IMPACT OF INCREASED FLUORIDE CONCENTRATIONS IN WATER ON BONE TISSUE FUNCTIONAL STATE, TEETH, […]

XI Zjazd Polskiego Towarzystwa Osteoartrologii i Polskiej Fundacji Osteoporozy
V Krakowskie Sympozjum Osteoporozy
Kraków 27-29.09.2001

Streszczenia:
Materiały kongresowe: STRESZCZENIA, s153.
Druk: Drukarnia Skinder, ISBN – 83-904008-5-5
oraz

Osteoporosis International 2001; vol. 12 (Suppl 1), s38.

P070

IMPACT OF INCREASED FLUORIDE CONCENTRATIONS IN WATER ON BONE TISSUE FUNCTIONAL STATE, TEETH, ANTHROPOMETRIC PARAMETERS AND PHYSICAL DEVELOPMENT OF TEENAGERS (WPŁYW PODWYŻSZONEGO STĘŻENIA FLUORU W WODZIE NA STAN TKANKI KOSTNEJ, ZĘBÓW, PARAMETRY ANTROPOMETRYCZNE I ROZWÓJ FIZYCZNY NASTOLATKÓW)

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The aim of this research is to study structural-functional state of bone mass, teeth, state of factual feeding, anthropometric parameters and physical development of children and teenagers residing in regions with high Fluoride content in water. 103 children, aged 10-15 years (48 boys and 55 girls) from the residential areas A, B and C where Fluoride content in environment was increased were inspected during the study. It was discovered that the Fluoride level in the water of towns B and C was 2-5 times higher than normative, and in local wells the level differed within bounds of residential area. Lower level of calorie content,

insufficient protein consumption and low level of microelements, unbalanced consumption of carbohydrates and fats characterize a daily ration of teenagers from all towns. The excessive F concentration in water (max – up to 3,51 ml/l in town C) leads to development of dental fluorosis, frequency and degree of which depends on Fluoride level in drinking-water, on the background of normal indexes of structural-functional state of bone tissue. For children residing in region with increased Fluoride content in drinking-water delay of physical development of boys and disharmonious physical development of girls are rather typical. The anthropometric examination of children revealed particular somatotypes of children from different towns, but to study them would be the task of further investigations. The increased Fluoride content in water negatively influences peak bone mass formation and physical development as well as dental state and calls for arrangements of primary and secondary prophylaxis of osteoporosis and fluorosis.