INTERNATIONAL MULTIDISCIPLINARY JOURNAL FOR RESEARCH & DEVELOPMENT
SJIF 2019: 5.222 2020: 5.552 2021: 5.637 2022:5.479 2023:6.563
eISSN 2394-6334 https://www.ijmrd.in/index.php/imjrd Volume 10, issue 12 (2023)

THE PROBLEM OF ACCELERATION OF CHILDREN'S DEVELOPMENT (LITERATURE REVIEW)

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Abstract: Acceleration is a Latin word, acceles means acceleration. Acceleration is the mental and physical development of the young generation compared to their previous peers, and it is widely known as the "secular trend" in a broad sense, i.e. century trend, as it was clearly visible in 100 years, i.e. a century. In the next 100-150 years, acceleration processes are observed on earth, including in Uzbekistan.
Key words: Acceleration, anthropometry, childhood, social acceleration, biological acceleration, constipation, eyeball.

INTRODUCTION

At the end of the 19th century and the beginning of the 20th century, it was found that the height growth of children accelerated in many countries, and information about this was published in the press in 1876. By 1935, the German scientist E. Koch called this acceleration in development acceleration[1,2].

Since the 20s of the 20th century, information has appeared that children aged 6-14 in Sweden, England, Germany, the USA, Japan and other countries have far surpassed their peers in their development compared to their peers who lived a hundred years ago. started with It was found that the height of young and middle-aged children increased by 10-15 cm, and their weight increased by 8-10 kg. This phenomenon is called the age-related increase in height and weight. In the following years, it was observed that the acceleration was more clearly manifested. 50 years ago, the maximum length of people's height corresponded to 25-26 years, but in our time, boys reach full physical maturity at 18-19 years, and girls at 16-17 years. they reach the horse. The body length of newborn babies is 1 cm longer on average than in the 1930s and 1940s.

The problem of acceleration in development has attracted the attention of biologists, doctors and sociologists all over the world. Social and biological types of acceleration are distinguished[3,5,6.

By biological acceleration, it is necessary to understand all the changes related to the biological development of a person. This includes a number of indicators describing the morphological and functional development of a person. These changes take place in a certain social environment and are largely determined by social reasons.

By social acceleration, it should be understood that the volume of children's knowledge has increased compared to that of their peers who lived 50-100 years ago.

The development of the human body continues as a continuous process throughout the life of a person. In each period of a person's life, the characteristic features of this period, the remnants of the previous period, and the buds of the future period appear. During these periods, the organism undergoes successive morphological, biochemical and physiological changes[4,7,8]. These changes are linked to genetic factors that cause growth and development stages. In adulthood, the growth of the organism stops, but the functional differentiation and improvement of reflex activity continue due to the development and complexity of internal cortical connections. The aging process is unique and involves a series of redevelopments.

The child's development periods are determined based on the weight and size of the body and organs, the degree of hardening of the skeletal bones, the appearance of teeth, the development of connective tissue in the internal secretion glands, the description of cortical

activity and other signs. However, until now, a complete list of universal general biological functional and morphological signs, which will be the basis for systematizing age-related periods, has not been determined. The system of age-related periods was recommended by N.P.Gundobin, and its systematization took into account, on the one hand, the basic laws of the organism's development, and, on the other hand, the issues of organizing education during childhood and adolescence[10]. Therefore, the following periods: kindergarten, kindergarten, elementary, middle and high school can be called pedagogical periods.

The childhood system is recommended as follows:

The period of development in the mother's womb. This period is fully connected with the mother's organism in matters of nutrition, breathing, temperature and other factors of the fetus. During this period, the growth and development of the fetus occurs rapidly.

Newborn period. This period is 2-3 weeks. This period starts from birth and lasts up to 2.5-3.5 weeks and is characterized by the adaptation of the organism to the external environment. Breathing through the lungs occurs for the first time in a newborn child, and the function of blood circulation in the lungs begins. Instead of feeding through the mother's organism, the child's nutrition is carried out through the function of the individual digestive tract, analyzers also take an active part in the activity of the organism[11,12]. During this period, the system that provides nutrition to the fetus is cut off and the umbilical wound heals, the body weight first decreases, and then begins to recover and increase.

Infancy. This period lasts up to one year. During this period, the body length increases 1.5 times and reaches an average of 75 cm, the weight increases 3 times and is around 11-12 kg, the function of the endocrine glands accelerates, the motor analyzers of speech are more developed and the child begins to speak, but the vocabulary will be less, that is, it will be at least 10 words.

Young age period. This period lasts from 1 to 3 years. During this period, growth and body weight gain decrease somewhat, but due to the fact that the child acquires the skills of walking and speaking, their sphere of communication with the environment expands. The child develops the ability to distinguish himself from other people (looks when called by name, gives his hand, etc.). The structure and functions of organs are improved.

Preschool period. This period lasts from 3 to 7 years. During this period, the cognitive processes (memory, thinking, creative thinking) develop rapidly, the bones of the skeleton harden and the bone-muscular system is strengthened, the child's movements are very diverse and coordinated. relatively, muscle strength increases 4-5 times and heart activity improves significantly, the weight of the brain increases and is 1250 grams in a 7-year-old child, conditional reflex connections become numerous, conditional braking develops.

Children of preschool age do not grow evenly. At first, it grows 4-6 cm per year, and at 6-7 years old it grows up to 7-10 cm, and this is called the first physiological growth period of the child's height.

Children's weight does not increase uniformly. The weight of a 4-year-old child increases by 1.6 kg as he gets older, by 2 kg at the age of 5, by 2.5 kg by the age of 6, that is, on average, it increases by 2 kg per year. By the age of 6-7, the child's weight should increase by 2 times compared to 1 year old. At this age, the skin becomes thicker and more elastic, the number of blood vessels decreases, it becomes more resistant to mechanical effects. Children under 6-7 years of age have more skin surface per 1 kg of weight than adults, so they can get hot or cold.

The period of junior school age. This period lasts from 7 to 12 years. During this period, growth and hardening of skeletal bones continue, body proportions change due to the growth of legs, muscles develop rapidly, the integrating role of the cortex of the large hemispheres increases, braking processes increase. Structural and functional differentiation of liver, kidneys,

lungs, heart and other organs and tissues is completed. The redevelopment of the thymus gland begins. The functioning of the thyroid gland and pituitary gland increases. Hormonal effect of gonads begins.

High school age. This period lasts from 12 to 15 years. This period is characterized by rapid growth and weight gain. The body proportions gradually approach those of an adult. Puberty (13-14 years for boys, 11-12 years for girls) and under the influence of hormones of the gonads increase the functions of the thyroid gland, the thymus undergoes redevelopment (involution). The shell of the large hemispheres of the brain functions as "the main controller and distributor of all the functions of the organism"[13,14]. The processes of excitation and inhibition become balanced, the functions of differentiation and generalization become complicated, especially due to the development of the second signal system.

High school or adolescence. This period lasts from 13 to 18 years for girls, from 15-16 to 19-20 years for boys. This period is characterized by an increase in the function of the gonads, the completion of secondary sexual characteristics. The functions of other endocrine glands, especially the pituitary gland and the thyroid gland, also increase. The thymus gland is an exception, its involution continues. The function of all organs and systems improves significantly as a result of continuous development.

Depending on the climate and economic conditions, puberty in girls starts at about 12-14 years old and ends at 16-18 years old, and in boys it starts at 13-15 years old and lasts until 18-20 years old. First of all, sexual signs appear: hair begins to grow on the forehead and armpits, girls' mammary glands enlarge, boys' voices become hoarse. A sign of maturation of the gonads: menstruation begins in girls, menstruation begins in boys. Vocal cords grow especially fast in the first year of life and at the age of 14-15. From the age of 12, boys' vocal cords are longer than girls', which is why boys' voices are hoarse. In teenagers, the lungs grow rapidly, the total volume expands, and by the age of 12, his lungs are 10 times larger than those of a baby. Functional changes are observed in various organs of adolescents. The size of the heart increases, a "youth heart" or "adolescent heart" is formed, a murmur is heard when listening. In most cases, an increase in blood pressure (hypertension of the young) causes the heart to beat more strongly, a rapid heartbeat is observed (sometimes the pressure decreases and the pulse becomes rare), shortness of breath, and pain in the temple area. Some people suddenly experience short-term dizziness, fainting (mostly in girls), and contractions in various parts of the gastrointestinal tract. When sitting still for a long time, dizziness, unpleasant sensations appear in the heart and abdominal areas. Some teenagers may faint and vomit when forced to stand for a long time. Their color turns pale, fingers become icy, sometimes they can turn blue. All these phenomena will pass after going to bed. In such teenagers, there is a lot of sweating, red demography (when you scratch the skin with a fingernail, a red line remains), and an immediate change in the child's mood is observed. Such cases are caused by the instability of the autonomic nervous system and the endocrine system of this age, mental and physical stress. With age, it usually goes away by itself, but when such phenomena appear, it is necessary to meet the brach to determine its real cause.

In 1965, a symposium dedicated to the problems of age-related periodicity held by the Institute of Physiology of Youth and Physical Education in Moscow recommended that all scientific, educational, medical and other organizations use the following scheme of age-related periodicity:

1. Newborn period - the first 10 days;
2. period of infancy - up to 1 year;
3. Early childhood - 1-3 years;
4. Early childhood - 4-7 years old;
5. Second childhood period - boys 8-12 years old; girls 8 - 11 years old;

6. Adolescence - boys 13 - 16 years old; girls 12 - 15 years old;
7. Age of puberty - boys 17 - 21 years old; girls 16-20 years old;

The child's development periods are determined based on the weight and size of the body and organs, the degree of hardening of skeletal bones, the appearance of teeth, the development of connective tissue in the internal secretion glands, the description of cortical activity and other signs. However, until now, a complete list of universal general biological functional and morphological signs, which will be the basis for systematizing age-related periods, has not been determined. The system of age-related periods was recommended by N.P.Gundobin, and its systematization took into account, on the one hand, the basic laws of the organism's development, and, on the other hand, the issues of organizing education during childhood and adolescence. Therefore, the following periods: kindergarten, kindergarten, elementary, middle and high school can be called pedagogical periods. The childhood system is recommended as follows:

CONCLUSION

Acceleration is the mental and physical acceleration of the younger generation. In the current period, in the next 100-150 years, the acceleration processes of children and adolescents are being observed. Such acceleration is visible in Uzbekistan as well. The height of newborn babies increased by 5-6 cm, the height of children of primary and secondary school age increased by 10-15 cm, and by 8-10 kg. Acceleration is observed in mental and physical development.

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