

Internationally, only three studies to date have explored this inter-generational risk association with grandparents. We prospectively examine the relationship between infants' birth-weights and all-cause mortality of their grandparents.

Methods In 2001–2003 the cross-generation cohort study was established at antenatal stage with 1082 participating families, including 1184 grandparents (455 maternal-grandmothers, 271 maternal-grandfathers, 277 paternal-grandmothers and 181 paternal-grandfathers). Grandparents' morbidity and mortality was followed through cohort management. In 2010, the computerised death registry at the General Registrar's Office was searched for any grandparental deaths. HRs were calculated with Cox regression models, adjusted as appropriate for child's gestational age and gender, grandparent's age, mother's age, maternal smoking and height at pregnancy.

Results A total of 85 deaths were registered. An association between lower birth-weight infants (both <2500 g and <3000 g) and grandparental mortality was seen only in maternal line families. A U shaped association with maternal-grandmother's mortality was also consistently observed, but did not reach statistical significance, whether adjusted or not for maternal characteristics [LBW: adjusted-HR (95% CI)=4.2 (0.5 to 37.6); HBW: adjusted-HR (95% CI)=1.3 (0.4 to 4.0)]. Conversely, a significant direct relationship emerged between paternal-grandfather's mortality and higher birth-weight infants (≥ 4000 g) [HR (95% CI)=3.9 (1.2 to 12.0)]. Controlling for maternal characteristics at pregnancy did not attenuate the relationship, but rather strengthened the risk [adjusted-HR (95% CI)=4.5 (1.4 to 14.9)].

Conclusion These findings are consistent with other studies in showing that maternal and paternal lines of transmission of risk differ, meriting further genetic and possible nutrigenomic investigation.

P2-280 WATER AND SUGAR SWEETENED BEVERAGES CONSUMPTION AND CHANGE IN BODY MASS INDEX AMONG BRAZILIAN 4TH GRADERS AFTER ONE SCHOOL YEAR FOLLOW-UP

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Introduction Drinking water has been associated to weight loss in experimental controlled studies and also with reduced weight gain in observational studies, whereas sugar sweetened beverage (SSB) consumption is associated with weight gain, mainly among adolescents. We examined whether water consumption displace SSB and whether the changes in body mass index (BMI) was associated with water and beverage intake.

Methods A randomised school trial of 4th graders from 22 public schools of the city of Niterói, Rio de Janeiro, Brazil, followed students during one school year. Most of the 1134 participants were 10–11 years old. Baseline consumption of water and SSB were evaluated using a drinking frequency questionnaire and one 24-h recall.

Results At baseline, a higher frequency of drinking water was associated with a greater intake of juices ($p=0.02$) and sodas ($p<0.0001$). Baseline frequency of drinking water was negatively associated with one year weight change (regression coefficients of -0.21) comparing more than three glasses of water per day with <3 ($p=0.04$), whereas for an increase in one glass of juice there was an increase of 0.15 units of BMI ($p=0.002$). After adjustment for physical activity and mutually adjustment for water and SSB results were materially unchanged.

Conclusion Our findings confirm the protective effect of drinking water while drinking juices was a risk factor for BMI gain. There was no compensation between water and SSB consumption, therefore the marketing of increasing water consumption would not prevent the excessive weight gain.

P2-281 PREVALENCE OF HEARING LOSS IN HIV-INFECTED BRAZILIAN CHILDREN AND ADOLESCENTS

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Introduction Children and adolescents living with HIV/AIDS may suffer from a variety of hearing problems which are more frequent and sometimes more severe when compared to other children. The objective of this study was to estimate the prevalence of hearing loss and its risk factors in children and adolescents attending the Childhood HIV Treatment Institute (ICr).

Methods Audiologic evaluation was conducted on patients attending at the ICr. Otoscopy was completed prior to audiologic evaluation which was composed of pure tone audiometry, tympanometry and tests of acoustic reflexes. We used the Bureau International d'Audio Phonologie (BIAP) classification to classify hearing loss. The statistical analysis was done using χ^2 test and univariate and multiple logistic regression models.

Results The prevalence of hearing loss was 35.8%. From 106 patients, 22 (58.0%) had conductive hearing loss, 9 (23.6%) had mixed hearing loss and 7 (18.4%) had sensorineural hearing loss. The risk factors for hearing loss were the occurrence of suppurative otitis media (OR=5.7, $p=0.001$) and use of lamivudine (3TC) (OR=5.8, $p=0.028$).

Conclusion Hearing loss is an important side effect in children and adolescents with HIV/Aids. The occurrence of suppurative otitis media and the use of lamivudine contribute to hearing loss in this population. Early detection, evaluation and observation of hearing loss is extremely important in order to prevent severe auditory sequelae.

P2-282 HEARING COMPLAINTS IN HIV-INFECTED BRAZILIAN CHILDREN AND ADOLESCENTS

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Introduction Hearing complaints are important signs that may indicate occurrence of hearing loss. Children and adolescents with HIV/AIDS presents some hearing complaints which are more frequent and sometimes more severe when compared to other children. The objective of this study was to describe the prevalence of hearing complaints in children and adolescents attended at the Childhood HIV Treatment Institute (ICr).

Methods We evaluated 106 patients who are currently attending at the ICr. All information was obtained from parents' interview and hearing evaluation. The χ^2 test was performed.

Results Males represented 53.8% of patients. Age ranged from 5 to 19 years (mean: 13 years) and most frequent age group was