

Nutrition and physical activity in early ages (new born up to 5 y ears)

Nutrición y actividad física en edades tempranas del recién nacido (hasta los 5 años)

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ABSTRACT

Activity and physical education are an ideal space to promote good practices that lead to improving the physical and emotional health of children, among other benefits, this together with good eating practices constitute crucial indicators for the correct development of life, which It must have its beginnings as early as possible. The study of the role of children's circles, teachers, their interaction with children, among other factors such as parents, families and social environment, is essential to optimize the educational teaching process. For this reason, the objective is to analyze the benefits of physical activity on the health of children as well as providing a varied and healthy diet, and especially the challenges that this implies for parents, teachers and the environment that surrounds them. A bibliographical review was developed from recent works on the subject, in order to determine key aspects. The benefits of physical activity and adequate nutrition for children at an early age and up to 5 years were determined; as well as the premises and functions of physical education. Physical activity together with adequate nutrition constitute a fundamental axis for the psychomotor development of children

KEYWORDS

Nutrition, Physical Activity, Lifestyle.

RESUMEN

La actividad y educación física es un espacio ideal para promover buenas prácticas que conduzcan a mejorar la salud física y emocional de los niños, entre otros beneficios, esto unido a las buenas prácticas alimentarias constituyen indicadores cruciales para el correcto desarrollo de la vida, lo cual debe tener sus inicios lo más tempranamente posible. El estudio del rol de los círculos infantiles, los profesores, su interacción con los niños, entre otros factores como padres, familias y medio social, es fundamental para optimizar el proceso docente educativo. Por ello, se plantea como objetivo analizar los beneficios de la actividad física sobre la salud de los niños así como proporcionar alimentación variada y saludable, y especialmente los retos que esto implica para los padres, profesores y el medio que los rodea. Se desarrolló una revisión bibliográfica a partir de obras recientes sobre la temática, con el fin de determinar aspectos clave. Se determinaron los beneficios que representan la actividad física y

una adecuada nutrición para los niños en edades tempranas y hasta los 5 años; así como las premisas y funciones de la educación física. La actividad física unido a la adecuada alimentación constituyen un eje fundamental para el desarrollo psicomotor de los niños.

PALABRAS CLAVE

Nutrición, Actividad Física, Estilo de vida.

INTRODUCTION

Regular physical activity is crucial for the physical, mental, psychological, and social development of children and adolescents. Good habits are acquired early in life. In addition, the benefits of physical activity include helping to avoid diseases, preventing overweight and obesity, and contributing to mental health. Physical activity is considered to be any bodily movement produced by skeletal muscles that requires energy expenditure.⁽¹⁾

Physical activity encompasses exercise but also other activities that involve body movement and are performed as part of moments of play. At the same time, active forms of transportation, household chores, and recreational activities. Physical activity modalities include physical play, recreation, formal and informal sports - organized or competitive - and indigenous games or sports. Sport has been defined by the World Health Organization as “all forms of physical activity that, through casual or organized participation, aim to express or improve physical fitness and mental well-being, form social relationships or achieve results in competition at all levels.”⁽²⁾

Childhood is one of the most important stages of our development, and providing a healthy diet for children and adolescents is important for everything to go well. How to achieve this? With a varied and balanced diet adapted to the needs of the child in each of its stages.^(1,2)

Physical activity combined with a balanced diet provides the basis for a healthy and active life. One of the most important things parents can do is to encourage healthy habits from an early age.

Generally in society, and especially in mothers, there is a lack of knowledge about what exercises or motor activities should be performed by children from the first months of life until the age of five, as well as their nutrition since most people think that eating a lot is nourishment.

At present, the problem of population aging is a permanent concern at the international level, of which Cuba is not exempt and Pinar del Rio much less. However, it is not when people enter adulthood the moment to worry and take care of such a situation. The solution to this problem must begin to face it from the moment the child is born, facilitating adequate psychomotor development and adequate nutrition from birth and in the first years of life.

The general lack of knowledge in society, particularly among mothers, is what has motivated us to carry out this research.

Based on the above, our objective is to describe the theoretical foundations that support the correct use of physical activity and nutrition in the psychomotor development of children from 0-5 years of age.

DEVELOPMENT

From the time a baby is a few weeks old, he or she can be encouraged to move. All the movements that babies make at this stage are a way to train their physical and mental coordination and their self-confidence. For the same reason, it is important not to physically reach for toys at the first demand but to let him make a little physical effort to get them. As long as this effort is made within limits that give them security and do not put them at risk, babies should be able to move freely, face challenges, and see that they can progressively reach the objects they desire. It is advisable to be accompanied while he/she makes these attempts, and it is key to remove dangerous objects from the environment: plugs, hot objects, and obstacles with which he/she can fall or cut himself/herself. As children grow, the exchanges with other children their age are very important for the development of their physical skills and abilities. For example, playground and kindergarten games are a fun way for them to practice balance, strength, and coordination with others.⁽³⁾

During the first months of life, the baby has no control over his body and its movements. Gradually, he begins to hold his head and then turn his neck. Later on, he manages to control what he does with his

hands and arms. By the end of the first year, he starts to crawl and stand on his legs. Most babies acquire these skills without help. Receiving extra stimuli for movement is a gift because it facilitates normal maturation and also enables other learning.⁽³⁾ Children learn more physical skills in their first five years than at any other stage of their lives, and the earlier you start exercising or encouraging physical activity, the better, with the goal of boosting children's psychomotor development from the moment they are born.

How long is it advisable for them to be physically active? ⁽⁴⁾

- Infants under one year: they should be physically active several times a day in a variety of ways through interactive floor-based play; more is better. For those who are not yet mobile, this includes at least 30 minutes in the prone position (tummy time) spread throughout the day while awake.
- Boys and girls ages 1 to 2: they should spend at least 180 minutes in a variety of physical activities of any intensity, including moderate to vigorous intensity physical activity, spread throughout the day; more is better. Exercise is not about sport-focused routines since it is only really at the age of 8 or 10 that they have the physical capacity, can sustain attention for extended periods, and have the ability to understand the rules necessary to play a sport in an organized manner. It is more about activities aimed at the early years of a person's life. Babies should be physically active every day, and from the time they start walking, they should be active at least three hours a day.
- Swimming: you can take your baby to the pool as early as six months, but it is at home that the first contact with water takes place. Little swimmers will become familiar with an environment in which they can have fun and exercise their limbs at the same time. Exercising in the water offers a long list of benefits ranging from improving coordination and balance to developing muscles and joints. It also helps increase appetite and helps establish a sleep pattern.
- Yoga: from the first months of their lives, children enjoy a great flexibility in their bodies, stretching and contorting their bodies intuitively. You can take advantage of this natural ability and stimulate it in a calm and serene place to boost their psychomotor development. If they are not yet walking, it will be necessary to direct them by holding their arms and legs, but it is advisable not to force the children to perform the postures. The best way is through imitation, teaching them, and letting them repeat it. In this way, they will become aware of the different parts of their body and what they are capable of doing with them.
- On wheels: a child is able to learn to ride a bicycle from 18 months, which is more or less the age at which he starts to coordinate all his movements correctly. However, there are many differences between one child and another, and in many cases, this coordination is achieved much later. However, there are alternatives to exercise and strengthen the legs, such as bikes without pedals or skateboards. In any case, this activity will also increase coordination and balance, although it may take some time and require constant supervision and assistance at the beginning.
- Obstacle course: this can be a fun activity from the time children begin to crawl, as well as designing an obstacle course with pillows, cushions, stools, and stuffed animals for the baby to navigate and explore at the same time. The key here is to place rewards each time he gets through a stage. Running and jumping: children are much more active when they are outdoors, whether in a garden or a park. Kicking a ball or throwing a ball are activities that encourage movement, but if we want to see them really active, few things work better than chasing bubbles. Because it is a game, kids have fun and get exercise without even realizing.⁽⁴⁾ Movements to strengthen the neck and sense of balance: balance contributes to the development of coordination, head movements in different planes, and the development of vision.⁽⁵⁾
- Talk and sing from different angles so that he can search.
- Carrying and turning slowly so that he looks at different places, thus enriching his visual world while he is attached to his father's body.
- Dance with the baby in your arms, holding him vertically.
- The "sawdust-sawdust" game consists of holding him by the forearms and, either lying on his back or on his knees, helping him to raise and lower his trunk. This strengthens the neck and

arms. This is done slowly at first, holding the head a little. Then, as he gains strength, he will like to do it at a faster pace.

- The airplane: Start by placing him face down on the forearm and moving him around the room. Later, hold his body with both hands under his armpits around his chest and make him go up and down higher and higher. With his laughter, he will say that he likes it and wants more.

Arms and hands:

- Passively move his arms and legs, stimulating the muscles. Sometimes alternating one and the other,
- and sometimes both at the same time.
- In the bath and the water, help him make kicking movements to splash and then brace.
- The “parachute” reflex is interesting for him to learn to protect his face with his hands when he loses his balance. It is stimulated in several ways. Please start with the babysitting and gently push him forward, helping him to support his hands at first until he does it on his own.
- Also, push him sideways. Practice until he does it automatically. It should always be rewarded with applause, a hug, or tokens of joy.
- It can also be done with a roller or a large ball, which is placed under the baby’s belly. Then, taking him by the legs, you slide him forward and backward. When he goes forward, he will probably try to support his little hands.⁽⁶⁾ Legs: crawling and standing. Crawling is optional for walking. However, the crawling baby has more autonomy, strengthens arm and leg muscles, and develops vision. Some babies crawl asymmetrically or crawl on one buttock. In the long run, it does not matter much, but their movements should be symmetrical:
- From 8-9 months, put the baby on all fours, letting the bottom rest on his ankles and move his trunk forward and backward, tilting on his hands.
- Put him on his tummy so that he starts to crawl forward, offering him a toy or calling him. As he gains strength, he will do it on his own, especially if you encourage him by showing him a toy. It is easier if his feet and knees do not slip. You can hold his feet alternately.
- Then, it is time to start standing up. To do this, you can put furniture on which he can climb. It would help if you were close by to encourage and support.^(6,7) The hands and the digital gripper. The coordinated movement of the hands and fingers will be essential for eating, manipulating, drawing, and writing. Combined with the sense of sight, it helps people understand the world.
- Between 3 and 4 months, put objects within his reach, hanging down. He cannot pick them up but stretches out his arms to touch them.
- Later on, he can grasp them and usually puts them in his mouth to explore them (make sure they are reasonably clean).
- At around 9-10 months, he starts to pick up smaller objects and develops his gripper. He also learns to drop objects.⁽⁷⁾

DISCUSSION

Eating habits that will be difficult to change later on are established during childhood. With proper eating habits and lifestyle, we contribute positively to the construction and modeling of their body and to improving their health and physical and intellectual performance. Correct nutrition during childhood is important because the child’s organism is in growth and formation, which is why it is more vulnerable to any nutritional problem.⁽⁸⁾

The months of gestation and the first two years are known as the ‘1000 critical days for life’. In fact, this is when the child’s basic development takes place, and nutrition is crucial. So much so that in the poorest countries, infant mortality is a scourge, largely due to malnutrition.⁽⁸⁾

The World Health Organization recommends exclusive breastfeeding for the first six months. Moreover, it encourages mothers to maintain it, along with complementary feeding, until two years of age or beyond. However, putting this into practice is not always easy, nor is it within the reach of all women. If weaning occurs before six months of age, the transition from milk to solid foods should be gradual. For example, it goes from a liquid texture to purées with more grain. You can start with cereal porridges and gradually introduce a variety of fruit or fresh vegetable purees. In addition, the idea is that you incorporate a new one every week so that you can identify if any of them cause discomfort or rejection. Avoid chard, spinach, and turnips, for example, until he is one year old, as they have a strong taste and

a high nitrate content.⁽⁹⁾ But from 8 months onwards, you can add meat. At around ten months, white fish, such as hake, Should avoid salt, at least until the baby is one year old. Dairy products are basic in a healthy diet for children up to 3 years old. Moreover, it is recommended to maintain a dose of 500 ml of milk per day. Alternatively, combine it with the consumption of fermented cheese or yogurts.⁽¹⁰⁾

Promoting a healthy diet for children from 3 to 6 years old is a way to ensure proper growth and development. However, it also prevents diseases in the short and long term. Moreover, it helps them acquire healthy habits.

From the age of 3 or 4, children can eat anything. But that does not mean that they should eat like a miniature adult, simply reducing the quantities. In fact, a healthy diet for children should take into account the fact that their nutritional needs are different from ours.⁽¹⁰⁾

A varied and balanced diet divided into 4 or 5 meals a day is recommended. Just over 50% should be carbohydrates, mostly complex carbohydrates such as legumes, cereals, tubers and fruits.⁽¹⁰⁾ In addition, between 10 and 15 % of the diet should be high-quality proteins, more than half of which should be of animal origin. And between 30 and 35 % fat. Above all, monounsaturated fats, such as those from olive oil and nuts. In total, we are talking about a caloric intake of 1,300 to 1,500 kcal/day at three years of age, depending on their physical activity. And about 1,800 kcal/day (90 kcal/kg/day) from 4 to 6 years of age. How to distribute them: 25 % at breakfast, 30 % at lunch, 15 % at snack, and another 30 % at dinner.

Related to physical activity at this stage of life:^(6,7)

- Babies should have opportunities to move all their muscles.
- Movement contributes to the development of vision, balance, coordination, and the brain in general.
- Their movements should be facilitated and stimulated: space for kicking and crawling, comfortable clothing, etc.
- The best stimulus is the attention of an adult who smiles, points, names, and rewards progress with laughter and hugs.
- All this also contributes to strengthening the attachment between parents and baby.

CONCLUSIONS

We are born to move and explore our world, and this is easier if all our senses develop at an early age. The more stimuli that reach the brain, the better intelligence will develop. Motor development is fundamental not only for physical development but also for intellectual and emotional development.

In this first stage of life, the baby develops the necessary faculties that will facilitate his adult life. For this reason, pediatricians recommend that children be physically active from the infancy stage. Ideally, a physical activity program should be integrated into children's daily lives and include the activities described in the body of the paper.

A child with a good diet is less likely to suffer from nutritional disorders, anemia, overweight, obesity, dental caries, and school learning problems, contributing to the prevention of certain pathologies in adulthood, such as cardiovascular diseases and diabetes. A varied and healthy diet always goes hand in hand with physical activity.

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