Tab. 1. *Demographic and biochemical data*

N = 17	average ± SD
Age (year)	50.2 ± 8.1
Total body weight (kg)	92.37 ± 19.49
Lean mass (kg)	62.55 ± 7.46
Overall body fat mass (kg)	29.82 ± 12.71
Overall body fat mass (%)	31.34 ± 5.55
BMI (kg.m^{-2})	30.04 ± 6.50
Abdominal circumference (cm)	104.50 ± 9.96
Total testosterone (nmol/l)	11.45 ± 3.81 (6.9–26.1)
SHBG (nmol/l)	30.00 ± 11.62 (14.5–94.6)
Total cortisol (nmol/l)	491.87 ± 87.48 (118.6–618)
Total cholesterol (mmol/l)	5.34 ± 1.33 (3.2–5)
LDL-cholesterol (mmol/l)	3.68 ± 1.07 (1–3)
HDL-cholesterol (mmol/l)	1.19 ± 0.20 (1–2)
HOMA-IR	3.96 ± 2.99 (0.4–2.0)
Glucose (mmol/l)	5.44 ± 1.33 (3.3–5.6)
Insulin (mIU/l)	15.82 ± 10.35 (3–25)
Predicted Legress 1RM relative to lean mass (kg)	2.49 ± 0.44
Handgrip average (kg)	50.26 ± 7.68
*VO_{2max} (mlO_2.kg BW-1.min-1)	33.88 ±1.12

Data are presented as means of the group with standard deviations. Biochemical parameters were analysed from fasting morning plasma. Reference values for a local male population are in parentheses.
*BMI – Body Mass Index, SHBG – Sex Hormone Binding Globulin, LDL – Low Density Lipoprotein, HDL – High Density Lipoprotein, HOMA-IR – The Homeostatic Model Assessment – Insulin Resistance, *indirect assessment*

Physical function

Muscle strength of lower extremities was measured by predicted dynamic leg press 1RM from multiple repetition maximum testing (10) on seated leg press machine (Technogym, Italy). For upper extremities, handgrip strength was measured by best of the 3 trials with 60 second rest period after warming up with 3 trials (approximately 50 and twice 80 % of maximal voluntary contraction) with the resting period of 20 seconds using digital hand dynamometer (Camry, USA).

Cardio-respiratory fitness was measured by The Single Stage Treadmill (Woodway Pro, USA) Walking Test, which is a submaximal aerobic fitness test that estimates VO_{2max}. It is suitable for low risk, apparently healthy, non-athletic adults 20–59 years of age. The walking pace required throughout the test also makes it appropriate for participants who experience problems such as knee pain when exercising at a jogging pace. The test can be administered to moderate sized groups of participants with low to moderate fitness levels and requires only a treadmill and a HR monitor VO_{2max} was estimated from heart rate results of the walking test using protocols calculation (11).

Biochemical parameters

Fasting morning venous blood samples were collected between 8:00 AM to 10:00 AM into closed system collection tubes containing beads coated with a clotting activator and polyacryl ester-gel (Sarstedt AG & Co, Germany). The samples were centrifuged at 2 000 rpm for 10

Fig. 1. *Relationship between total testosterone levels and abdominal circumference (r = -0.639, p < 0.01*