Background and aims Preterm birth with very low birth weight.
Methods We studied the association of preterm birth with 24-hour ambulatory BP and variabilityof BP in 42 young adults (mean age 23.2y) born early preterm (=37 weeks) in Northern Finland population. Wake and sleep period were distinguished with accelerometry in 72.4% of subjects, and for others by time (awake 9 am-11 pm, sleep 01 am-07 am).
Results Adults born early preterm had 5.6 mmHg (95% CI 1.9–9.3) higher 24-hour SBP, 2.9 mmHg (0.4–5.4) higher 24-hour DBP, 6.4 mmHg (2.8–10.1) higher awake SBP and 4.0 mmHg (0.4–7.5) higher sleep DBP when adjusted for age, sex and use of an accelerometer. Adults born early preterm had also higher within-subject standard deviation (SD) of 24-hour SBP and DBP, awake SBP and DBP and sleep DBP (Figure). Also adults born late preterm had higher SD of 24-hour DBP and sleep SBP and DBP when adjusted for age, sex and use of an accelometer. When adjusted for maternal BMI, smoking during pregnancy and hypertensive pregnancy disorder, parental education, subject's height and BMI, physical activity and smoking, the results were somewhat attenuated.
Conclusions Higher 24-hour ambulatory blood pressure and variability of BP may indicate that adults born early preterm are in greater risk for later cardiovascular outcomes.

PS-163 ADULT SURVIVORS OF INTRAUTERINE TRANSFUSION FOR RHESUS DISEASE HAVE HEALTH AND SOCIOECONOMIC STATUS SIMILAR TO UNAFFECTED SIBLINGS

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Background and aims Intrauterine transfusion for rhesus disease is not uncommon, but long-term health and socioeconomic status in adulthood have not previously been reported. This study aimed to compare these outcomes in adult survivors of intrauterine transfusion to that of unaffected siblings.
Methods Participants were adults who received intrauterine transfusion for rhesus disease, and their unaffected sibling (s). Data regarding socioeconomic status, lifestyle and medical history were collected and compared using Chi-squared and T-tests.
Results Affected participants (n = 95) were younger than unaffected (n = 92) (mean ± SD 33.7 ± 9.3 vs 40.1 ± 10.9 years, p < 0.001) and born at lower gestation (34.5 ± 1.6 vs 39.5 ± 2.1 weeks, p < 0.001) but similar in sex distribution (%male: 54% affected vs 45% unaffected, p = 0.21). There were no differences between groups in socioeconomic status and lifestyle variables (Table 1), or health outcomes (Table 2).
Conclusions This study provides the first evidence that survivors of intrauterine transfusion for rhesus disease show no evidence of adverse effects on general health or socioeconomic status in early to middle adulthood.

Abstract PS-163 Table 1

	Affected n (%)	Unaffected n (%)	p-value
Professional occupation	33(35%)	37(40%)	0.44
Income >NZ$70,000*	37(54%)	38(55%)	0.94
Tertiary education	53(56%)	59(64%)	0.24
Married/*de facto* relationship	58(61%)	55(60%)	0.86
Non-smokers	55(58%)	51(55%)	0.73
Non-drinkers or social drinkers	37(39%)	44(48%)	0.22
≥2.5 h/week exercise	63(66%)	68(74%)	0.26

*n = 68 (affected); 69 (unaffected); NZ$70,000 = median household income in 2013

Abstract PS-163 Table 2

	Affected n (%)	Unaffected n (%)	p-value
Hypertension	15(16%)	20(22%)	0.30
Hyperlipidemia	11(12%)	11(12%)	0.94
Diabetes	2(2%)	0(0%)	0.10
Asthma/atopy	61(64%)	50(54%)	0.17
Other medical problems	29(31%)	27(29%)	0.86
Medication use	23(24%)	26(28%)	0.53

PS-164 RESTING STATE FUNCTIONAL CONNECTIVITY IN AMYGDALA-PREFRONTAL NETWORKS AND EMOTION PROCESSING IN ADULTS WHO WERE BORN VERY PRETERM

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Background and aim Preterm birth has been associated with psychiatric disorders involving emotion regulation, social competence and communicative skills throughout the first three decades of life. However, the exact neuro-anatomical mechanisms underlying socio-emotional impairments in individuals who were born very preterm (VPT) are still unknown. Therefore, the aim of this study was to investigate the functional integrity of an emotion-processing brain network comprising the amygdala and prefrontal cortex and to test whether it correlated with participants' capacity to recognise specific emotions.
Method 28 VPT born adults and 28 age-matched controls (mean age for both groups 29 years) were scanned at rest in a 3T scanner. Nuisance effects of head motion, whole-brain, CSF and white matter were removed from the preprocessed data and a seed-based analysis focusing on three amygdalar subregions (centro-medial/latero-basal/superficial) was performed using SPM8 (University College London). Participants' ability to recognise specific emotions was assessed using dynamic stimuli of human faces expressing six basic emotions at different intensities (Emotion Recognition Task - ERT).
Results Preliminary analysis of resting state functional connectivity MRI (fcMRI) data revealed that the centro-medial subdivision of the right amygdala showed less functional connectivity with the bilateral prefrontal cortex in preterm-born young adults compared to controls. Regarding performance on the ERT, the groups significantly differed in recognising anger in faces moving from a neutral expression to the lowest intensity of that emotion.
Discussion These findings suggest that reductions in the intrinsic connectivity between the amygdala and prefrontal cortex potentially underlie emotional deficits in preterm born individuals.