

Investigating the Impact of SSRIs on Cardiovascular Risk Factors in Young Healthy Individuals: A Preliminary Study

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ABSTRACT

Selective serotonin reuptake inhibitors (SSRIs) are a class of antidepressants that are commonly used to treat anxiety, depression, and other psychological disorders. The effects of SSRIs on cardiometabolic health in young and healthy populations have not been well described. **PURPOSE:** We evaluated the effects of SSRI use on blood pressure (BP), heart rate variability (HRV), arterial stiffness, and microvascular function, of young, otherwise healthy adults. **METHODS:** Fourteen healthy males and females aged 18-41 were included in this study, separated by use of SSRIs, and matched into pairs based on sex, age, height, and weight. Anthropometrics, BP, arterial stiffness, HRV, near-infrared vascular occlusion test (NIRS-VOT), and blood lipid profile were assessed. Framingham CVD risk scores and heart ages were then calculated. **RESULTS:** Participant characteristics were not different between groups ($p>0.05$). There were no significant differences in central or peripheral BP dependent on SSRI use ($p>0.39$, Cohen's $d<0.48$). There were no significant differences in HRV between groups ($p>0.43$, Cohen's $d<0.44$), except for HFpeak which was 0.20 ± 0.05 Hz in SSRI users and 0.28 ± 0.06 Hz in non-users ($p=0.04$, Cohen's $d=1.26$). There were no significant differences in microvascular reactivity between groups ($p>0.21$, Cohen's $d<0.81$), however, slope 2 was greater in non-users at $1.98\pm 1.09\%/s$ vs. $1.15\pm 0.93\%/s$. There were no significant differences found in lipid panels ($p>0.22$, Cohen's $d<0.09$) or Framingham risk scores ($p>0.68$, Cohen's $d<0.14$) between groups. **CONCLUSION:** SSRI use does not appear to have any significant effects on blood pressure, heart rate variability, arterial stiffness, microvascular function, or lipid profile in young healthy individuals.