

**UNIT - 5**  
**Children and sports**

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**Key Points:**

- Motor Development in Children
- Factors affecting Motor Development
- Advantages and Disadvantages of Weight Training
- Concept & Advantages of Correct posture
- Causes of bad Posture
- Common postural deformities
- Corrective measures for postural deformities

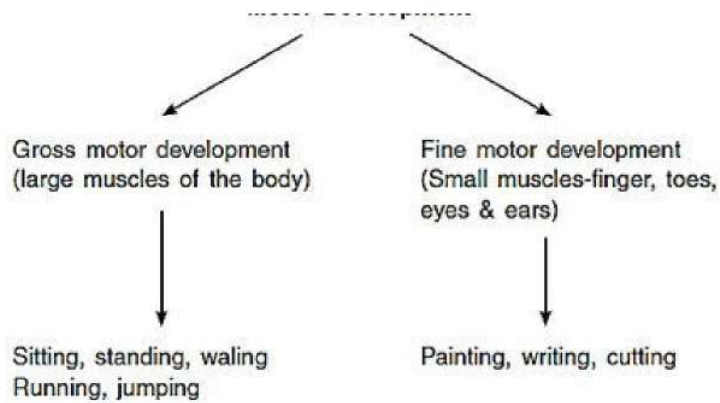
**Motor development** refers to the development of general body control, fine motor skills and large muscle movements. There are three stages of motor development in children as given below infancy or infancy hood , early childhood & later childhood

**It is of two types:**

1. **Gross motor development** involves the development of large muscles in the child's body such as sitting, walking, running etc.
2. **Fine motor development** involves development of small muscles of the body, especially during the small movements of the fingers and hands eg. Holding of javelin, discus and pole, catching a cricket ball etc.

**5.1 Motor Development-Motor Development refers to the development of a child's Bone, muscles and ability to move around and manipulate his/her environment.**

**Motor Development**



### **Factors affecting motor development**

1. Nutrition: - Nutritious food promotes good motor development. Sensory motor development is dependent upon nutrition that the child gets to a great extent. Children get stronger and development is good if they get nutritious food.
2. Immunization: - If mother and child both are immunized at a proper time it leads to good sensory motor development.
3. Environment: - Encouragement, love and security help the child to take risk to explore fearlessly and to know more about environment which leads to a better sensory development.

### **5.2 Factors affecting Motor Development**

1. Heredity
2. Nutrition
3. Sleep
4. Immunization
5. Environment
6. Stimulation and Interaction
7. Opportunities
8. Training and Practice
9. Recreation
10. Education-Learning and Productivity
11. Gender
12. Posture Deformities

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13. Sensory Impairment

14. Obesity

15. Social Skills

16. Mental Health

### **5.3 Physical and Physiological benefits of Exercise on Children**

#### **Physical benefit of exercise**

1. Physical Health and Strength
2. Mental Health
3. Emotional Well being
4. Social Health
5. Positive School Environment
6. Motivating personality
7. Controls anti-social behavior

#### **Physiological benefits of Exercise**

1. Strengthening the heart
2. Strengthens bones and muscles
3. Controls Blood Sugar
4. Regulate Blood Pressure
5. Increases Energy level
6. Detoxification
7. Reduce Cholesterol level

#### **Advantages and disadvantages of weight training**

Advantages of weight training

a) Increase bone density: weight training helps in increasing bone density. The risk for osteoporosis is lower for the individuals who do weight training exercises at least 3 times a week.

b) Helps in getting good shape: Weight training is magical as it shape up all by involving appropriate schedule. Fat peoples can become slim and slim can gain weight and become

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strong.

**Disadvantages of weight training are:**

a) Risk on injuries: there is always a risk of injuries while performing weight training without any companion. In case you are alone and you are not able to do the required repetitions of exercise, you may be injured.

b) Less flexibility; weight training reduces flexibility, if flexibility exercises are not done along with weight training. If flexibility exercises are done continuously then such disadvantage can be ignored.

**5.4 Advantages and Dis-advantages of Weight training and food supplement for children**

**Weight training:-**Those exercise, that are designed to strengthen specific muscles. By causing them to overcome a fixed resistance, usually in the form of Bar bells or dumbbells.

**Advantages of Weight Training**

1. Improves Posture and range of motion
2. Increases muscles strength, bone density and endurance
3. Protection against injury
4. improve motor performance
5. Promote healthy Blood pressure and Cholesterol levels
6. Maintain Healthy Weight
7. Develop confidence and self esteem
8. Improve immune system functions
9. improve Psycho-socio well being
10. Promote and develops exercise habits

**Disadvantages of Weight Training**

1. Maturity
2. Introduce Injury
3. Safety
4. Loss of Flexibility

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## **Concept of posture**

The posture in which the body is so balanced as to produce least fatigue. It means balancing the body in accurate and proper manner while sitting, standing etc or during any other actions.

### **Importance:-**

- a) One's personality can be judged,
- b) Better balance, agility and overall physical performance.
- c) helps in maintaining proper manner of standing, sitting walking of one's body.
- d) it is a measure of one's alertness.
- e) has better alignment, which translates into less injury.
- f) recovers quicker from exercise or physical exertion, and feels more energetic

### **Causes of poor posture**

- (i) Injury when bone, ligament or muscle is injured, it weakens the support to that
- (ii) Disease causes the joints to lose their strength and mobility.
- (iii) Heredity Deformities like Kyphosis and flat foot are sometimes due to hereditary factors.
- (iv) Overload Over work or fatigue also results in poor posture.
- (v) Lack of Exercise The maintenance of erect posture requires strength and endurance.

### **Common postural deformities**

Postural deformities are the exaggerated curvature of the spine. The spine is naturally curved but various factors may give rise to the deformities. It reduce the efficiency of individual to great extent & cause more health problem.

**Knock Knee** - a postural deformity in which both the knees touch or overlap each other in normal standing position

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### **Causes of knock knee**

- (i) Weakness of muscles and ligaments
- (ii) Overweight body
- (iii) Lack of balanced diet
- (iv) Lack of vitamin-D

**Flat Foot** is a deformity of the feet. In this deformity, there is no arc in the foot and the foot is completely flat.

**Round Shoulder** It is a postural deformity in which the shoulders are drawn, the head is extended with the chin pointing forward.

### **Causes of round shoulders**

- (i) Due to poor posture while working
- (ii) Faulty furniture
- (iii) Wrong habit of sitting / standing
- (iv) Carrying heavy load on shoulders
- (v) By sleeping on one side

**Kyphosis** is a deformity of the spine in which there is an increase or exaggeration of a backward curve.

### *Corrective measures of kyphosis*

- (i) Perform Dhanurasana regularly
- (ii) Bend your head backward in standing position.
- (iii) Reverse sit-up
- (iv) Perform Bhujang Asana

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(v) Perform ushth Asana

**Bow Legs** is a deformity opposite knock knee. In fact, if there is a wide gap between the knees, the deformity can be observed easily.

**Lordosis** is a common defect in deformity & posture. Here lumbar curve becomes more pronounced and front central position of pelvic region is tilted forward.

Corrective measures of Lordosis

- (i) Forward bending
- (ii) Alternate toe touching
- (iii) Sloop walking
- (iv) Perform paschimotan Asana
- (v) Perform sit-ups regularly

Causes of scoliosis

(i) **Congenital scoliosis**, which is caused by a bone abnormality present at birth.

**Neuromuscular scoliosis**, which results due to abnormal muscles or nerves.

(ii) This is seen in people with cerebral palsy or having partial paralysis.

(iii) **Degenerative scoliosis**, which may result from traumatic (i. e. Injury & illness) bone collapse, previous major back surgery, or osteoporosis.

(iv) **Idiopathic scoliosis**, which is the most common type. It has no specific identifiable cause.

**Preventive measures to avoid Scoliosis**

Corrective measures of scoliosis

- (i) Perform Ardh Chakra Asana
- (ii) Chin-ups
- (iii) Swim by using breast stroke technique
- (iv) Perform Trikon Asana
- (v) Perform Tarra Asana