

outcome including increases risk of spontaneous abortion, stillbirth, low birth weight, preterm delivery and sudden infant death syndrome. ETS exposure after birth can increase the risk of sudden infant death syndrome, respiratory infections, asthma, middle ear diseases or even cancer and it can cause neurodevelopmental and behavioural problems in children.

The aim of the study was to evaluate the prenatal and postnatal child exposure to environmental tobacco smoke.

Material and methods: The study population consisted of 150 women from Lodz, Poland among which detail questionnaires were conducted three times during pregnancy period. From all women included into the study the saliva sample was collected to verify smoking status in pregnancy. One and two years after delivery additional questionnaires were performed and urine sample from all children was collected. The cotinine level in saliva and urine was analyzed using Liquid Chromatography with Tandem Mass Spectrometry (LC-MS/MS ESI⁺).

Results: About 22% of the children were exposed to ETS during prenatal and 46% in postnatal period. Cotinine level in children's urine statistically differentiated children from smoking mothers (geometric mean (GM) 11.4 ng/ml; 95% CI 7.1-18.3) and in exposed homes (GM 7.3 ng/ml; 95% CI 3.6-15.0) compared with non-exposed homes (GM 1.3 ng/ml; 95% CI 0.9-1.7) ($p < 0.001$).

Conclusions: Children should be more protected from ETS exposure in prenatal and postnatal period.

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ENVIRONMENTAL TOBACCO SMOKE EXPOSURE, PREGNANCY OUTCOMES AND CHILDREN'S HEALTH

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Aim: The aim of the study was to analyze the influence of environmental tobacco smoke exposure on pregnancy outcome and children's health.

Material and methods: The study population consisted of pregnant women and their children followed up to two years of life. Pregnant women were interviewed three times during pregnancy.

From all women included into the study the saliva sample was collected. Assessment of child ETS exposure within two years after birth was based on questionnaires, confirmed by biochemical verification of cotinine level in child urine. Cotinine level in biological samples was analyzed using Liquid Chromatography with Tandem Mass Spectrometry. Pregnancy outcomes were noticed by neonatologist. The children's health focused on anthropometry indicators and the incidences of respiratory infections and allergy was performed by pediatricians during the first and second year of life.

Results: For the lower cotinine levels in saliva (up to 10 ng/ml) we observed increasing trend in birth weight, head and chest circumference with the increasing level of cotinine (p trend < 0.05). For the cotinine level higher than 10 ng/ml we noticed decreasing trend for birthweight, head and chest circumference as the level of this biomarker increased. The newborn length decreased with the increasing cotinine level in saliva (p trend < 0.001). There were no statistically significant associations between ETS exposure and anthropometric measurements within first two years of life. Such exposure increases the risk of pneumonia but the results were not statistically significant.

Conclusions: All effort should be taken to eliminate the child ETS exposure.

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GROWTH PATTERNS IN DUTCH CHILDREN WITH DOWN SYNDROME

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Objective: The majority of children with Down syndrome (DS) have concomitant disorders, such as congenital heart defects (CHD), celiac disease, and hypothyroidism. We aim to establish growth patterns of height in Dutch children with DS, while taking into account the influence of the concomitant disorders.

Methods: Out of the 30 regional outpatient clinics for children with DS in the Netherlands 25 participated. Children with Trisomy 21 karyotype of Dutch descent

born after 1982 were included. Growth data were retrospectively collected from their medical records, as were data on concomitant medical conditions and treatments administered. The LMS method was applied to fit the growth references.

Results: We enrolled 1,596 Dutch children with Trisomy 21 (56% boys). Children with DS without concomitant disorders and children with DS who suffer from only mild CHD showed similar growth patterns. Reference growth curves were therefore fitted from all measurements (n=3,728) of these subgroups. Mean final height was determined at 163 and 152 cm, respectively in boys and girls with DS. On the reference growth curves of the general Dutch population, the DS curves roughly follow the -2 SDS line with a deflection to the -2.8 SDS line after the age of 12 years.

Conclusions: Children with DS without concomitant disorders and those with only a mild CHD show similar growth patterns of height. As compared to the general Dutch population, they are of short stature with an increasing height difference at older ages.

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CHANGING PATTERN OF NEONATAL MORTALITY OF VLBW INFANTS IN CROATIA IN 1998-99 AND TEN YEARS LATER - POPULATION SURVEY

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Aim: Analysis of VLBW newborns' mortality and comparison over ten-year period.

Methods: Data were collected from nurseries and NICUs, embracing all VLBW newborns in Croatia.

Results: Total of 663 VLBW newborns born in 1998-99, and 345 who were born in 2008, are analyzed. Early neonatal mortality (ENM) and mortality to discharge from hospital (MDH) are shown in the table.

birth weight (g)	early neonatal mortality		later mortality		mortality to discharge from hospital	
	1998-99 year	2008 year	1998-99 year	2008 year	1998-99 year	2008 year
500-599	92,3%	72,2%	7,7%	22,2%	100,0%	94,4%
600-699	87,5%	77,8%	12,5%	0,0%	100,0%	77,8%
700-799	87,5%	46,4%	2,4%	10,7%	90,2%	57,1%
800-899	60,0%	20,0%	26,0%	22,8%	86,0%	42,9%
900-999	46,8%	16,2%	15,2%	5,4%	62,0%	21,6%
1000-1249	37,0%	9,6%	10,6%	2,4%	47,6%	12,0%
1250-1499	20,0%	2,4%	6,2%	0,0%	26,2%	2,4%

[VLBW newborns' mortality]

Conclusions: ENM and MDH are reduced over the time.

Efforts of neonatal services to reduce neonatal mortality could be realized as excess of "later mortality", neonatal services in BW groups of 500-599 g, 700-899 g reduced ENM substantially more than MDH.

Apart of increased knowledge and experience in intensive care of newborns, as well as better equipment in maternities and NICUs, important increase in proportion of VLBW newborns who were born in maternities with NICU occurred, from 61% in 1998-99 to 81% in 2008. Extent of contribution of increased regionalization of perinatal care to reduction of neonatal mortality is unknown.