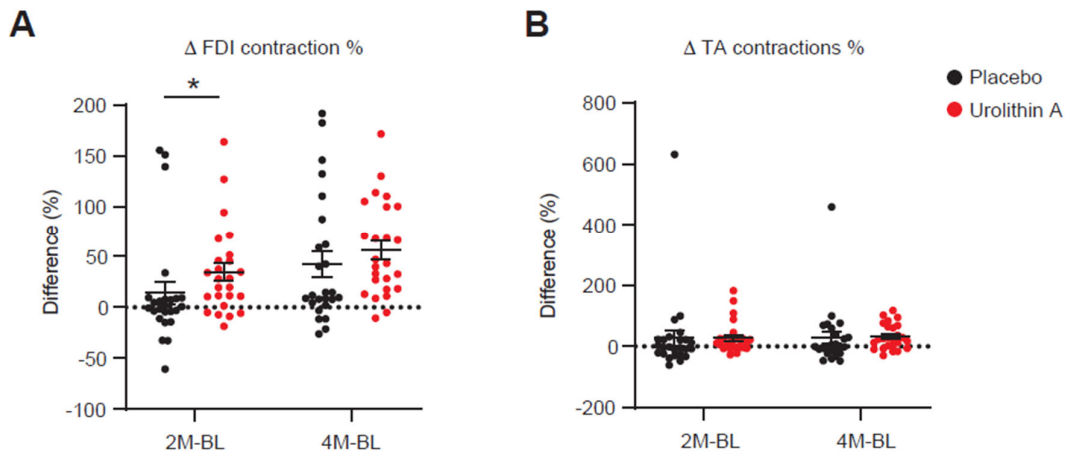
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Muscle CSA	Group	BL	4M	%Δ4M-BL
TA (cm²)	Placebo	10.5±2.1	10.4±2.5	-1.1±9.7
	UA	9.8±1.97	9.4±1.7	-1.6±6.7
FDI (cm²)	Placebo	2.3±0.5	2.2±0.5	-4.0±9.3
	UA	2.1±0.5	2.1±0.5	0.28±8.8



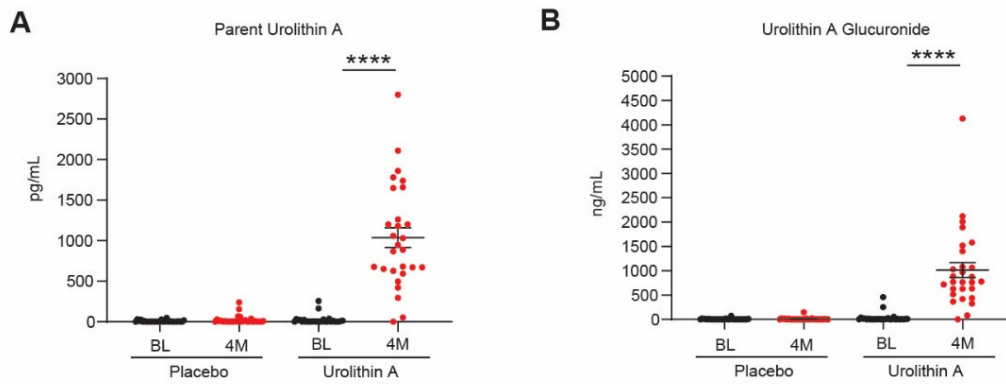
eFigure 1. Change in TA ATPmax

Mitochondrial capacity (ATP_{max}) in the TA. Changes of ATP_{max} in absolute value after 4-month supplementation from baseline are shown. The analysis was done using an analysis of co-variance (ANCOVA) with 95% confidence intervals for treatment differences.



eFigure 2. Percent Change in Number of Muscle Contractions in Skeletal Muscle

Change in muscle endurance (number of muscle contractions in hand (FDI) (A) and leg (TA) (B) skeletal muscles from baseline at 2-months and 4-months following intervention depicted as % change. * $p < 0.05$ after an analysis of co-variance (ANCOVA) with 95% confidence intervals for treatment differences and corresponding non-adjusted p-values depicted.



eFigure 3. UA Bioavailability in the Study Population

UA (A) and UA-glucuronide (B) plasma levels comparing baseline to the last day of the 4-month treatment period for Placebo and UA 1000 mg (n = 27, Placebo; n = 25, UA 1000 mg). Data represent mean \pm s.e.m. ****p < 0.0001 after paired t-test.

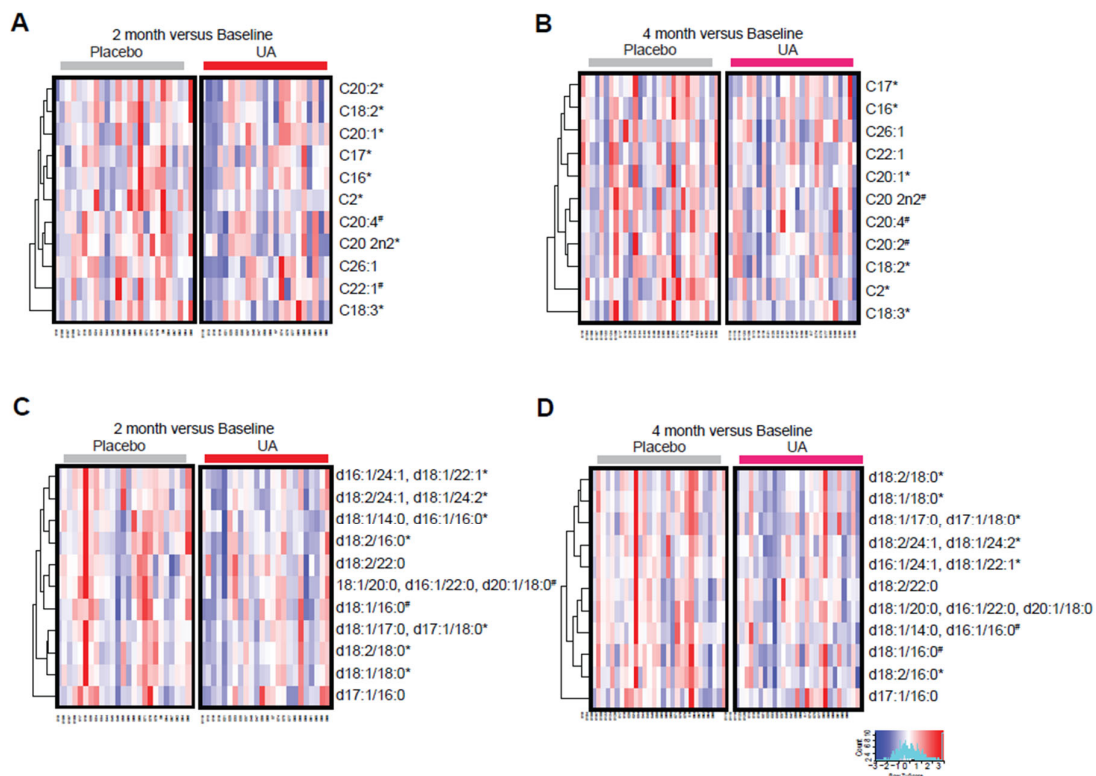


Figure 4. UA Impact on Plasma Acylcarnitine and Ceramide Levels

A, B, Heatmaps representing the plasma levels of selected acylcarnitines for the indicated groups, comparing the 2-month time-point versus baseline (A) and the 4-month time-point versus baseline (B). **C, D,** Heatmaps representing the plasma levels of selected ceramides for the indicated groups, comparing the 2-month time-point versus baseline (C) and the 4-month time-point versus baseline (D). Values are expressed as Z-scores. #0.05 < P < 0.10; *p < 0.05; after a two-way, repeated-measures ANOVA.