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Children and Sports

Read this as new chapter.

Sports are good for children of all ages. Children can enjoy and enhance their physical activity by taking part in organised sports and games. However, the sports activities should be appropriate for the children. Engaging in sports which do not match their developmental abilities can lead to disappointment. This can even result in early dropout. As a matter of fact, children and sports are closely related to each other. Children can't stay away from sports activities whatever the circumstances are. In fact, they have innate tendency to take part in sports. The most important thing is that children's motor development should be according to the requirement of sports.



Importance of sports for growing children

5.1 MOTOR DEVELOPMENT AND FACTORS AFFECTING IT

Meaning of Motor Development

Motor development refers to the development of a child's bones, muscles and his/her ability to move around and manipulate his/her environment. In simple words, motor development means the development of various motor abilities from birth till death. In other words, motor development is the progressive change in movement throughout the life. As a matter of fact, the ability to move is essential for human development. Various motor movements or motor skills are essential for everyday life activities such as sitting, walking, running, climbing, catching or holding, jumping, skipping, throwing, etc. Motor development can be divided into two types, i.e., gross motor development and fine motor development.

1. **Gross Motor Development.** It involves the development of large muscles in the child's body such as while sitting, walking, running, climbing, etc.



Motor development

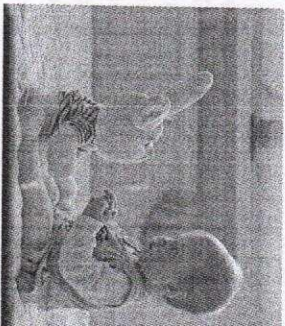
2. **Fine Motor Development.** It involves the small muscles of the body, e during the small movement of the fingers and hands. For example, holding a discus and pole, catching a cricket ball, smashing a volleyball, gymnastic with or without apparatus, etc.

Motor Development in Children

Motor development in children can be studied effectively under the following three of childhood.

1. Early childhood (3 to 6 years)
2. Middle childhood (7 to 10 years)
3. Late childhood (11 to 12 years)

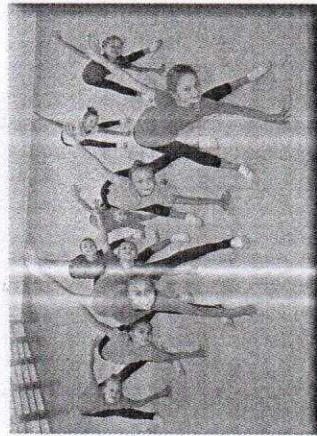
1. **Early Childhood:** The period of early childhood starts from 3rd year and continues till 6th year. The motor development during this period takes place rapidly. This stage is also known as the preschool years. In this period, a child becomes perfect in various fundamental movements such as running, jumping and throwing and acquires the ability to unite or combine these movements. In this period, children's stride length increases and they develop a more mature running pattern. During this period, proficiency in climbing on ladders becomes efficient. They can hop and gallop skillfully. motor development at the end of early childhood achieves a satisfactory level systematic training of children in various sports such as gymnastics and swimming can be started because their basic movements like rolling, hanging, pushing, etc., become efficient. They can combine these movements efficiently under easy and difficult conditions. They become efficient in various movement combinations such as running and jumping, catching and throwing, running and throwing. Thus, they become efficient in all such movements but still competitions at that should be avoided.



Motor development in early childhood

2. **Middle Childhood:** The period of middle childhood starts from 7th year continues up to the 10th year. During this period, children become active and They have strong desire to engage in various physical movements and activities. During this period, children have a desire to compete with children of their age group. They also have an urge to improve upon their previous performance. This period, most of the children achieve mature patterns of fundamental skills. Their posture and balance become better. They try to become efficient variation of movements which they had already learnt. In fact, the same movements are performed differently for different aims such as jumping for distance or throwing for distance or height, etc. They become efficient in movement coordination movement precision and movement flow. The speed-related abilities develop faster rate. Coordinative abilities also show a higher level of development

age group, whereas flexibility develops at a very slow rate. During this period, rules should be flexible, instruction time should be short and there should be minimum competitions. Stress should be given on movement correction.



Motor development in late childhood

Late Childhood: The period of late childhood begins from 11th year and continues up to 12th year or till the beginning of sexual maturation process. During this period, girls are temporarily smaller and heavier than boys because of the earlier onset of puberty. Strength begins to differ but the differences are small. Boys and girls are able to compete evenly. Most of the children master most intricate or complex motor skills. They are ready to learn strategies and more complex play combinations. Running and jumping movements, qualitatively as well as quantitatively, develop at a faster rate than in the middle childhood period. Coaches or teachers of physical education should continue to encourage skill development with an increasing stress on strategies and tactics.

Factors Affecting Motor Development

There are various factors which are liable to affect motor development in children. These factors are stated below.

Biological Factors: Biological factors are related to the genes. These factors are also known as heredity or genetic factors. The genes which we get from our parents are responsible for various types of development including motor development. The percentage of fast twitch fibres and slow twitch fibres depends on biological factors. In fact, these factors are likely to affect the rate and ability of motor development. These factors are related to body weight, size and strength. Research studies show that the children with proportionately longer legs and who are not overweight, usually walk earlier than the children with shorter legs.

Environmental Factors: Environmental factors such as physical and social factors are likely to affect the motor development of children. Research studies indicate that motor development takes place at a faster rate in children who are encouraged to explore their surroundings. Generally it is observed that in our society boys are expected to be involved in sports in comparison to girls. Boys are encouraged to take part in motor activities. They are given more opportunities to take part in sports activities. Those children, who are not encouraged or motivated towards motor activities have slow rate of motor development. In fact, encouragement, love and security push a child to take risks to explore fearlessly, which leads to better motor development.

3. Nutrition: Nutrition is also liable to affect the motor development. Indeed, nutritious food promotes good motor development. Sensory motor development is dependent upon nutrition. If children get nutritious food they become stronger which ultimately leads to good motor development. On the other hand, if children do not get proper nutrition they are found to be less energetic and owing to this their motor development takes place slowly.

4. Physical Activities: Taking part in regular physical activities enhances the motor development at a faster rate. However, the physical activities must be according to the capabilities of children. Motor development becomes slow in those children, who do not take part in physical activities regularly. Not doing even minor physical activities results in delayed motor development in children.

5. Opportunities: It is a well-known fact that children who get ample opportunities to do more and more physical activities or motor activities are likely to have better motor development. In fact, opportunities to participate in motor activities give a better chance for developing sensory motor abilities. If proper opportunities are not given to children, then motor development cannot take place in those children properly or motor development will be slow in such children.

6. Sensory Impairments: Sensory impairments such as visual impairments, hearing impairments, etc., are likely to affect the motor development in children. Due to hearing impairments, following instructions about any type of motor activity becomes more difficult. In the same way, visual impairments also slow down the process of motor development. So, it can be concluded that if there are no sensory impairments in children, then they will have better motor development.

7. Postural Deformities: Postural deformities in children definitely affect their motor development. Any postural deformity, viz., spinal curvature deformities, flatfoot, knock-knees, bow leg, etc., creates hindrances or obstacles in the path of motor development of children. In the absence of postural deformities, motor development in children takes place at a faster rate.

8. Obesity: Obesity and being overweight have negative effect on the motor development of children. It means that children who are overweight or obese are not enthusiastic to do any motor activity and may even feel uncomfortable to do it. Motor development in such children takes place very slowly. Such children take more time to perform motor movement.

5.2 EXERCISE GUIDELINES AT DIFFERENT STAGES OF GROWTH AND DEVELOPMENT

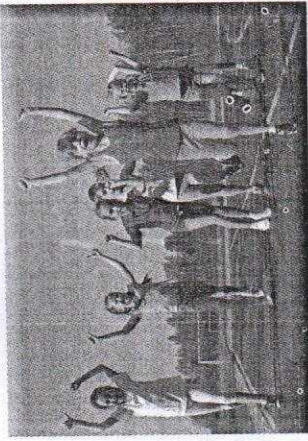
Exercise or physical activity has the potential to improve the physical and mental health of the nation, reduce the maximum causes of mortality and improve life expectancy. It can save money by significantly easing the burden of chronic diseases. Exercise is important for us to remain active throughout our lives. It is significant for infants, children's and

growth and development. This continues through preschool, school, adolescence, mood and older years. There is a consistent evidence of a dose-response relationship, the greater the volume of exercise or physical activity undertaken, the greater the benefits that are obtained. Exercise or physical activity is also helpful in reducing risk of depression, dementia and Alzheimer's. It also improves self-perception, self-mood and sleep quality. It can be said obviously that exercise or physical activity is vital for proper growth and development of individuals. There are following guidelines to exercise or physical activity in various stages of growth and development, i.e., infancy, early childhood, later childhood, adolescence and adulthood.

Infancy (1 to 2 years): During this stage of growth and development, physical activity or exercise should be encouraged. Gross motor activities or exercises should be promoted. Exercises to develop head control, sitting, crawling, etc., should be encouraged. Infants should be indulged in some exercises such as moving arms, legs and reaching to various objects. Infants should be provided objects, toys and games that encourage them to move and do things for themselves. They should be provided with safe environment for performing these activities or exercises. Watching TV and other electronic media should be avoided by the infants. Infants should be restrained in high chair for prolonged periods. They should be encouraged to walk instead of using a stroller to carry them around. Simple exercises like throwing, catching and kicking a ball may be most suitable exercises during the stage of infancy.

Early Childhood (3 to 7 years): During this stage of growth and development such exercise or physical activity should be encouraged which helps in developing competence in movement skills (throwing, jumping, catching or kicking the ball). Emphasis should be laid down on participation and not on competition. During this stage, stress should also be laid on activities related to fine motor skills i.e., coordinative abilities. Structured as well as unstructured physical activities should also be performed daily for atleast sixty minutes by children during this stage of growth. Recreative as well as enjoyable methods should be used to encourage them for participation in various physical activities. Stress should also be laid on clean and safe environment during this stage of growth. They may be allowed to watch quality programmes on TV for one to two hours.

Later Childhood (8 to 12 years): During this stage of growth and development children should indulge in activities such as, stunts, throwing, jumping, catching, running, etc., so that they can acquire body-control, strength and coordination. However, activities related to endurance should be avoided. Stress should also be laid down on organised or team games which aim to develop social-consciousness in them. During this stage, children should be introduced to competitive sports and taught the basic rules of sports competition, i.e., enjoying the game, fair play,



Later childhood exercise

simple strategies and tactics. They can also be introduced to the concept of sports training and the exercises that build endurance (aerobic exercises like running, swimming and cycling, etc.), strength (resistance exercises) and agility, coordination and balance (fast work and rapid movement exercises).

4. **Adolescence (13 to 19 years):** During the stage of adolescence, moderate to vigorous intensity exercise/physical activity is recommended for at least 60 minutes and up to several hours every day. They should also indulge in muscle strengthening exercises at least three days per week. They should also include bone strengthening exercises. Adolescents or teenagers should minimise the amount of time spent being sedentary for long periods. Physical activity or exercise such as running, gymnastics, push-ups, jumping rope, playing hockey, basketball, swimming, tennis, and resistance exercises (weight training) should be included.

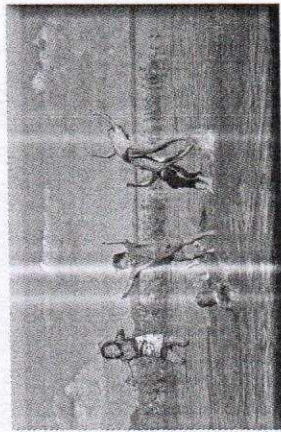
5. **Adulthood (Above 19 years):** Adults should try to be active daily. They should do brisk walking, bike riding, dancing, and swimming with moderate intensity. They should also indulge in running, aerobic exercises, weight training, push-ups, sit-ups, etc., for muscle strengthening. They should minimise the amount of time spent being sedentary for long duration. As a matter of fact, adults require such exercises or activities that help to increase their muscular and bone strength. So, they should perform resistance exercises at least two days a week to tone their muscles and bones. These exercises increase skeletal muscles strength, power, endurance and mass. Bone strengthening exercises/activities produce an impact or tension force on the bones that promotes bone growth and strength. For bone strengthening, they should include running, jumping rope and weight training exercises.

5.3 ADVANTAGES AND DISADVANTAGES OF WEIGHT TRAINING

Weight Training

Weight training includes those exercises that are designed to strengthen specific muscles by causing them to overcome a fixed resistance, usually done with the help of bar-bells or dumb-bells. In fact, weight training refers to the exercise phase of the activity where weights in the form of bar-bells and dumb-bells are used to condition and alter the sizes of various segments of the body. This is, undoubtedly, the most popular phase. Here the underdeveloped individual strives for average or about average size in terms of muscular bulk and body weight and size; the athlete strives for increased strength and condition to become a better performer in chosen sports.

Weight training method is used to develop physical fitness. Germany probably was the first nation to use systematic weight training while preparing athletes for the track and field events at the 1936 Olympic games. Since then, the use of weight training across



Early childhood exercise

the world has become the rule rather than the exception. Weight training involves bodily movements similar to those in calisthenics. These movements are made progressively harder by increasing the resistance in the form of graduated weight against which specific muscle groups have to be exercised. According to Logan, "Through the judicious use of weight training, we can effectively improve strength, local muscular endurance, and power, which are vital for athletes."

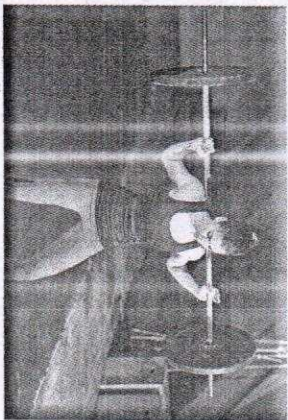
No doubt that weight training is one of the most common methods of increasing strength. But a question arises: should children engage in weight training before adolescence? The controversy centres on whether weight training is capable of increasing the strength among adolescents? The recent researches indicate that adolescents can gain strength by weight training. Weight training can be started at the age of 12, but it should be supervised by an experienced coach. Children must learn correct techniques and procedures. Children are prone to injuries when they compete with each other to see who can lift more weight.

Advantages of Weight Training

There are following advantages of weight training.

1. **Helps in Getting Good Shape:** Weight training is an extraordinary training. This is magical because it can shape up all people by involving appropriate schedules (and sometimes appropriate diet). Fat people can become slim and trim, people can put on weight if so desired. The weak can become strong and the strong can become stronger. The slower can become faster and the ponderous can become more dynamic. In fact, weight training helps individuals in getting their entire body in good shape. It is beneficial not only for upper body but also for lower body.

2. **Best Means of Providing Fitness:** Weight training has a major advantage over other means of fitness. It involves less time, exceptions being throwers and competitive weightlifters who need longer sessions. Optimum gains can be made by spending just one hour, three times a week in weight training gymnasium. Weight training enhances all the components of health-related fitness such as muscular strength and body composition.



Weight training



Arm curling

3. **Helpful in Enhancing Athletic Performance:** A perfect weight training programme is helpful in enhancing athletic performance. The advantages of strength training for athletic performance are enormous. Weight training is one of the significant components of conditioning programme for runners, throwers, jumpers, boxers and players of football, basketball and other games.
4. **Best Means to Develop Strength:** Today weight training is considered as the best means of securing strength but it requires proper guidance of coaches and physical trainers. The weight training exercises are valuable but have to be carefully and systematically. In fact, there is no other better means to increase strength, speed and endurance for application to all sports and to all walks than training with weights.
5. **Increases Bone Density:** Weight training helps in increasing bone density. Researches which have been conducted in this field indicate that the risk of osteoporosis is lower for the individuals who do weight training exercises at least three times a week.
6. **Reduces Stress and Tension:** Weight training is also advantageous for reducing stress and tension. In fact, it acts like an outlet for stress and tension.

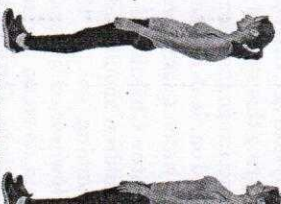
Disadvantages of Weight Training

Although weight training has various advantages, it has some disadvantages too, as stated below.

1. **Risk of Injuries:** While performing weight training, there is always a sustaining injuries, especially when performing exercise without any companion case you are alone and you are not able to do the required repetitions of exercise may be injured. So, you should always have a companion or a supervisor supervising you in case the worst happens. In addition, you should perform weight training under expert physical trainer.
2. **Less Flexibility:** Weight training reduces the level of flexibility if flex exercises are not done along with weight training. However, this is a minor disadvantage in comparison to many advantages of weight training. If flex exercises are done continuously, then such disadvantages can be ignored.

5.4 CONCEPT AND ADVANTAGES OF CORRECT POSTURE

Posture plays a very significant role in our daily activities. In fact, posture is the position in which we hold our body upright against gravity while standing, sitting, walking, running or lying down. The force of gravity acts upon our body constantly. If the muscles of our body are weak, we may suffer from postural deformities such as kyphosis, lordosis, scoliosis, bow legs, knock-knee, flatfoot, etc. Owing to these postural deformities, our working efficiency usually gets reduced. Therefore, it is essential for us to know about correct posture, bad posture and how to correct posture with the help of various exercises.



Balancing body in a proper