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relative work (low-fitness) (154±22 vs. 133±15 mmHg, p<0.001). The high-
fitness group had greater stroke volume, lower heart rate and LV longitudinal
strain compared to the low-fitness group (72±18 vs. 39±15 ml, 61±9 vs.
68±10 bpm, p<0.05 for all). Exercise systolic BP was asso-
ciated with LV mass index independent of resting BP, age and sex in the low-
fitness group during stage one of the PWCV170 ($\beta=0.13$, 95% CI=0.01-0.3) but
not in the high-fitness group at any stage.

Conclusions: Sub-maximal exercise systolic BP independently relates to LV
mass index in those with low, early stage-relative aerobic capacity. BP
measured during submaximal exercise testing (light-intensity) may reveal
early changes in hypertension-related organ damage that are more evident
in people with low-fitness.

P3.2
ROGOZA INDEX IN HEALTHY VOLUNTEERS AS A FUNCTION OF AGE
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Background: Recently, prof Anatoly N Rogoza proposed a new vascular index
calculated from one-channel volume physmography of brachial artery,
Rogoza’s index or Rogoza Index. It may be useful as a new indicator of
asymptomatic vascular damage associated with cardiovascular risk in
patients with hypertension.

Objective: This study provides just an idea about the Rogoza Index in healthy
volunteers as a function of age and sex.

Methods: The object of the study was the set of 120 bpw-flies (BPLab format)
with oscillometric ambulatory (24-h) blood pressure readings in
age-matched group of 60 male and 60 female healthy volunteers. Rogoza In-
dex (ms/cm) was calculated as $\frac{1}{R}\sqrt{\frac{T}{L}}$ where $R$ is reflected wave
transit time (ms) and $L$ is height (cm).

Results: Averaged 24-h Rogoza Index was 1.1855–0.0063 Age (r=−0.30)
for men and 0.9326–0.0025 Age (r=−0.27) for women; averaged daytime
Rogoza Index was 1.2054–0.0067 Age (r=−0.32) and 0.90989–0.0022 Age
(r=−0.22) and nighttime 1.1412–0.0049 Age (r=−0.24) and
1.0076–0.0033 Age (r=−0.31) accordingly. All correlations are significant,
p<0.05.

There was also a significant difference between Rogoza Indices in male and
female subgroups: for 24-h period Rogoza Index was of 0.88 vs 0.80 ms/cm
(mean, p=0.002); for daytime of 0.79 vs 0.87 ms/cm (p=0.001); and for
nighttime of 0.84 vs 0.90 ms/cm (p=0.002).

Conclusions: Rogoza Index is sex- and age-dependent like other surrogate
indices of arterial stiffness.

P3.3
THE CKD273 URINARY PROTEOMIC BIOMARKER FOR EARLY DIAGNOSIS OF
DIABETIC NEPHROPATHY DOES NOT INDICATE GENERALISED
SUBCLINICAL VASCULAR DISEASE IN NORMOALBUMINURIC TYPE 2
DIABETIC PATIENTS
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Introduction: Patients with Marfan syndrome may suffer from a variety of
symptoms, including changes of the cardiovascular system. The aim of this
study was to perform ambulatory 24 hour blood pressure and pulse wave
measurements in a group of Marfan patients and a group of healthy controls
and to analyse wave reflections of the arterial system.

Methods: All measurements were obtained with the Mobi-li-O-Graph device.
Reflection magnitude (RM) was calculated with the inbuilt ARC遂ver algo-
rithms and averaged during daytime and nighttime. The study included 27
patients with Marfan syndrome and 27 healthy controls. Matching criteria
were age (39 years mean in both groups), sex (14 female) and daytime
brachial systolic blood pressure (119 mmHg mean in both groups). Patients
with Marfan syndrome were significantly taller than controls (190 cm vs.
174 cm).

Results: Reflection magnitude increased significantly during night in both
groups (Marfan: 57.8 day, 66.6 night; controls: 38.6 day, 68.7 night). Differ-
ences between groups were not significant both day and night. Correlations
between RM and body height were positive in Marfan patients (R=0.36 day,
R=0.33 night) but negative in controls (R=−0.47 day, R=−0.66 night),
showing a significantly different trend (p<0.01).

Conclusions: There are similar levels and diurnal changes of reflection
magnitude in patients with Marfan syndrome and healthy controls, but cor-
relations of RM to body height are significantly different in Marfans and
controls. This finding may relate to structural changes of the cardiovascular
system associated with Marfan syndrome.

P3.5
TYPE 2 DIABETES EXACERBATES CAROTID ARTERY ECHOCOGENICITY
AND CENTRAL ARTERY STIFFNESS IN MIDDLE-AGED AND OLDER INDIVIDUALS
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Grey scale median of the common carotid artery intima-media complex (IM-
GSM) characterizes the composition of the arterial wall and low IM-GSM
reflects more generalized atherosclerotic vulnerability. However, it is
unclear whether the presence of DM itself affects IM-GSM, similar to that
observed with aortic stiffness. We measured IM-GSM and aortic stiffness in
middle-aged and older individuals with and without DM. We included 264
individuals with DM (DM+; 67.0±8.9 yrs, 83F) and 226 individuals without DM
(DM−; 66.3±9.3 yrs, 81F). Ultrasound images of the common carotid artery
intima-media thickness (IMT) were obtained and IM-GSM was analysed using
semi-automated edge-detection software. Aortic stiffness was assessed by
carotid-femoral pulse wave velocity (cfPWV) using a SphygmoCor device.
IM-GSM was significantly lower in DM+ than DM− (130.6±1.5au vs
113.4±1.6au, p=0.05) after adjustment for age and sex. Adjustments for
cardiovascular disease (CVD), hypertension (HT), statin treatment and IMT
did not change the finding. cfPWV was significantly higher in DM+ than
DM− (10.2±1.0ms/s vs 9.1±1.0ms/s, p=0.05) after adjustment for age, sex
and mean arterial pressure. Adjustments for CVD, HT, statin treatment and heart
rate did not change the finding. With further adjustment for HbA1c, cfPWV
became similar between the groups, but IM-GSM remained lower in DM+ than
DM− (p=0.05). These results demonstrate that the presence of DM