Background Worldwide, more than five million babies have been born as a result of assisted reproduction technology. Safety aspects are therefore crucial to consider.
Aim By review of the literature to assess if children conceived by assisted reproduction technology are at increased risk of somatic morbidity after the newborn period compared with spontaneously conceived children.
Methods Medline/Pubmed, Embase and The Cochrane Library were searched on May 20, 2013. Studies on assisted reproduction technology and post-neonatal somatic diseases were included in the systematic review. Furthermore, health care contacts, chronic illnesses, surgery, medication and mortality were considered. Cohort and case-control studies were included. To assess the risk of bias in the individual studies, quality of all studies were evaluated independently by two of the authors, using the Newcastle-Ottawa Scale. The PRISMA statement for systematic reviews was followed.
Results Thirty-eight studies, out of 819 identified studies, were included. Results indicate that children conceived by assisted reproduction technology are at increased risk of leukaemia and retinoblastoma, asthma and obstructive bronchitis, genitourinary diseases, and epilepsy or convulsions when compared with spontaneously conceived children. Furthermore, it appears that children conceived by assisted reproduction technology are hospitalised longer per admission, compared with spontaneously conceived children.
Conclusion Children conceived by assisted reproduction technology may be at increased risk of various somatic diseases in childhood compared with spontaneously conceived children.

PS-355 THE DIFFERENT CONTRIBUTIONS OF BODY MASS INDEX AND HEIGHT DURING THE LIFE CYCLE IN PREDICTING ADULT HYPERTENSION

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Background and aims Birthweight and weight gain have been associated with high adult blood pressure (BP). Less well known is the association between height gain across the life cycle and hypertension (HT). The objective of the present study is to assess the independent association of body mass index (BMI) and length at birth and BMI and height gains from birth to childhood, and from childhood to adulthood with adult blood pressure and HT.
Methods A prospective cohort of all living born in Ribeirão Preto, Brazil, was assessed at birth (1978/79), school-age (1987/89) and adulthood (2002/04). Data on neonatal variables, socioeconomic position and anthropometry of all three moments as well as adult risk factors for HT were present for 1141 subjects. Conditional weight analysis was performed to assess the independent association of BMI and height repeated-in-time measurements on adult HT.
Results After adjustments BMI at birth (inversely: RR = 0.58; 95% CI 0.35–0.96), BMI gain in adolescence (RR = 3.39; 95% CI 1.87–6.16) and height gain in childhood (RR = 1.95; 95% CI 1.12–3.38) were associated with adult HT. Adult systolic BP was associated with BMI at birth, BMI and height gains in childhood and adolescence. Diastolic BP was associated with BMI at birth, BMI gain in childhood and adolescence, and with height gain in childhood.
Conclusion Lower BMI at birth, higher height gain between birth and school age and higher BMI gain during the second decade of life were associated with adult HT. BMI and height also predict both systolic and diastolic blood pressure.
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PS-356 ASSOCIATION BETWEEN MATERNAL PRE-PREGNANCY BODY MASS INDEX AND SIZE AT BIRTH IN RIBEIRÃO PRETO, SÃO PAULO, BRAZIL

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Background and aims Fetal growth is determined partially by maternal characteristics such as pre-pregnancy weight. Maternal pre-pregnancy anthropometry is useful to estimate birth weight and the risk of various adverse perinatal outcomes. We studied the relationship between pre-pregnancy anthropometry and newborn size. We estimated the risk of low birth weight (LBW, <2,500 g) or high birth weight (HBW, ≥4,000 g), preterm (PT), small (SGA) or large (LGA) for gestational age in a birth cohort from Ribeirão Preto, Brazil, in 2010, according to maternal pre-pregnancy body mass index (BMI).
Methods A convenience cohort of 1370 pregnant women living in the city was evaluated between 22–25 weeks of gestation, and their respective newborns. Standardised questionnaires were applied during pregnancy and soon after birth. The dependent variables were LBW/HBW, PT and SGA/LGA. The independent variable was maternal pre-pregnancy BMI, classified as overweight (BMI between 25 and 29.9 kg/m^2) and obese (BMI≥30 kg/m^2). Logistic regression models were adjusted for biological, sociodemographic and pregnancy-related variables.
Results A high prevalence of overweight-obesity (39.6%) was observed and gestational weight gain was above international recommendations, especially among obese mothers. Overweight and obesity before pregnancy, according to pre-pregnancy BMI showed high risk of HBW (RR 2.1, 95% CI 1.09–3.68 and RR 2.58, 95% CI 1.36–4.91, respectively) and LGA infants (RR 1.96, 95% CI 1:10–3:49 and 3:47 RR, 95% CI 1.95–6.16, respectively), but not with LBW, SGA or PT.
Conclusions In this population, frequencies of overweight and obesity were elevated and were independently associated with HBW and LGA.
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PS-357 FIRST YEAR GROWTH IN RELATION TO PRENATAL EXPOSURE TO ENDOCRINE DISRUPTORS – A DUTCH PROSPECTIVE COHORT STUDY

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Background Growth in the first year of life may already be predictive of growth and obesity later in childhood. Early life exposure to endocrine disrupting chemicals (EDCs) has been associated with obesity in children and older populations.
Objective To assess the association between prenatal exposure to various EDCs and child growth in the first year of life.
Methods Cord plasma or breast milk was used to determine exposure to amongst others dichlorodiphenyldichloroethylene (DDE), mono (2-ethyl-5-oxohexyl) phthalate (MEOHP), and mono (2-ethyl-5-carboxypentyl) phthalate (MECPP). Data on weight and length until 11 months after birth was obtained. Mixed models were composed for each compound and health outcome. Exposure quartiles, time, and gender were added to the models as fixed effects. Subject was added as a random effect.
Results For MEOHP, boys in Q1 had a consistently higher BMI than higher exposed boys ($p = 0.029$). MECPP exposure was related to increased BMI over time in both boys and girls in Q1, though the association was not significant ($p = 0.117$). The effect of MECPP exposure on BMI was mainly due to weight, which was higher in the low exposed groups. For DDE interaction between time and exposure was significant ($p = 0.078$). For boys in particular, those with relatively low exposures had higher BMI curves during the first year.
Conclusion Low exposure to phthalates and DDE was associated with BMI during the first year after birth. Results were gender specific, and associations were mostly non-monotonic. Follow-up is warranted to see if these effects are persistent during childhood.

PS-358 EVALUATION OF PATIENTS WITH DIAGNOSIS OF FAMILIAL MEDITERRANEAN FEVER IN UMRANIYE REGION OF ISTANBUL

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Background and aims A retrospective evaluation of clinical findings and genetic analysis of patients with Familial Mediterranean Fever (FMF) in Umraniye region of Istanbul.
Methods 44 patients with FMF were evaluated retrospectively in the Department of Paediatrics between 2013–2014 years.
Results The mean age of 44 patients was 8.8 years. Female-male ratio was 1.2:1. The clinical characteristics of patients were recorded as fever (84%), abdominal pain (72.7%), recurrent infection story (47.7%), myalgia (43.1%), arthritis (15.9%; monoarthritis, 11.4%, polyarthritis 4.5%), pleuritis (11%), erysipelas-like erythema (7%), vasculitis (2.2%). MEFV gene analysis in patients has revealed 8 mutations. The most common mutation type was M694V (47.7%) followed by E148Q (38.6%), R202Q (15.9%), M680I (11.3%), V726A (9%), P369S (6.8%), M694I and K695 (2.2%), respectively. The M694V mutation was detected in 58% of homozygous mutations. Patients with homozygous M694V mutation have shown significantly more often joint complaints when compared to patients with other mutations. The joint complaint was usually seen in the form of monoarthritis. The clinical immigrant polyarthritis ratio was 2.2%.
Conclusions Although most previous genetic studies showed that M694V mutation was the leading locus of risk for developing amyloidosis, we couldn't determine amyloidosis in our study. In comparation with national studies, clinical signs of pleuritis, arthritis and erysipelas-like erythema determinated at lower rates in our study. The M680I mutation, which is very rare among Jews and relatively more prevalent in Aermenians and Arabs, was the fourth most common mutation in our study, although it was the second common mutation in nationwide studies.

PS-359 CROSS-CULTURAL STUDY OF ADAPTATION IN FAMILIES OF INDIVIDUALS WITH DOWN SYNDROME

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Background There is growing evidence that while some families of individuals with Down Syndrome (DS) find it difficult to adapt to the ongoing challenges associated with raising an individual with DS, others adapt successfully and some even thrive. However, few studies have examined the experiences of families living in different countries. Therefore, the aim of this study was to examine the influence of family factors on adaptation in families of individuals with DS living in four countries.
Methods The guiding framework for this study was the Resiliency Model of Stress, Adjustment and Adaptation. Over 800 parents of individuals with DS from Ireland, Portugal, UK, and USA completed a survey which included these measures: Family Index of Regenerativity and Adaptation- General; Family Management Measure; Family Problem Solving Communication Index and the Brief Family Assessment Measure. Linear mixed modelling was used accounting for intra-familial correlation and constant variance for the two parents. An adaptive modelling process was also used.
Results Family functioning was worse with greater family strains and incendiary communication and with lower condition management ability, affirming communication, and family hardiness. Parent wellbeing was worse with greater condition management effort, family strains, family stressors and incendiary communication and with lower condition management ability and family hardiness.
Conclusion Findings contribute to our understanding of the underlying processes associated with differing outcomes in families of individuals with DS. Efforts to intervene will be more effective if clinicians recognise how culture and family factors interact and shape how families respond.

PS-360 THE IMPACT OF CONGENITAL HEART DISEASE ON CHILDREN WITH DOWN SYNDROME ADMITTED FOR BRONCHIOLITIS

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Background and aims Children with Down Syndrome (DS) are reported to have increased morbidity due to bronchiolitis. We aim to study if congenital heart defects will have an impact on children with DS admitted for bronchiolitis.
Methods We identified children with DS with diagnosis of bronchiolitis from 2004 to 2012 from electronic records. We define congenital heart defects (CHD) as all congenital heart defects except small patent ductus arteriosus or small atrial septal defect.