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Active motion in childhood and adolescence is that very important factor for building up and maturing of the bone-skeletal system. With view to realization of the so called „strategic" (in childhood and adolescence) osteoporosis prevention, the study aimed to establish the level of physical activity in adolescents, hypodynamia signs and other unfavorable phenomena as risk factors for disturbed bone health. The studied group consisted of 773 adolescents, 14 – 18 years of age, from secondary schools. The study used anthropometric, questionnaire and psychological methods. A number of shortcomings are found in the system of physical exercises in the Bulgarian school. The students whose physical activities are restricted
to school sports lessons form a large group at risk with marked signs of hypodynamia (50.98%). The processes of growth, maturing and development of the bone and muscle system in this group are disturbed. The physical development and physical capacity are at a statistically significant lower level (p <

0.001), the age annual dynamics of anthropometric indicators is uneven, the peak growth of the bone skeleton is retarded with a year, the rate of kyphoses and kyphoskolioses is higher.

The immobilized students, as a result of hypodynamia, form an unfavorable psychosocial pattern – decreased „internal control" and „self-control" with resulting behavior risky for bone health – addiction to harmful habits and styles – tobacco smoking, drinking alcohol etc. The obtained results show that adolescent girls are at greater bone health risk than boys ($p < 0.01$). The fact that physical development indicators in all studied adolescents groups, with high or low physical activity extent, are significantly lower than those of their mates 15 years ago (Slanchev P. et al, 1992) is alarming and suggests retarded and weaker development of the bone-skeletal system.

All adolescents in the conditions of polluted environment with reduced oxygen content in resting conditions use maximally the capacity of their lungs (very large range of the anthropometric parameter – $p < 0.001$) which significantly restricts the functional capacity of the respiratory system to work adequately at intensive physical efforts necessary for stimulation and maintenance of osteogenesis processes. Hypodynamia together with accompanying negative disturbances in the period of growth, maturing and development of the bone-skeletal system create particularly unfavorable life „start" and potential risk for osteoporosis development.