

1 **Supplementary materials**

2 **Supplementary Table 1** | Summary of inclusion and exclusion criteria during medical examination

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<b>Inclusion criteria</b>	1. Aged not less than 30 years and not older than 40	4
	2. Experienced marathon runner (minimum five starts in full marathon run)	5
	3. Completion time less than 3 h 20 min	
	4. No additional drug intake or smoking and good health status	6
	5. No additional supplementation	
<b>Exclusion criteria</b>	1. Physically or mentally illness	7
	2. Previsions heart and liver problems	
	3. Comorbidities causing severe inflammation: asthma, allergy, asthma, <sup>8</sup> celiac disease, psoriasis, Raynaud's disease, rheumatoid arthritis, systemic lupus erythematosus, diabetes, and other.	9

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