NEWSLETTER

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Per la ricerca degli articoli pubblicati nella letteratura scientifica nel trimestre in esame sono state consultate le banche dati Medline, Embase, utilizzando le seguenti parole chiave (o i loro sinonimi): 'Birth Cohort', 'Primary Care', 'Infant', 'Child', 'Human', 'Newborn', 'Pediatrician', 'General pratice'. Sono qui riportate le referenze considerate rilevanti e pertinenti.

DALLE BANCHE DATI BIBLIOGRAFICHE

1. Lancet Child Adolesc Health 2020;4(3):201-209. doi:10.1016/S2352-4642(19)30424-9

ASSOCIATIONS BETWEEN EARLY-LIFE SCREEN VIEWING AND 24 HOUR MOVEMENT BEHAVIOURS: FINDINGS FROM A LONGITUDINAL BIRTH COHORT STUDY.

Chen B, Bernard JY, Padmapriya N, et al.

BACKGROUND: Screen viewing is a sedentary behaviour reported to interfere with sleep and physical activity. However, few longitudinal studies have assessed such associations in children of preschool age (0-6 years) and none have accounted for the compositional nature of these behaviours. We aimed to investigate the associations between total and device-specific screen viewing time at age 2-3 years and accelerometer-measured 24 h movement behaviours, including sleep, sedentary behaviour, light physical activity, and moderate-to-vigorous physical activity (MVPA) at age 5·5 years.

METHODS: The Growing Up in Singapore Towards healthy Outcomes (GUSTO) study is an ongoing longitudinal birth cohort study in Singapore, which began in June 2009. We recruited pregnant women during their first ultrasound scan visit at two major public maternity units in Singapore. At clinic visits done at age 2-3 years, we collected parent-reported information about children's daily total and device-specific screen viewing time (television, handheld devices, and computers). At 5·5 years, children's movement behaviours for 7 consecutive days were measured using wrist-worn accelerometers. We assessed the associations between screen viewing time and movement behaviours (sedentary behaviour, light physical activity, MVPA, and sleep) using Dirichlet regression, which accounts for the compositional nature of such behaviours. This study is active but not recruiting and is registered with ClinicalTrials.gov, NCT01174875.

FINDINGS: Between June 1, 2009, and Oct 12, 2010, 1247 pregnant women enrolled and 1171 singleton births were enrolled. 987 children had parent-reported screen data at either 2 or 3 years, of whom 840 attended the clinic visit at age 5·5 years, and 577 wore an accelerometer. 552 children had at least 3 days of accelerometer data and were included in the analysis. Total screen viewing time at age 2-3 years had a significant negative association with sleep (p=0·008), light physical activity (p<0·0001), and MVPA (p<0·0001) in relation to sedentary behaviour at age 5·5 years. Compared with children who spent 1 h or less per day screen viewing at age 2-3 years, children who screen viewed for 3 h or more per day at 2-3 years engaged in more sedentary behaviour (439·8 mins per day [≤1 h screen viewing time] vs 480·0 mins per day [≥3 h screen viewing time]), and less light physical activity (384·6 vs 356·2 mins per day), and MVPA (76·2 vs 63·4 mins per day) at age 5·5 years. No significant differences in time spent sleeping were observed between the groups (539·5 vs 540·4 mins per day). Similar trends were observed for television viewing and handheld device viewing.

INTERPRETATION: Longer screen viewing time in children aged 2-3 years was

associated with more time spent engaged in sedentary behaviour and shorter time engaged in light physical activity and MVPA in later childhood. Our findings indicate that screen viewing might displace physical activity during early childhood, and suggest that reducing screen viewing time in early childhood might promote healthier behaviours and associated outcomes later in life.
FUNDING: Singapore National Research Foundation, and Singapore Institute for Clinical Sciences, Agency for Science Technology and Research (A*STAR).

2. Environ Int. 2020;139:105692. doi:10.1016/j.envint.2020.105692

PRENATAL EXPOSURE TO MIXTURE OF HEAVY METALS, PESTICIDES AND PHENOLS AND IQ I CHILDREN AT 7 YEARS OF AGE: THE SMBCS STUDY.

Guo J, Wu C, Zhang J, et al.

OBJECTIVE: Prenatal exposure to heavy metals, pesticides and phenols has been suggested to interfere with neurodevelopment, but the neurotoxicity of their mixtures is still unclear. We aimed to elucidate the associations of maternal urinary concentrations of selected chemical mixtures with intelligence quotient (IQ) in children.
METHODS: Maternal urinary concentrations of selected heavy metals, pesticide metabolites, and phenols were quantified in pregnant women who participated in the Sheyang Mini Birth Cohort Study (SMBCS) from June 2009 to January 2010. At age 7 years, child's IQ score was assessed using the Chinese version of Wechsler Intelligence Scale for Children (C-WISC) by trained pediatricians. Generalized linear regression models (GLM), Bayesian kernel machine regression (BKMR) models and elastic net regression (ENR) models were used to assess the associations of urinary concentrations individual chemicals and their mixtures with IQ scores of the 7-year-old children.
RESULTS: Of 326 mother-child pairs, single-chemical models indicated that prenatal urinary concentrations of lead (Pb) and bisphenol A (BPA) were significantly negatively associated with full intelligence quotient (FIQ) among children aged 7 years [β = -2.31, 95% confidence interval (CI): -4.13, -0.48; p = 0.013, sex interaction p-value = 0.076; β = -1.18, 95% CI: -2.21, -0.15; p = 0.025; sex interaction p-value = 0.296, for Pb and BPA, respectively]. Stratified analysis by sex indicated that the associations were only statistically significant in boys. In multi-chemical BKMR and ENR models, statistically significant inverse association was found between prenatal urinary Pb level and boy's FIQ scores at 7 years. Furthermore, BKMR analysis indicated that the overall mixture was associated with decreases in boy's IQ when all the chemicals' concentrations were at their 75th percentiles or higher, compared to at their 50th percentiles. ENR models revealed that maternal urinary Pb levels were statistically significantly associated with lower FIQ scores (β = -2.20, 95% CI: -4.20, -0.20; p = 0.031).
CONCLUSIONS: Prenatal exposure to selected chemical mixtures may affect intellectual performance at 7 years of age, particularly in boys. Pb and BPA were suspected as primary chemicals associated with child neurodevelopment.

3. Front Pediatr 2020;8:192. doi:10.3389/fped.2020.00192

EARLY LIFE DOMESTIC PET OWNERSHIP, AND THE RISK OF PET SENSITIZATION AND ATOPIC DERMATITIS IN PRESCHOOL CHILDREN: A PROSPECTIVE BIRTH COHORT IN SHANGHAI.

Li C, Chen Q, Zhang X, et al.

BACKGROUND: Although domestic pet ownership is on the rise, the impact of early life pet ownership on children's pet sensitization and atopic dermatitis (AD) remains controversial.

METHODS: Shanghai Allergy Cohort is an ongoing prospective study followed up to the age of 5 years. Pregnant mothers were recruited and their offspring were followed up every year by a group of pediatricians. Information on furred pet ownership was collected by the questionnaire. AD was diagnosed by dermatologists according to disease history and Williams criteria at 5 years ± 1 months. Skin prick test (SPT) was performed to determine sensitization to specific allergens. Multiple logistic regression models were used to evaluate the associations between pet ownership and AD, dog/cat sensitization.

RESULTS: In the 538 children at preschool age, 112 (20.82%) were diagnosed with AD. Dermatophagoides pteronyssinus and Dermatophagoides farina were the most common allergens, and almost 10% of children were positive to dog and cat. The percentage of positive SPT reactors at 5-year old was 65.28% in the group of children with AD, higher than that in non-AD group (44.57%). Domestic pet ownership at both infant and preschool period was positively associated with an increased risk of sensitization to dog (OR adjusted = 2.85 [95% CI: 1.08–7.50 for infant exposure], OR adjusted = 2.73 [95% CI: 1.33–5.61] for preschool exposure), and interestingly, pet ownership at infant period negatively associated with higher risk of AD at 5-year old (OR adjusted = 0.33 [95% CI: 0.12–0.88]).

CONCLUSION: This is the first prospective birth cohort study in Shanghai that found half of preschool children had positive allergen sensitization even in the non-AD children. Although early life exposure to dog may increase the risk of dog sensitization, it significantly decreased the risk of AD. The underlying mechanisms warrant further investigations.

4. BMJ Open 2020;10. doi:10.1136/bmjopen-2019-033613

HEALTHY LIVING PRACTICES IN FAMILIES AND CHILD HEALTH: 5-YEAR FOLLOW-UP OF TAIWAN BIRTH COHORT STUDY.

Lin YC, Li YF, Chiang, TL.

OBJECTIVES. We have previously developed the Child Healthy Living Practices in Family (CHLPF) Index and found that the CHLPF Index was concurrently associated with the health of children at age 3. In this follow-up study, we aimed to examine whether healthy living practices in family at age 3 predicted health of children at school age.

DESIGN AND SETTING. Data came from the Taiwan Birth Cohort Study designed to assess the development and health of 24 200 children born in 2005. Participants A total of 18 553 cohort members whose mothers or primary caregivers had completed 6-month, 3-year, 5-year and 8-year surveys were included for analysis, representing a response rate of 87.3%.
OUTCOME MEASURES. A multiple logistic regression model was used to test the relationship between mother-rated children's health at age 8 and the CHLPF Index level, after controlling for sex, birth outcomes, family structure, parental education, residential area, family income and mother-rated child's health at age 3.
RESULTS. The percentage of mother-rated good health at age 8 was 79.7%. Compared with the low CHLPF level, the adjusted OR of mother-rated good health was 1.38 (95% CI 1.19 to 1.60), 1.21 (95% CI 1.10 to 1.35) and 1.17 (95% CI 1.07 to 1.29), respectively, for high, high-low and mid-low CHLPF levels. Moreover, the prevalence of mother-rated good health at age 8 with high-level CHLPF Index in the low-income group was similar to that of the high-income group (83.72% vs 84.18%); the prevalence with low-level CHLPF Index in the low-income group was much lower than that of the high-income group (70.21% vs 78.98%).
CONCLUSIONS. Our study underscores that high level of healthy living practices in early childhood is positively associated with good health at school age, particularly for children from disadvantaged families.

5. Midwifery 2020;86:102688. doi:10.1016/j.midw.2020.102688.
THE IMPACT OF PSYCHOSOCIAL FACTORS ON BREASTFEEDING DURATION IN THE BABI-STUDY. ANALYSIS OF A BIRTH COHORT STUDY IN GERMANY.
Ludwig A, Doyle IM, Löffler A, et al.

NO ABSTRACT AVAILABLE

6. Matern Child Health J 2020;24(7):943-952. doi:10.1007/s10995-020-02937-z
ARE SOCIAL STATUS AND MIGRATION BACKGROUND ASSOCIATED WITH UTILIZATION OF NON-MEDICAL ANTENATAL CARE? ANALYSES FROM TWO GERMAN STUDIES.
Ludwig A, Miani C, Breckenkamp J, et al.

OBJECTIVE: Non-medical antenatal care (ANC) refers to a range of non-medical services available to women during pregnancy aiming at supporting women and prepare them for the birth and the postpartum period. In Germany, they include antenatal classes, breastfeeding classes and pregnancy-specific yoga or gymnastics courses. Studies suggest that various types of non-medical ANC carry benefits for both the women and their babies. Little is known about the uptake of non-medical ANC among different socioeconomic population subgroups, but one may expect lower utilization among socio-economically disadvantaged women. We analyzed

factors contributing to the utilization of non-medical ANC in general and antenatal classes in particular.

METHODS: Baseline data of the Bielefeld BaBi birth cohort (2013-2016) and the Berlin perinatal study (2011-2012) were analyzed. Comparing the two cohorts allowed to increase the socio-economic and migration background variance of the study population and to capture the effect of the local context on uptake of services. Multivariate logistic regression analyses were performed to study associations between the uptake of non-medical ANC and socio-economic and migration status.

RESULTS: In Berlin and Bielefeld, being a first generation migrant and having lower levels of education were associated with lower non-medical ANC uptake. In Berlin, being a 2nd generation woman or having a low income was also associated with lower uptake.

CONCLUSIONS FOR PRACTICE: Our study suggests that non-medical ANC remains in some part the prerogative of non-migrant, well-educated and economically privileged women. Since differences in non-medical ANC have the potential to create inequalities in terms of birth outcomes and maternal health during pregnancy and post-partum, more efforts are needed to promote the use of non-medical ANC by all population groups.

7. *Acta Psychiatr Scand. 2020;10.1111/acps.13212.* doi:10.1111/acps.13212

CARDIOMETABOLIC RISK PREDICTION ALGORITHMS FOR YOUNG PEOPLE WITH PSYCHOSIS: A SYSTEMATIC REVIEW AND EXPLORATORY ANALYSIS.

Perry BI, Upthegrove R, Crawford O, et al.

OBJECTIVE: Cardiometabolic risk prediction algorithms are common in clinical practice. Young people with psychosis are at high risk for developing cardiometabolic disorders. We aimed to examine whether existing cardiometabolic risk prediction algorithms are suitable for young people with psychosis.

METHODS: We conducted a systematic review and narrative synthesis of studies reporting the development and validation of cardiometabolic risk prediction algorithms for general or psychiatric populations. Furthermore, we used data from 505 participants with or at risk of psychosis at age 18 years in the ALSPAC birth cohort, to explore the performance of three algorithms (QDiabetes, QRISK3 and PRIMROSE) highlighted as potentially suitable. We repeated analyses after artificially increasing participant age to the mean age of the original algorithm studies to examine the impact of age on predictive performance.

RESULTS: We screened 7820 results, including 110 studies. All algorithms were developed in relatively older participants, and most were at high risk of bias. Three studies (QDiabetes, QRISK3 and PRIMROSE) featured psychiatric predictors. Age was more strongly weighted than other risk factors in each algorithm. In our exploratory analysis, calibration plots for all three algorithms implied a consistent systematic underprediction of cardiometabolic risk in the younger sample. After increasing participant age, calibration plots were markedly improved.

CONCLUSION: Existing cardiometabolic risk prediction algorithms cannot be recommended for young people with or at risk of psychosis. Existing algorithms may underpredict risk in young people, even in the face of other high-risk features. Recalibration of existing algorithms or a new tailored algorithm for the population is required.

8. Archives of Disease in Childhood 2020;105:569–574. doi:10.1136/archdischild-2019-318212.

TEMPORAL TRENDS IN INCIDENCE OF ROLANDIC EPILEPSY, PREVALENCE OF COMORBIDITIES AND PRESCRIBING TRENDS: BIRTH COHORT STUDY.

Stephen J, Weir CJ, Chin RF.

OBJECTIVE: To examine temporal trends in incidence of Rolandic epilepsy (RE), prevalence of comorbidities and antiepileptic drug (AED) prescribing patterns.
DESIGN: Retrospective cohort study. SETTING: The UK.
PATIENTS: Children aged 0-16 years born 1994-2012 were followed from birth until September 2017, transfer to another general practitioner practice or death or practice withdrawal from The Health Improvement Network (THIN), whichever occurred first.
MAIN OUTCOME MEASURES: Incidence of RE, prevalence of comorbidity and AED prescribing patterns. Read codes for comorbidities and AEDs were adapted from other UK population-based epilepsy studies.
RESULTS: There were 379 children with first RE event recorded between 2000 and 2014 from active THIN practices with available mid-year population counts. Crude annual incidence across all years was 5.31/100 000 (95% CI 4.81 to 5.88). There was no significant time trend in adjusted incidence rate ratios (aIRR) (0.99/year, 95% CI 0.96 to 1.02). Males had higher aIRR (1.48, 95% CI 1.20 to 1.82) as did children aged 6-8 and 9-11 years compared with 4-5 years (aIRR 2.43, 95% CI 1.73 to 3.40; aIRR 2.77, 95% CI 1.97 to 3.90, respectively). There was recorded comorbidity in 12% with 6% with a recorded diagnosis of pervasive developmental disorder. Half of children with RE had a record of being prescribed AEDs.
CONCLUSIONS: UK incidence of RE has remained stable with crude incidence of 5/100 000/year. Carers and clinicians need to be aware that comorbidities may exist, particularly pervasive developmental disorders. Carbamazepine is consistently the most commonly prescribed AED for RE in the UK.

9. Am J Clin Nutr 2020;112(1):39-47.doi:10.1093/ajcn/nqaa055

MATERNAL GLYCEMIA DURING PREGNANCY AND OFFSPRING ABDOMINAL ADIPOSITY MEASURED BY MRI IN THE NEONATAL PERIOD AND PRESCHOOL YEARS: THE GROWING UP IN SINGAPORE TOWARDS HEALTHY OUTCOMES (GUSTO) PROSPECTIVE MOTHER-OFFSPRING BIRTH COHORT STUDY.

Tint MT, Sadananthan SA, Soh SE, et al.

BACKGROUND: Gestational diabetes is associated with unfavorable body fat distribution in offspring. However, less is known about the effects across the range of maternal gestational glycemia on offspring abdominal adiposity (AA) in infancy and early childhood.
OBJECTIVES: This study determined the association between gestational glycemia and offspring AA measured by MRI in the neonatal period and during the preschool years. METHODS: Participants were mother-offspring pairs from the GUSTO (Growing Up in Singapore Towards Healthy Outcomes) prospective cohort study. Children who underwent MRI within 2 wk postdelivery (n = 305) and/or at preschool age, 4.5 y (n = 273), and whose mothers had a 2-h 75-g oral-glucose-tolerance test (OGTT) at 26-28 weeks of gestation were included. AA measured by adipose tissue compartment volumes-abdominal superficial (sSAT), deep subcutaneous (dSAT), and internal (IAT) adipose tissue-was quantified from MRI images.
RESULTS: Adjusting for potential confounders including maternal prepregnancy BMI, each 1-mmol/L increase in maternal fasting glucose was associated with higher SD scores for sSAT (0.66; 95% CI: 0.45, 0.86), dSAT (0.65; 95% CI: 0.44, 0.87), and IAT (0.64; 95% CI: 0.42, 0.86) in neonates. Similarly, each 1-mmol/L increase in 2-h OGTT glucose was associated with higher neonatal sSAT (0.11; 95% CI: 0.03, 0.19) and dSAT (0.09; 95% CI: 0.00, 0.17). These associations were stronger in female neonates but only persisted in girls between fasting glucose, and sSAT and dSAT at 4.5 y.
CONCLUSIONS: A positive association between maternal glycemia and neonatal AA was observed across the whole range of maternal mid-gestation glucose concentrations. These findings may lend further support to efforts toward optimizing maternal hyperglycemia during pregnancy. The study also provides suggestive evidence on sex differences in the impact of maternal glycemia, which merits further confirmation in other studies.This trial was registered at clinicaltrials.gov as NCT01174875.

10. Pediatric Obesity 2020;15:e12647. doi:10.1111/ijpo.12647
DYNAMIC PREDICTION MODEL TO IDENTIFY YOUNG CHILDREN AT HIGH RISK OF FUTURE OVERWEIGHT: DEVELOPMENT AND INTERNAL VALIDATION IN A COHORT STUDY.
Welten M, Wijga AH, Hamoen M, et al.

BACKGROUND: Primary prevention of overweight is to be preferred above secondary prevention, which has shown moderate effectiveness.
OBJECTIVE: To develop and internally validate a dynamic prediction model to identify young children in the general population, applicable at every age between birth and age 6, at high risk of future overweight (age 8).
METHODS: Data were used from the Prevention and Incidence of Asthma and

Mite Allergy birth cohort, born in 1996 to 1997, in the Netherlands. Participants for whom data on the outcome overweight at age 8 and at least three body mass index SD scores (BMI SDS) at the age of ≥3 months and ≤6 years were available, were included (N = 2265). The outcome of the prediction model is overweight (yes/no) at age 8 (range 7.4-10.5 years), defined according to the sex- and age-specific BMI cut-offs of the International Obesity Task Force.
RESULTS: After backward selection in a Generalized Estimating Equations analysis, the prediction model included the baseline predictors maternal BMI, paternal BMI, paternal education, birthweight, sex, ethnicity and indoor smoke exposure; and the longitudinal predictors BMI SDS, and the linear and quadratic terms of the growth curve describing a child's BMI SDS development over time, as well as the longitudinal predictors' interactions with age. The area under the curve of the model after internal validation was 0.845 and Nagelkerke R(2) was 0.351.
CONCLUSIONS: A dynamic prediction model for overweight was developed with a good predictive ability using easily obtainable predictor information. External validation is needed to confirm that the model has potential for use in practice.

11. *Dev Med Child Neurol* 2020;62:30. doi:10.1111/dmcn.14469

THE INTERSECTION OF DEVELOPMENTAL VULNERABILITY AND SOCIOECONOMIC DISADVANTAGE ON HEALTH CARE ACCESS FOR PRESCHOOL AGED CHILDREN: THE INVERSECARE LAW.

Woolfenden S, Galea C, Badland H, et al.

OBJECTIVE: Children who are developmentally vulnerable have increased health needs. Socioeconomic disadvantage not only increases the risk of a developmental vulnerability but can be associated with less access to health services. Our aim was to compare health services use in children aged 4-5 years in Australia with and without developmentally vulnerability and consider the intersection of socioeconomic disadvantage on this relationship.
DESIGN: Cross sectional study.
METHOD: Data were collected from Wave 3 of the Longitudinal Study of Australian Children birth cohort when the children were aged 4-5 years. A composite variable for developmental vulnerability was designed by combining those children who were in the lowest 15% in the physical, socioemotional and/or learning outcome indices. Children were then sub-grouped according to developmental vulnerability and disadvantage based on socioeconomic position (SEP) quintile (derived from parental education, occupation, household income). We defined SEP 1 the lowest quintile as 'disadvantaged' and SEP quintiles 2-5 as 'not disadvantaged'. Multivariate regression was used to examine the intersection between health service use and developmental vulnerability and disadvantage using these composite variables.
RESULTS: The total number of children with information on developmental vulnerability in Wave 3 was 3967 (90% of the sample). A total of 1292 (32.6%)

children were classified as developmentally vulnerable. 30.6% of children who were developmentally vulnerable came from families who were socioeconomically disadvantaged. Overall children who were developmentally vulnerable were reported to use more specialist/ hospital health services than those who were not developmentally vulnerable (10-25% vs 5-16%). Children with developmental vulnerability who were not disadvantaged were 1.4 to 2.0 times greater odds to have reported to use a GP, paediatrician, other specialist, and Emergency Department compared with children who were developmentally vulnerable and disadvantaged. Children who were not disadvantaged regardless of developmentally vulnerability had 1.6 to 1.8 times greater odds of having reported use of a GP than children who were developmentally vulnerable and disadvantaged.

CONCLUSION: There is evidence of an inverse care law-that is those with the greatest health needs are the least likely to access services. Preschool children who were not disadvantaged with and without developmental vulnerability are more likely to use health services compared with children who are developmentally vulnerable and disadvantaged. For true equity, there needs to be enhanced services (more intense or delivered differently or financial barriers removed) for children in this most vulnerable group.

12. J Clin Endocrinol Metab 2020;105(7):dgaa211. doi:10.1210/clinem/dgaa211

MATERNAL GLYCEMIA DURING PREGNANCY AND CHILD CAROTID INTIMA MEDIA THICKNESS, PULSE WAVE VELOCITY, AND AUGMENTATION INDEX.

Yuan WL, Lin J, Kramer MS, et al.

BACKGROUND: In women without diabetes, little is known about the consequences of hyperglycemia during pregnancy for the offspring's cardiovascular structure and function.

OBJECTIVE: To investigate the association of maternal glycemia during pregnancy with cardiovascular risk markers in their children in GUSTO, a Singaporean birth cohort study.

METHODS: Around 26 weeks' gestation, a 75 g oral glucose tolerance test was performed and fasting plasma glucose (FPG) and 2-hour postprandial plasma glucose (PPPG) concentrations were measured. Gestational diabetes mellitus (GDM) was defined using WHO 1999 diagnostic criteria. At 6 years of age, we measured the child's carotid intima-media thickness (cIMT), carotid-femoral pulse wave velocity (cfPWV), aortic augmentation index (AIx), and blood pressure (BP). Association of maternal glycemia during pregnancy with cardiovascular risk markers in their children were analyzed using multiple linear and logistic regressions.

RESULTS: Analysis were performed on 479 mother-child dyads. Higher maternal FPG was associated with higher cIMT and, in males, with a higher cfPWV in the offspring (adjusted β [CI 95%], cIMT: 0.08 per 10mm increase [0.02; 0.15], cfPWV:

0.36 m/s [0.01; 0.70]). Higher 2-hour PPPG was associated with higher cfPWV and AIx. Gestational diabetes mellitus was associated with higher AIx. No association was found between maternal glycemia and their offspring blood pressure.

CONCLUSIONS: among mothers without pre-existing diabetes, higher glycemia during pregnancy was associated with mild structural and functional vascular changes in their children at 6 years of age across a continuum. These results support the necessity to monitor maternal glycemia during pregnancy even in the absence of pre-existing diabetes or diagnosed GDM.

COORTI STORICHE

13. J Hum Hypertens 10.1038/s41371-020-0339-z. doi:10.1038/s41371-020-0339-z
BLOOD PRESSURE LOAD PER BODY SURFACE AREA IS HIGHER IN WOMEN THAN IN MEN.
Korhonen PE, Palmu S, Kautiainen H, Eriksson JG.

Many unexplained sex differences have been observed in blood pressure (BP) related morbidity. However, there has been little research about the most obvious difference between men and women-body size. Given that blood vessels are organs of tubular shape, we hypothesized that correction of BP for body surface area (BSA), a two-dimensional measurement of body size, would allow comparison of BP load between men and women. We assessed the relationship of 24-h ambulatory BP measurements and BSA in 534 participants (mean age 61 ± 3 years, 51% women) from the Helsinki Birth Cohort Study. The study subjects had no previous medication affecting vasculature or BP. When BP values were adjusted for age, smoking, physical activity, and body fat percentage, males had higher ambulatory daytime mean systolic BP (131 mmHg vs. 127 mmHg, $p < 0.001$), diastolic BP (83 mmHg vs. 78 mmHg, $p < 0.001$), and mean arterial pressure (100 mmHg vs. 96 mmHg, $p < 0.001$) than females. However, all BP components per unit of BSA were significantly lower in males: daytime mean systolic BP (65 mmHg vs. 71 mmHg, $p < 0.001$), diastolic BP (41 mmHg vs. 44 mmHg, $p < 0.001$), pulse pressure (24 mmHg vs. 28 mmHg, $p = 0.013$), and mean arterial pressure (49 mmHg vs. 54 mmHg, $p < 0.001$). The same phenomenon was observed in night-time BP values. BP load per BSA is higher in women than in men, which may explain many reported sex differences in cardiovascular morbidity. Relatively small-sized individuals might benefit from a more aggressive therapeutic strategy.

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14. BMC Public Health 2020;20:708. doi:10.1186/s12889-020-08763-w
EARLY EXPOSURE TO SOCIAL DISADVANTAGES AND LATER LIFE BODY MASS INDEX BEYOND GENETIC PREDISPOSITION IN THREE GENERATIONS OF FINNISH BIRTH COHORTS.
Lowry E, Rautio N, Wasenius N, et al.

BACKGROUND: The study aimed to explore the association between early life and life-course exposure to social disadvantage and later life body mass index (BMI) accounting for genetic predisposition and maternal BMI.
METHODS: We studied participants of Helsinki Birth Cohort Study born in 1934-1944 (HBCS1934-1944, n = 1277) and Northern Finland Birth Cohorts born in 1966

and 1986 (NFBC1966, n = 5807, NFBC1986, n = 6717). Factor analysis produced scores of social disadvantage based on social and economic elements in early life and adulthood/over the life course, and was categorized as high, intermediate and low. BMI was measured at 62 years in HBCS1934-1944, at 46 years in NFBC1966 and at 16 years in NFBC1986. Multivariable linear regression analysis was used to explore associations between social disadvantages and BMI after adjustments for polygenic risk score for BMI (PRS BMI), maternal BMI and sex.

RESULTS: The association between exposure to high early social disadvantage and increased later life BMI persisted after adjustments (β = 0.79, 95% CI, 0.33, 1.25, p < 0.001) in NFBC1966. In NFBC1986 this association was attenuated by PRS BMI (p = 0.181), and in HBCS1934-1944 there was no association between high early social disadvantage and increased later life BMI (β 0.22, 95% CI -0.91,1.35, p = 0.700). In HBCS1934-1944 and NFBC1966, participants who had reduced their exposure to social disadvantage during the life-course had lower later life BMI than those who had increased their exposure (β - 1.34, [- 2.37,-0.31], p = 0.011; β - 0.46, [- 0.89,-0.03], p = 0.038, respectively).

CONCLUSIONS: High social disadvantage in early life appears to be associated with higher BMI in later life. Reducing exposure to social disadvantage during the life-course may be a potential pathway for obesity reduction.

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15. J Gerontol A Biol Sci Med Sci 2020;75(5):885-891. doi:10.1093/gerona/glz126

ASSOCIATIONS OF FAT AND LEAN BODY MASS WITH CIRCULATING AMINO ACIDS IN OLDER MEN AND WOMEN.

Mikkola TM, Salonen MK, Kajantie E, et al.

Circulating amino acids are potential markers of body composition. Previous studies are mainly limited to middle age and focus on either fat or lean mass, thereby ignoring overall body composition. We investigated the associations of fat and lean body mass with circulating amino acids in older men and women. We studied 594 women and 476 men from the Helsinki Birth Cohort Study (age 62-74 years). Bioelectrical impedance analysis was used to indicate two main body compartments by fat (fat mass/height2) and lean mass indices (lean mass/height2), dichotomized based on sex-specific medians. Eight serum amino acids were quantified using nuclear magnetic resonance spectroscopy. General linear models were adjusted for age, smoking, and fasting glucose. Higher lean mass index (LMI) was associated with higher concentrations of branched-chain amino acids in both sexes (p ≤ .001). In men, LMI was also positively associated with tyrosine (p = .006) and inversely with glycine (p < .001). Higher fat mass index was associated with higher concentrations of all branched-chain amino acids, aromatic amino acids (phenylalanine and tyrosine), and alanine in both sexes (p ≤ .008). Associations between body composition and amino acids are largely similar in older men and women. The associations are largely similar to those previously observed in younger adults.

SEGNALAZIONI:

A tutti i partecipanti al Progetto NASCITA

Carissime/i,
con la presente vi comunichiamo che, per ragioni organizzative e gestionali, l'inserimento dei bambini nella coorte NASCITA (**nuovi nati fino al 31 luglio 2020**) sarà possibile **FINO A DOMENICA 20 SETTEMBRE c.m.**
Procederemo quindi con le analisi dei dati e successivamente produrre un primo report.
RICORDIAMO quindi a tutti di verificare la completezza delle proprie schede inserite (attraverso il sistema di segnalazione nella sezione "lista bambini") e di comunicarci se avete avuto problemi nella compilazione o nell'invio dei dati.
Siamo a disposizione per qualsiasi chiarimento.
Grazie per la collaborazione.

ACP
ASSOCIAZIONE CULTURALE PEDIATRI

ACP 2020. INSIEME È MEGLIO

32° CONGRESSO NAZIONALE ACP

Piattaforma interattiva online, 17 ottobre 2020

:: SABATO 17 OTTOBRE

8.30 **Attivazione piattaforma**

9.00 **Introduce e modera** *Federica Zanetto*

9.15 **NASCITA (Coorte "Nascere e creSCere in ITAlia")**
Antonio Clavenna

9.30 **Le domande dalla sala virtuale**

9.45 **Newsletter ACP e Covid-19**
Costantino Panza

10.00 **I bambini nell'emergenza Covid-19 in USA**
Perri Klass

10.15 **I bambini nell'emergenza Covid-19 a Madrid**
Angel Carrasco

10.30 **Discussione**

11.00 *Pausa caffè*

Modera *Michele Gangemi*

11.15 **Le cure palliative pediatriche in Italia: stato dell'arte**
Franca Benini

11.30 **Il pediatra delle cure primarie e la sorveglianza evolutiva nei primi 3 anni di vita**
Maria Luisa Scattoni

11.45 **Discussione**

12.15 **Editoria Pediatrica**
I 50 anni di "Prospettive in Pediatria"
Fabio Sereni

"Tropici in ambulatorio"
Fabio Capello

13.00 ***Pausa pranzo***

14.30 **Assemblea sociale**

16.30 **Chiusura dei lavori**

La **votazione** per l'elezione di quattro consiglieri nazionali si svolgerà esclusivamente online a partire dal giorno 6 luglio 2020. Date le particolari modalità di svolgimento dell'assemblea congressuale 2020 (ai sensi e per gli effetti di quanto previsto dall'art. 106, D.L. 17 marzo 2020, n. 18), la votazione sarà possibile fino al giorno 14 ottobre 2020.

SEGRETERIA SCIENTIFICA
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Con il contributo tecnico-organizzativo di *Flavio Aganetto* – Netmedica Italia

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