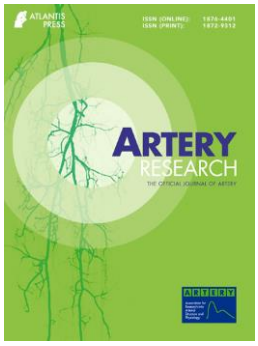

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PO-19: ASSOCIATIONS OF WALKING WITH SARCOPENIC OBESITY AND CARDIOVASCULAR DISEASE RISK FACTORS IN OLDER ADULTS

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(BPV) and baroreceptor sensitivity (BRS) can provide insight into aspects of autonomic function, particularly following an aerobic exercise bout.
Purpose: To examine BPV and BRS in normotensive obese individuals in response to aerobic exercise.
Methods: Normal-weight (n=8; 25 yr; 23.0 kg/m^2) and obese individuals (n=9; 27 yrs; 32.2 kg/m^2) performed a 60-min leg cycling exercise at 60% of VO_{2peak}. Beat-by-beat blood pressure was recorded at baseline, immediately post-exercise and 30 min into passive recovery using finger plethysmography. R-R intervals were obtained at 1,000 Hz with a digital acquisition system. Power spectral analysis was conducted using WinCPRS software for estimates of BPV (very low and low frequency (VLF, LF), and systolic and diastolic deviation (SDev, DDev)). BRS was estimated using the sequence technique. Natural log-transformed was performed on LF BPV (LnLF) to account for non-normal distribution.
Results: HR increased from baseline similarly in both groups ($p<0.05$). The control group decreased SBP at immediately post-exercise compared to baseline measurements ($p<0.05$), but not the obese group. A main effect of time and group ($p<0.05$) existed for BRS. No group differences were found on DBP, LF, LnLF, VLF, SDev and DDev.
Conclusion: The results showed no difference in the BPV indices between the obese and control groups. The different response in SBP suggests that control group may have better BRS; however, this is not supported by the lower values in BRS. A limitation of this study may be the small number of participants.

	Control			Obese		
	Baseline	Immediate	30min	Baseline	Immediate	30min
HR (bpm)*	66 ± 11	88 ± 12	80 ± 12	60 ± 6	79 ± 11	74 ± 11
SBP (mmHg)*#&	116 ± 11	104 ± 8^{abc}	115 ± 9	122 ± 5	119 ± 6	122 ± 4
DBP (mmHg)	64 ± 10	64 ± 4	68 ± 7	69 ± 5	71 ± 5	72 ± 5
Raw LF (mmHg2)	9.00 ± 5.37	15.91 ± 15.03	15.24 ± 12.29	5.23 ± 4.65	6.89 ± 4.93	9.64 ± 8.13
LnLF (mmHg2)	2.07 ± 0.53	2.40 ± 0.89	2.41 ± 0.89	1.37 ± 0.75	1.73 ± 0.66	1.89 ± 0.98
VLF (mmHg2)	20.83 ± 14.39	29.63 ± 19.77	22.69 ± 13.67	11.91 ± 7.96	18.68 ± 14.70	15.29 ±10.87
BRS (ms/mmHg)*#	15.95 ± 7.92	5.20 ± 3.48	8.05 ± 4.52	19.38 ± 6.79	12.74 ± 8.70	14.49 ± 7.79
SDev (mmHg)	5.61 ± 1.75	7.14 ± 2.71	6.36 ± 2.25	4.77 ± 1.48	5.83 ± 2.42	5.50 ± 2.02
DDev (mmHg)	3.70 ± 1.08	4.06 ± 1.56	3.84 ±.31	3.67 ± 1.33	4.18 ± 1.67	3.90 ± 1.30

All data are mean ± SEM. *Time effect, # Group effect, & time x group effect, a Within-Subjects effect vs Baseline, b Within-Subjects effect vs 30min, c Between-Subject effect vs obese group.

PO-17
ROLE OF NITRIC OXIDE IN β_2-ADRENERGIC MEDIATED VASODILATION IN POSTMENOPAUSAL WOMEN

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Objectives: Postmenopausal (PM) women have a blunted β_2-adrenergic receptor-mediated responsiveness when compared to young premenopausal women in part due to a reduction in the relative contribution of nitric oxide (NO) to β_2-adrenergic mediated vasodilation. Hence, we tested the contribution of NO to β_2-adrenergic receptor-mediated vasodilation during terbutaline infusion.
Hypothesis: We hypothesized that the contribution of NO to β_2-adrenergic mediated vasodilation would be attenuated in PM women as compared to young women.
Methods: Venous occlusion plethysmography was used to measure forearm blood flow (FBF) in 7 healthy young premenopausal women and 9 healthy PM women (mean age = 27 ± 1 and 60 ± 1 years, respectively). FBF was measured at baseline and during terbutaline infusion at 0.1, 0.5, 1.0, 2.0 μg/100ml tissue/min before (with saline co-infusion) and during NO synthase inhibition with L-NMMA. Forearm vascular conductance was calculated from FBF and mean arterial pressure.
Results: In young women, there was a significant L-NMMA effect on forearm vascular conductance during terbutaline infusion with and without L-NMMA (1.7 ± 0.14, 3.56 ± 0.41, 7.13 ± 1.11, 7.87 ± 0.74, 10.54 ± 1.81 versus 2.08 ± 0.28, 5.54 ± 0.50, 9.32 ± 1.10, 10.77 ± 1.49, 13.29 ± 1.94 ml/100ml tissue/min/mmHg, respectively). However, there was no effect of L-NMMA in PM women during terbutaline infusion with and without L-NMMA (1.34 ± 0.26, 2.37 ± 0.32, 5.21 ± 0.99, 4.71 ± 0.99, 6.43 ± 1.37 versus 1.62 ± 0.31, 3.11 ± 0.55, 5.41 ± 1.12, 6.26 ± 1.38, 7.26 ± 1.44 ml/100ml tissue/min/mmHg, respectively).
Conclusions: These data suggest that NO contributes to β_2-adrenergic mediated vasodilation in young premenopausal women. In contrast, no contribution of NO to β_2 mediated vasodilation was observed in PM women. These data suggest a lower β_2-adrenergic responsiveness in PM women may be due to a reduced contribution of NO.

PO-19
ASSOCIATIONS OF WALKING WITH SARCOPENIC OBESITY AND CARDIOVASCULAR DISEASE RISK FACTORS IN OLDER ADULTS

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Objectives: To investigate the associations of walking (steps/day) with sarcopenic obesity (SO) and cardiovascular disease (CVD) risk factors in older adults.
Methods: This cross-sectional study included 297 older adults aged ≥65 years (mean age 72, ranged 65-95). Walking was assessed using an accelerometer (Omron HJ-321) and categorized into thirds (tertile) based on the average daily steps. SO was defined based on physical function (gait speed), muscle strength (handgrip strength), and muscle mass (appendicular lean mass [ALM] index) according to the Foundation for the National Institutes of Health Sarcopenia Project diagnostic criteria, and % body fat (obesity as ≥25% in men and ≥30% in women) using Dual Energy X-Ray absorptiometry.
Results: Each 10,000 steps/day increase was associated with improved SO variables and CVD risk factors, specifically with 0.008 faster gait speed (m/s), 0.006 higher muscle mass index (ALM/BMI), 0.59 lower % body fat (%), and 0.68 lower fasting glucose (mg/dl)(all $p<0.05$) in the linear regression after adjusting for age, sex, smoking status, and alcohol intake. Compared to low walking group, odds ratios (ORs)(95% confidence intervals [95% CIs]) in moderate and high walking groups were 0.18 (0.02-1.54) and 0.22 (0.03-2.01) for slow walking, 0.42 (0.14-1.30) and 0.34 (0.09-1.29) for weak handgrip strength, 0.45 (0.23-0.87) and 0.44 (0.22-0.88) for low muscle mass, 0.58 (0.13-2.57) and 0.46 (0.11-2.06) for high % body fat, and 0.62 (0.17-2.28) and 0.21 (0.02-1.78) for SO, respectively, in the multivariable logistic regressions. Compared to individuals without SO, ORs (95% CIs) in individuals with SO were 2.04 (0.58-7.18) for hypertension, 1.27 (0.39-4.22) for hypercholesterolemia, and 1.87 (0.37-9.45) for type 2 diabetes in the multivariable logistic regression. However, these associations appeared to be weaker after further adjustment for walking (steps/day).
Conclusion: This study suggests that walking in older adults is associated with lower risks of SO and CVD risk factors.

PO-20
A HYDROGEN SULFIDE PRODRUG AUGMENTS ANGIOGENESIS IN A SWINE MODEL OF CRITICAL LIMB ISCHEMIA VIA A NITRIC OXIDE DEPENDENT MECHANISM

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Introduction: Despite advances in revascularization, treatments for critical limb ischemia (CLI) have been largely unsuccessful. Hydrogen sulfide (H_2S)