

## Supplementary Material

## Table S1: Participant timeline

		Study day x*			Study day y*			
	Enrollment	Pre- allocation	Allocation	Post- allocation	Pre- allocation	Allocation	Post- allocation	
Time point	Before first study day	T -1	T <sub>0</sub>	Τ 1	T -1	T <sub>0</sub>	Τ 1	After second study day
Enrollment								
Eligibility screen	x							
Informed consent	х							
Interventions (depending on number in sealed envelope)								
Capsules with cocoa flavanols			x					
Capsules with placebo						х		
Assessments		1	1	-	-			
Baseline variables: Body mass index, venous blood sample		x			X			
Flow-mediated dilation measurement		X		х	X		Х	
Blood pressure measurement		X		X	X		X	
Dynamic handgrip exercise test with Near-infrared spectroscopy				x			X	

Additional measurements:				Х
Accelerometer and				
continuous glucose				
monitoring system				

\*: the intake of the capsules is randomized so study day x or study day y can be the first or the second study day.