

Preface

In early childhood education, Physical Education activities are often used to promote better physical and mental development of children. Playing all kinds of sports and sport games plays an important role in experience accumulation for enhancing both physical and mental development. In short, “Physical Education of Young Children” is needed to educate children and parents for having sufficient physical activities. This does not only let children learn about various movements, but this also helps improve children's cardio-pulmonary function, skeletal development and physical fitness. Moreover, this helps children develop self-protection awareness as well. Consequently, all these promote a positive effect on lifelong physical fitness and health, cultivate a positive and caring spirit, promote a stable mood and stimulate creative abilities. Therefore, we can see that Physical Education always lays a good foundation that will allow children to experience a rich and fulfilling life.

Since “Physical Education of Young Children” has

important significance in children's daily lives, our IPEC Society endeavors to promote better "Physical Education of Young Children" all over the world, applying theories into practical use. We work as a team to actively promote better Physical Education for Young Children. Please pay close attention to our Society and come to join us if you agree with our objectives. Our team is enthusiastic about Physical Education of Young Children and we hope that you can help us in our research work and support our activities to promote a better future for young children.

International Society of Physical Education of
Young Children (IPEC)

President Dr. Akira Maehashi

Health and Physical Education
of Young Children

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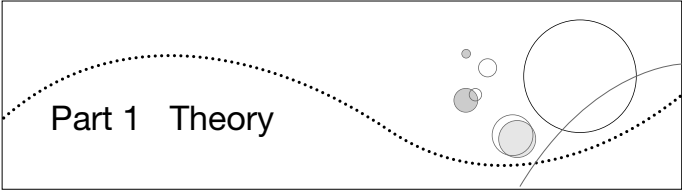
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1. Three problems faced by children in recent years

(1) Sleep rhythm out of order

The first concern is that more and more children in today's Japanese society are becoming night owls. It is now a common sight to see children brought to family restaurants, pubs, karaoke bars, etc. by their parents late at night. Some pubs have even begun to provide designated areas and special menus for children. In fact, growing numbers of parents are letting their children stay up late, saying things like “No problem. Our children are full of life”, “Night is the time when children can have quality time with their father” or “Our children say they are not sleepy yet”. Consequently, today's children increasingly tend to “go to bed late,

wake up late and always feel tired!” The fact that more than 40% of Japanese young children go to bed after 10p.m. is a national crisis in Japan. The problems here are “lack of knowledge” and “low awareness,” causing parents to be ignorant about healthy lifestyles for their children and preventing them from helping their children maintain natural daily rhythms, as well as the nocturnal lifestyles of many adults, all these lead their children into unhealthy lifestyles. So, what actually happens when young children do not sleep long enough (ten hours) at night? These children, particularly short-sleeping ones who sleep fewer than nine and a half hours, tend to demonstrate behavioral characteristics, such as being less able to exercise caution or concentrate, easily becoming irritated, or being hyperactive and constantly on the move. Such children can neither keep their composure nor properly take part in kindergarten activities, and are likely to have trouble focusing on their lessons after moving on to elementary school.

(2) Eating rhythm out of order

When children go to bed late at night and wake up late in the morning, they are lacking of sleep and often fail to have a full breakfast or even skip breakfast altogether. This is the second concern. Skipping break-

fast can make children irritable and cause young children to demonstrate behaviors such as throwing building blocks, treating their toys roughly and suddenly hitting friends from behind. Today, however, only 80% of Japanese young children have breakfast every morning. At the same time, increasing numbers of children are failing to have bowel movements at home to make a fresh start in the morning before arriving at kindergarten, resulting in many children not showing up in good spirits. When this is the case, it is no wonder that more children become less active in the morning. Reduced physical activities lead to a decline in the daily amount of exercise and prevent children from appropriately building up their physical strength.

(3) Lack of exercise

The third concern is that there has been a marked decrease in the amount of exercise taken by children in their daily lives. For example, the number of steps walked by an average five-year-old nursery school child from 9:00 a.m. to 4:00 p.m., which was about 12,000 in 1985~1987, dropped to 7,000~8,000 in 1991~1993. The number fell below 5,000 after 1998 and the current amount of physical activities done by young children has become less than half compared to the Showa peri-

od (1926~89). In addition, as it has become more common for children to commute between home and school by car, there has been a decline in the total number of steps walked by children during the whole day. This results in a lack of exercise which is essential for children to build up their physical strength.

2. Body temperature rhythm affected by the autonomic nerves and hormones in the brain

Staying awake until hours can disturb the sleep rhythms of children, which in turn, can interrupt their eating rhythms, leading to no breakfast and no defecation. The result of this can be reduced physical activities in the morning, affected by morning sleepiness and fatigue. This can cause not only a decrease in their physical strength, but also impaired functioning of the autonomic nerves, which can upset their day-and-night body temperature rhythms (Figure 1).

This is the reason why there are children with “hyperthermia” and “hypothermia,” whose core body temperatures are not maintained at a stable 36°C level since they cannot control their body temperatures. In addition, when nocturnal children whose body temperature rhythms are disturbed, they are inactive in the

morning with a low body temperature and become active at night with a high body temperature.

Generally speaking, human body temperature maintains a certain cycle in daily lives in which it becomes lowest at around 3:00a.m. at night and highest at around 4:00p.m. in the afternoon, influenced by hormones in the brain (Figure 2). This circadian variability is one of the biological rhythms that human beings have acquired over time. For example, around 4:00p.m. in the afternoon is the time of the day when people become most active.

This is why I call it children's "Golden Time for Playing and Learning." I believe it should be the time of the day in which children should exercise their curiosity and look for things that catch their interests, for example nature, animals, sports games, children should enjoy playing as much as they can. By experiencing such enthusiasm, attempting new things and repeating a cycle of creating ideas and putting them into practice, over and over again, children can achieve dramatic growth.

However, the body temperature rhythms of children who lead nocturnal lifestyles are several hours behind the normal body temperature rhythm. Their bodies are not really awake and are still inactive in the morning,

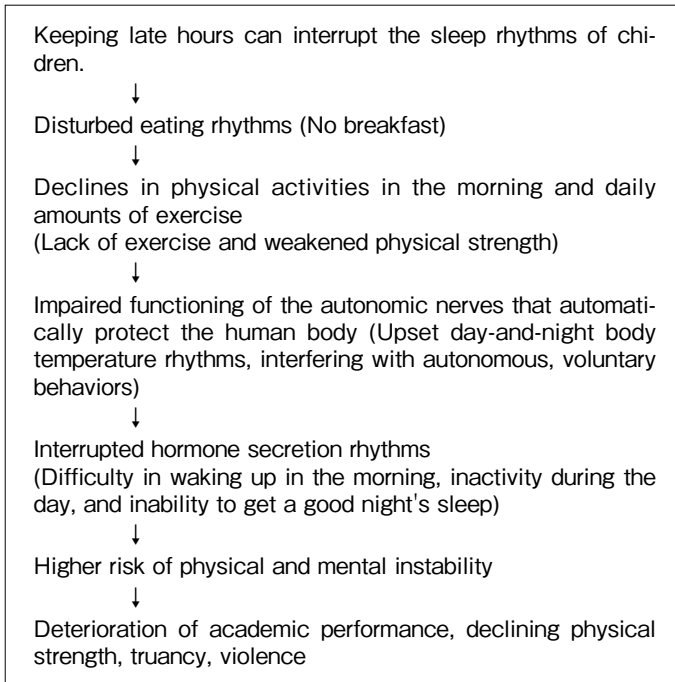


Figure 1 The flow and onset of problems common to Japanese children

as they have to get up and start the day while their body temperatures are still as low as when they are asleep. The reverse is also true; their body temperatures remain high at night, causing them to have difficulty in falling asleep and leading to a vicious cycle. Restoring these delayed body temperature rhythms back to normal is the key to the success of the daily

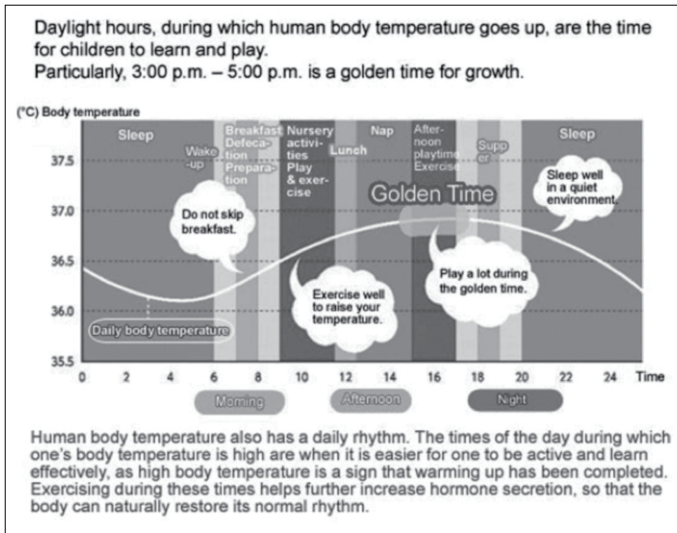


Figure 2 Daily body temperature rhythm

rhythm improvement strategy. Here are the two most effective methods of achieving this end: (1) exposing children to sunshine in the morning and (2) getting them to exercise during the day.

3. Launch of the “Go to bed early, get up early and have breakfast” movement and challenges

Put simply, the solution to the problems experienced by children is to get adults to take more seriously about the “lifestyles that babies, toddlers and children

should have (to achieve a good dietary, exercise and rest balance).” In fact, the “Go to bed early, get up early and have breakfast” movement is a nationwide movement that Japan has developed as the result of its efforts to achieve the above. Although this movement is very effective in encouraging people to take action to promote health, we must admit that there is still room for improvement before it can bring more vitality to children by proactively stimulating their autonomic nervous systems.

Figure 1 illustrates my view of how problems faced by Japanese children have developed. If you want to stop these problems from continuing, the first thing to do is to take “sleep” more seriously to help protect and nurture the brains of children. This is why I emphasize the importance of “going to bed early and getting up early”. Another important thing is to place special emphasis on “breakfast,” as sleep disorders lead to “eating” disorders.

A shortcoming of this nationwide movement, however, is that it only covers these two aspects, while the third one, “Exercise,” should also be an indispensable part of the daily lives of children, if you expect them to become self-motivated, self-directed and able to think and act independently. In fact, exercise and physical

play are essential for the development of autonomic functions. It is necessary, also from the perspective of lifestyle improvement, that we should not overlook the importance of providing children with opportunities and occasions, as part of their daily lives, to take exercise during the day to let out their physical energy and release their emotions.

To this end, it is essential that another element, “Exercise,” should be added to the nationwide “Go to bed early, get up early and have breakfast” movement. To put it plainly, it should be “Eat, be active and sleep well.” In other words, the key is to launch a campaign that emphasizes the importance of “physical activity” and proactively put it into practice. My wish is that children, who are after all our future, can develop healthy lifestyles and lead healthy, fulfilling lives.

4. The importance in meeting new challenges

What is crucial for children now? A new challenge is to introduce the importance of “Exercise” into the campaign. The “Eat well, Move well and Sleep well” campaign through the concerted efforts of kindergartens and nurseries with the families and the local

authorities, can be implemented nation-wide. It is time that we all join and get involved.

Sports (exercise) and sporting games do not just make one stronger, it improves metabolism, body temperature control and plays an important role in brain or nerve system functions too. It is important that the kindergartens and nurseries, schools and local authorities ensure an environment conducive to sport play where children can play fully engrossed and forget about time – this will help them grow safely. For the sake of a healthy future for our children, it is important for the society and all adults to work together single-mindedly to provide a good environment for sports and make exercise a part of our daily lives. Let's contribute our hearty efforts to make the world a happy place for our children to grow up in.



1. The problem is not just about physical activities

“The decline in scholastic ability”, “the decline in physical strength” and “mental problems.” have become important issues. Why did these three issues appear for Japanese children to handle in recent years? When we think it over, we can see the problems are stemming from life cycle deficiencies. The society as a whole is becoming a “night person” society, which is making normal sleep cycles impossible. This leads eating cycles going wrong and so on. When the eating cycles are disrupted and children do not take breakfast, they cannot store enough energy to complete normal activities, and they also lose concentration skills easily. More over, a hungry child loses patience quickly. In these conditions,

it is obvious that normal vitality declines. Usually, a body gets tired and then gains strength through activities, this is how human beings gain physical strength. When there are no chances, the physical strength declines. Moreover, rest (sleeping), nutrition (eating), physical activities (playing) make up one day cycle. When the cycle balance breaks, the brain and autonomic nerves, which protect your body, start to work improperly. When this escalates, the hormone balance, which keeps the body temperature, goes wrong. As a result, daily physical conditioning deteriorates, mental function become unstable and this leads to “the decline in scholastic ability”, “the decline in physical strength” and “school refusal.”

These culminate in problems of the mind and body. Today, we have started to figure out that these problems about life cycles do not only influence physical strength and physical knowledge, but it also influences mental development. Therefore, when we need to think about “physical activities,” we need to look at the whole life cycle, and discuss a better exercise program in detail and the better way of coaching. Young childhood is the time when the brain and the nervous system develop. So, to firmly establish healthy life habits such as sleeping and eating habits, and to promote the

growth of physical movements and physical knowledge, we must help children build these habits when they are young. Keeping this in mind, let's get to work.

2. Impressing experience forms “Liking”

During young childhood, the time when the base of the ability, to form physical knowledge is made, we experience many movements. It is important for children to feel “I want to do it, I want to play” with a positive will. By helping children develop this positive will, the movement they wanted to form, becomes diversified, and the movements they worked on by themselves improves during their mid-to-latter period of young childhood. Let's keep introducing many other movements, so that they will keep improving their movements. The experience like “yeah,” feeling empowered, when children climb on the vaulting horse, will raise children's confidence to do even more. Please appraise children's movement to show the feeling of like “yeah,” whether they were able to make or not. Those positive experiences will make them feel that they want to accomplish more new movements. On the other hand, if you keep appraising only the knowledge, and scold just because they cannot not make it right, this will make

your children not like exercising. The negative response can make it difficult to fix the negative experience afterwards.

3. It will even help enough just by watching over

Then, how can we raise children's exercise confidence levels when children do not have any knowledgeable ability? There is no need to think hard. Just observing your children will help a lot. Children always ask you to "Look! Look!" no matter if they are able to perform the skill or not. When someone is looking, just watching makes children happy. Plus, if you cheer them by saying "Good job", this will make them feel "I want to try again". And again, they will come over and let you see it, even they are not able to perform the task. In these times, when they need contact with people, it greatly helps just by watching. We have measured how much they are moving by putting a pedometer on the children. During free playing for two hours from 9 o'clock to 11 o'clock, the pedometer measures about three thousands steps. When the play surroundings are set up more interestingly, the pedometer measures up to five thousands steps. When teachers play

together with them, the pedometer measures up to over six thousands steps. In other words, when the teachers are with them, play with them, laugh with them, and promote a positive play experience, the pedometer will probably measure higher exercise and step levels. Whether the teachers have the requisite coaching technique or not, it is just a matter of whether teachers are watching the children or not.

With the number of children decreasing, and the society changing, we do not see children playing around the local area as much as before. In spite of that, just by saying “play freely,” physical gain will never expand. So, this is the time when teachers become the leader, play and coach new physical games. This will lead to the children playing more, and will foster much more physical movement. With vitality and physical strength gains, children will naturally become vigorously more active. If it does not work, it means that the problems are the play settings and surroundings, as well as the teachers willingness to get involved. We need to face the problems sincerely, and think about what we should do.

4. Society, life cycle, and children's bodies corresponded coaching to the various changes

When one element goes wrong, the life cycle goes wrong. On the other hand On besides, when one element improves, the life cycle improves. When you want to fix the life cycle, exercise and playing are very effective. Problems with today's children are related to a lack of physical stimulus at an appropriate time during the day. At what time period and what kind of physical games should teachers provide? In addition, the behaviors of the adults who are involved in the physical games and what kind of "words" they use to motivate the children will become very important. We should never forget the point that the physical games will activate life itself. Previously, there was a time when it was thought that "health is health", "life is life", and "physical activity is physical activity" all different and separated things, but it is now time to think about the relationships. It is becoming important to see how many teachers are seeing the problems and what they are doing to fix the problems. How are the coaches, who are teaching young children's physical education, do they only think about the improvement of physical