undergo a similar CV assessment.The average age of the offspring and controls was 65 (61–73 years, 20 women and 18 men).
Results: The heart rate was significantly elevated as compared to the controls. In addition, the nightly normal blood pressure dip (>15%) did not occur in comparison with controls.

Circadian heart rate en blood pressure

	TTT-offspring (n=38)	Controls (n=38)	Significance level
Average systolic blood pressure (day)	160±32	159±21	NS
Average systolic blood pressure (night)	156±33	130±15	p<0.01
Average diastolic blood pressure (day)	96±26	91±11	NS
Average diastolic blood pressure (night)	91±29	80±16	p<0.05
Average heart rate (day) bpm	82±32	76±31	NS
Average heart rate (night) bpm	76±33	62±13	p<0.01

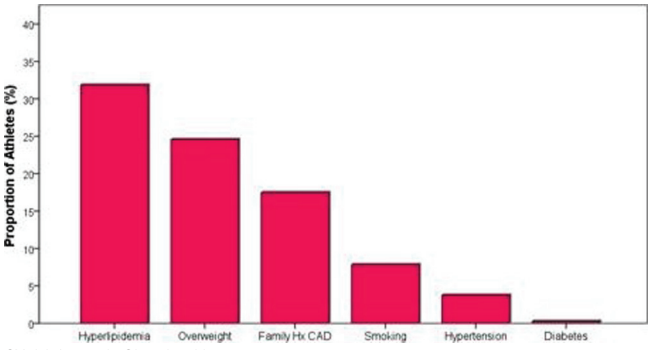
NS: not significant; bpm: beats per minute; blood pressure in mmHg. TTT = Transgenerational Transmission of Trauma.

Conclusion: This is the first study to report that first generation offspring is likely to suffer from transgenerational transmission of CV trauma.
The relevance for the second generation survivors in the TreeGenes Study is not limited to a warlike situation.It seems plausible that other populations (veterans, refugees etc.) will show a similar pathological CV response.

P4434
Cardiovascular risk profile in Olympic athletes: an unexpected and underestimated risk scenario

F. D'Ascenzi[1], S. Caselli[2], F. Alvino[1], E. Lemme[2], M. Piepoli[3], A. Pelliccia[2]. *[1]University of Siena, Department of Medical Biotechnologies, Division of Cardiology, Siena, Italy; [2]Institute of Sport Medicine and Science CONI, Rome, Italy; [3]Guglielmo da Saliceto Hospital, Piacenza, Italy*

Background: Prevalence of cardiovascular (CV) risk factors has been poorly explored in subjects regularly engaged in high-intensity exercise programs. Our aim was, therefore, to assess the prevalence and distribution of CV risk factors in a large population of competitive athletes, to derive the characteristics of athlete's lifestyle associated with the best CV profile.
Methods: 1,058 Olympic athletes (656 males, 402 females), consecutively evaluated in the period 2014–6, represent the study population. Prevalence and distribution of major CV risk factors was assessed, in relation to age, body size and sport.
Results: Dyslipidemia was the most common risk (32%), followed by overweight (25%), positive family history (18%), smoking habit (8%), hypertension (3.8%), and hyperglycemia (0.3%). Large subset of athletes (418, 40%) had none or 1 (414, 39%) risk factors, while only a few (39, 3.7%) had 3/4 CV risk factors. The group without risks was largely comprised of endurance athletes (34%). Aging was associated with higher total and LDL cholesterol, triglycerides (p<0.001) and glycemia (p=0.002), and lower HDL cholesterol. On multivariate logistic regression analysis, age, BMI and body fat were identified as independent predictors of increased CV risk.



CV risk factors in Olympic athletes

Conclusions: Dyslipidaemia and overweight are common in elite athletes (32% and 25% respectively). Only a minority (3%) presents a high CV risk, largely expression of unhealthy lifestyle. A large proportion (40%), of mostly endurance athletes, are totally free from risk factors. These athletes represent the reference model of "CV health" and the desirable target to manage abnormal risk profile in young/adult individuals.

P4435
The relationship between periodontitis, tooth loss and the presence of atherosclerotic cardiovascular diseases, cardiometabolic and skeletal diseases

A. Izawa[1], J. Suzuki[2], M. Takeda[3], H. Haishima[4], H. Ogawa[5], T. Sugiyama[5], J. Yamagishi[3], S. Takebuchi[5], T. Ohkubo[5], H. Kuneshita[5], Y. Inoue[5], T. Yokoyama[5], A. Sugiyama[3]. *[1]Shinshu University, School of Health Sciences, Matsumoto, Japan; [2]University of Tokyo, Tokyo, Japan; [3]Matsumoto City Medical Association, Matsumoto, Japan; [4]Matsumoto Dental University Hospital, Matsumoto, Japan; [5]Matsumoto City Dental Association, Matsumoto, Japan.* On behalf of the Dental and Medical Collaboration for the Advanced Medical Prevention in Matsumoto

Background: Periodontitis is a chronic inflammatory disease that causes tooth loss and is associated with systemic diseases. This study was aimed to examine relationships between oral health status and systemic diseases in a cohort of 6068 participants of periodontal screening in our city.
Methods: The numbers of teeth, and periodontal status according to the community periodontal index (CPI, 0–4) were investigated between April 2008 and March 2016. Participants were recruited if they had at least one National Health Insurance claim. Odds ratios (OR) and 95% confidence intervals (CI) for disease categories were calculated by the logistic regression analysis with multivariable-adjusted models.
Results: A total of 2574 participants (40.1% male, median age, 61 years, range 30–72) were recruited, and 56.2% of all had periodontitis of CPI level 3 (n=1086) or level 4 (n=360). The level of CPI was significantly associated with the presence of cerebral infarction: OR 1.132 (95% CI: 1.001–1.280, p=0.049). The total number of lost teeth was more significantly associated with the presence of myocardial infarction (OR 1.079: 1.033–1.127, p=0.001), angina pectoris, (OR 1.039: 1.015–1.063, p=0.001), aneurysm (OR 1.069: 1.015–1.125, p=0.011), and hypertensive diseases (OR 1.017: 1.000–1.035 p<0.001). Interestingly, the presence of diabetes and diabetic vascular complications were significantly associated with the number of lost teeth: diabetes (OR 1.022: 1.004–1.041 p=0.018), diabetic nephropathy (OR 1.051: 1.008–1.095, p=0.019), and diabetic retinopathy (OR 1.072: 1.034–1.112, p<0.001). Moreover, the number of lost teeth was significantly associated with the presence of abnormal bone density and structure (OR 1.051: 1.032–1.070, p<0.001), bone fracture (OR 1.042: 1.013–1.071, p=0.004), and spine disorders (OR 1.046: 1.029–1.064, p<0.001). Similarly, but inversely, the numbers of healthy teeth and remaining teeth were significantly associated with systemic diseases.
Conclusions: The number of lost teeth was significantly associated with the presence of atherosclerotic cardiovascular diseases, cardiometabolic and skeletal diseases. The relationship between oral health and systemic diseases is of great clinical importance in the future with an aging society.
Funding Acknowledgements: Astellas Research Support

P4436

ABSTRACT WITHDRAWN