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OBJECTIVE MEASURE OF PHYSICAL ACTIVITY AND TIME SPENT IN WATCHING TV IN RALATION TO WEIGHT STATUS IN PRIMARY SCHOOL CHILDREN

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Objective: To investigate the association of physical activity (PA) and time spent in watching TV with weight status in school children living in Tehran.

Methods: We conducted a cross-sectional study among school children aged 6-9 years. A representative sample of 30 boys and 42 girls participated in current study. PA was measured using Actigraph accelerometer for 7 consecutive days. Height and weight were directly measured using standardized equipment and the Centers for Disease Control and Prevention's (CDC) 2000 Growth Charts was used to calculate BMI percentiles. Overweight and obesity were defined according to the CDC cut-off values of 85th and 95th BMI percentile, respectively.

Results: No significant difference ($p > 0.05$) was found between boys and girls for body weight, BMI percentiles, 7 days and weekday activity counts, and time watching TV. Girls were older ($F = 24.32$, $P < 0.001$), taller ($F = 7.34$, $P = 0.008$) and had lower weekend activity counts ($F = 4.70$, $P = 0.02$) compared to boys. There was no significant correlation ($p > 0.05$) between time spent watching TV and PA. No significant difference ($p > 0.05$) was found between normal weight children compared to overweight and obese children for time in watching TV or PA.

Conclusions: Although the association between BMI with time spent watching television and a low PA has been shown in several studies, in the present study we were unable to show such an association. However, further researches are needed to address the true relationship between BMI with time spent watching television and PA activity in children.

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EXPRESSION OF E-CADHERIN AND BETA-CATENIN IN THE DEVELOPING LUNG AFTER PRENATAL ADMINISTRATION OF VITAMIN A

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Cadherin-catenin complexes stabilize adhesive contacts between the neighboring cells, direct actin cytoskeleton reorganization, and are tightly linked to several key signal transduction networks, which makes them crucial players during lung morphogenesis. Vitamin A and its derivatives (retinoids) are potent regulators of cell proliferation and differentiation essential for normal lung development. In order to investigate vitamin A influence on E-cadherin and beta-catenin during lung development we conducted an *in vivo* study in which pregnant mice were subjected to subcutaneous administration of vitamin A on the 12th gestational day. The lungs from control and treated animals were collected daily from the 15th gestational day till the 3th day of life and processed for routine immunohistochemistry. According to our results, beta-catenin expression was not changed by vitamin A administration, while the expression of E-cadherin increased. E-cadherin expression was significantly higher in the lungs of vitamin A-treated animals at the 15th and 18th gestational days, at the day of birth and at the first and second day of life. Our previous works showed that prenatal administration of vitamin A modified branching morphogenesis resulting in a more mature lung at the canalicular and subsequent stages of lung development, a feature that can be explained by its influence on the regulation of the correct size and shape of the epithelial growing buds in which the E-cadherin spatial and temporal expression is of pivotal importance.

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NUTRITIONAL OUTCOME OF SURGICAL NEONATES AFTER HOSPITAL DISCHARGE

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Background/Aims: Neonates who have undergone major gastrointestinal (GI) surgery are complex. They often require prolonged artificial nutritional

support and hospital stay. Little is known about the nutritional and growth outcomes of surgical neonates (SNs) post-hospital discharge. This study evaluates the prevalence of "failure to thrive" (FTT) in SNs after hospital discharge.

Methods: A retrospective analysis was done at Chelsea and Westminster Hospital, a tertiary referral centre for neonatal surgery. Babies who had major GI surgery over an 18-month period (1Jan2006-31Jul2007) were identified from unit's database. Further data were collated from medical case notes, dietetic records, parental satisfaction survey and physician feedback. FTT was defined as weight decreasing over 2 centile lines using unit's standardized growth centile chart.

Results: Sixty-five of 80 eligible infants were analysed. Keysurgical diagnosis included necrotizing enterocolitis, duodenal stenosis, tracheoesophageal fistula, Hirschsprung's disease and exomphalous. Nineteen SNs (29%) developed FTT, 12/19 as inpatients (4 with further growth impairment post-discharge) and 7/19 after discharge/transfer to local hospital. Twenty SNs (30.8%) were referred for dietetic follow-up after discharge for associated comorbidity e.g. FTT, gastroesophageal reflux, and milk intolerance and in 22/65 (33.8%) they required milk change post-discharge e.g. to a hypoallergenic or hypercaloric formula. Post-discharge FTT was common if babies only had surgical without co-existing neonatal follow-up.

Conclusion: SNs are shown to be at high risk of FTT even after discharge from hospital, and they require significant dietetic input. We recommend increased awareness of the potential comorbidities and ongoing provision of dedicated multidisciplinary nutritional and neurodevelopmental support for early identification and intervention.

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AFTER INFANT NUTRITION: WHAT'S GOING WRONG?

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Background and aims: Infant nutrition with breast and/or formula feeding is safe and enables to grow and develop well. According to programming hypothesis, nutrition onwards with general family nutrition may influence later health. Aim was to investigate energy

and nutrient intake of 12 to 36 month old children compared to general recommendations.

Methods: Austrian Mothers of children selected by chance where interviewed, a 3d-recall recorded [1] and calculated by DGE-PC on basis of BLS data bank. Daily average intake was compared with DACH references of age 1-4 years.

Results: In Austria 176 interviews were performed from 79m & 97f children; 167 evaluated. Average age 23,7mo, height 87cm, weight 11,94kg and 15.94 BMI. These consumed 96±33 kcal/d with 0,77±0,19kcal/g energy density. From protein they got 13,9±3,1%E or 3,2±1,1g/kg. Total water intake (food and beverage) was 107±43 ml/kg. Energy from fat was 28,2±6,3%E and 56,5±8,0%E from carbohydrates. With CH 26,9±16,2% Monosacch, 40,9±14,7% Polysacch and total Fibre 10,6±5,1 g/1000kcal were consumed. Ca was 655±290 mg/d and Fe 6,4±2,9mg/d. Some nutrients are critical because of low intake (Vit. D & E, Folic acid, Fe, J) and Na because of extreme high intake.

Conclusions: Children consume high energy, extremely high protein, have critical intake of essential nutrients. After safe infant nutrition they acquire disadvantages of family nutrition still in intense development with need of high quality nutrition. Appropriate recommendations & training of responsible persons are necessary for good development and better health in later life.

[1] Students of nutritional paedagogic, Pädagogische Hochschule Graz 2004

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THE RELATION OF OBESITY AND OVERWEIGHT WITH A PERSISTENCE OF NUTRITIONAL DEFICIENCY ON SCHOOL CHILDREN IN PARELHEIROS, SÃO PAULO, BRAZIL

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Objective: A sample of schoolchildren in a low socioeconomic level, the persistence of nutritional deficiency, overweight and obesity.

Methods: Cross-sectional study with a sample of 1761 students from three schools of basic education of Parelheiros, without distinction of sex or ethnicity.