

**S5 Table. Studies reporting beneficial, non-significant and detrimental associations of activity patterns with inflammatory and endothelial blood biomarkers.**

<i>Moderate-to-Vigorous Physical Activity patterns</i>						
<u>Time spent in bouts</u>	Beneficial (B)	Non-significant (NS)	Detrimental (D)	B	NS	D
1-4 min	C-reactive protein [44] <sup>A</sup>			1	0	0
1-9 min	C-reactive protein [44] <sup>A</sup>			1	0	0
≥5 min		C-reactive protein [44] <sup>A</sup>		0	1	0
≥10 min	C-reactive protein [44] <sup>A</sup>			1	0	0
<i>Light Physical Activity patterns</i>						
<u>Frequency of bouts</u>	Beneficial (B)	Non-significant (NS)	Detrimental (D)	B	NS	D
≥4 s	Acetylcholine <sup>B</sup> [55] <sup>C</sup> , [55] <sup>C</sup>			2	0	0
≥5 min	Acetylcholine <sup>B</sup> [55] <sup>C</sup> , [55] <sup>C</sup>			2	0	0
<u>Time spent in bouts</u>	Beneficial (B)	Non-significant (NS)	Detrimental (D)	B	NS	D
≥4 s		Acetylcholine <sup>B</sup> [55] <sup>C</sup> , [55] <sup>C</sup>		0	2	0
≥5 min		Acetylcholine <sup>B</sup> [55] <sup>C</sup> , [55] <sup>C</sup>		0	2	0

<u>Intensity of bouts</u>	Beneficial (B)	Non-significant (NS)	Detrimental (D)	B	NS	D
≥4 s		Acetylcholine <sup>B</sup> [55] <sup>C</sup> , [55] <sup>C</sup>		0	2	0
≥5 min		Acetylcholine <sup>B</sup> [55] <sup>C</sup> , [55] <sup>C</sup>		0	2	0
<i>Sedentary patterns</i>						
<u>Frequency of bouts/breaks</u>	Beneficial (B)	Non-significant (NS)	Detrimental (D)	B	NS	D
1-4 min		C-reactive protein [59] <sup>D</sup> , [59] <sup>E</sup>		0	2	0
5-9 min		C-reactive protein [59] <sup>D</sup> , [59] <sup>E</sup>		0	2	0
5-10 min		Adiponectin [14]; BDNF [14]; C-reactive protein [14]; IL2, 6, 8, 10 <sup>F</sup> [14]; PAI-1 [14]; Resistin [14]; sE-selectin [14]; sICAM-1 [14]; sVCAM-1 [14]; TNF- $\alpha$ [14]		0	13	0
10-14 min		C-reactive protein [59] <sup>D</sup> , [59] <sup>E</sup>		0	2	0
15-29 min	C-reactive protein [59] <sup>D</sup>	C-reactive protein [59] <sup>E</sup>		1	1	0
≥10 min		Adiponectin [14]; BDNF [14]; C-reactive protein [14]; IL2, 6, 8, 10 <sup>F</sup> [14]; PAI-1 [14]; Resistin [14]; sE-selectin [14]; sICAM-1 [14]; sVCAM-1 [14]; TNF- $\alpha$ [14]		0	13	0
≥30 min		C-reactive protein [59] <sup>D</sup> , [59] <sup>E</sup>		0	1	0

<b>Breaks</b>		Adiponectin [14] BDNF [14] C-reactive protein [14], [59] <sup>D</sup> , [59] <sup>E</sup> ; IL2, 6, 8, 10 <sup>F</sup> [14]; PAI-1 [14]; Resistin [14]; sE-selectin [14]; sICAM-1 [14]; sVCAM-1 [14]; TNF- $\alpha$ [14]		<b>0</b>	<b>15</b>	<b>0</b>
<b><u>Time spent in bouts/breaks</u></b>	<b>Beneficial (B)</b>	<b>Non-significant (NS)</b>	<b>Detrimental (D)</b>	<b>B</b>	<b>NS</b>	<b>D</b>
<b>5-10 min</b>		Adiponectin [14]; BDNF [14]; C-reactive protein [14]; IL2, 6, 8, 10 <sup>F</sup> [14]; PAI-1 [14]; Resistin [14]; sE-selectin [14]; sICAM-1 [14]; sVCAM-1 [14]; TNF- $\alpha$ [14]		<b>0</b>	<b>13</b>	<b>0</b>
<b><math>\geq 10</math> min</b>		Adiponectin [14]; BDNF [14]; C-reactive protein [14]; IL2, 6, 8, 10 <sup>F</sup> [14]; PAI-1 [14]; Resistin [14]; sE-selectin [14]; sICAM-1 [14]; sVCAM-1 [14]; TNF- $\alpha$ [14]		<b>0</b>	<b>13</b>	<b>0</b>
<b><math>\geq 30</math> min</b>		C-reactive protein [36]		0	1	0
<b>Breaks</b>		C-reactive protein [36] <sup>G</sup>		0	1	0

Abbreviations; *B* Beneficial, *D* Detrimental, *NS* Non significant, *min* Minutes, *s* Seconds, *BDNF* Brain-derived neurotrophic factor, *IL* interleukin, *PAI* Plasminogen Activator Inhibitor, *sICAM* Soluble Intercellular Adhesion Molecule, *sVCAM* Soluble Vascular Cell Adhesion Molecule, *TNF* Tumor Necrosis Factor.

<sup>A</sup> The sample was divided in four quartiles and the odds ratio of beneficial health factors were presented. When the odds consistently increased/decreased in all quartiles, we assumed that the associations were significantly beneficial/detrimental; <sup>B</sup> Two associations for Acetylcholine included in the table as both the absolute peak response and the

area under the flux versus time curve over the scans were reported in the study; <sup>C</sup> Only minimum borders for intensities were used to classify  $\geq$ light,  $\geq$ moderate,  $\geq$ vigorous and  $\geq$ very hard physical activity bouts; <sup>D</sup> Boys; <sup>E</sup> Girls; <sup>F</sup> All interleukin measures combined in table; <sup>G</sup> Percentage of time spent in intensity/percentage of sedentary time spent in breaks.

The bold numbers in the right hand columns tables represent that specific activity patterns which were examined at least four times.

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