

Chapter 2 · Children and Women in Sports

CBSE Class 12 Physical Education (048) · Unit 2 = 7 marks · Ultimate Revision Sheet

60-SECOND RECALL

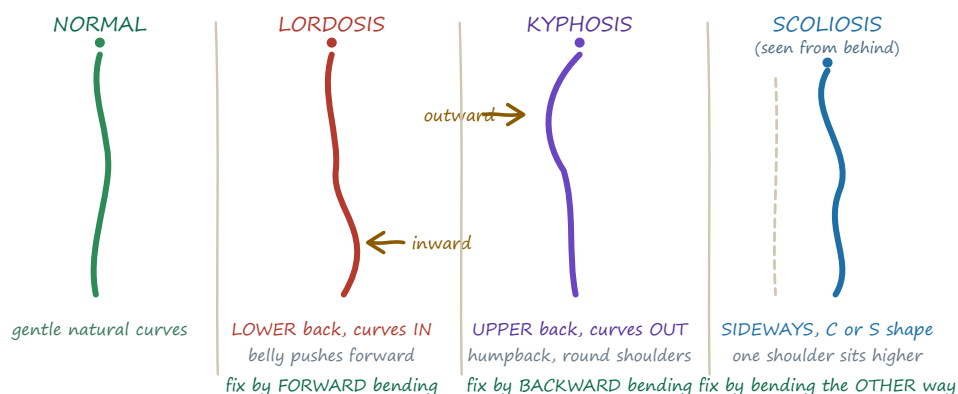
WHO guideline	5–17 yrs: 60 min moderate-vigorous daily · 18–64: 150–300 min moderate per week · 65+: same + balance training
7 deformities	Knock knees · Flat foot · Round shoulders · Lordosis · Kyphosis · Scoliosis · Bow legs
Spine trio	Lordosis = inward curve of lower back · Kyphosis = outward curve of upper back · Scoliosis = sideways curve
Female Athlete Triad	Osteoporosis + Amenorrhoea + Eating disorders
Menarche	The first menstrual period
Knock knees vs Bow legs	Knock = knees touch, ankles apart · Bow = knees apart, ankles touch

1. WHO Exercise Guidelines by Age Group

Age group	Recommendation
Under 5 years	At least 180 minutes of physical activity spread through the day; limit sedentary screen time.
5–17 years	At least 60 minutes of moderate-to-vigorous activity daily , mostly aerobic; vigorous activity and muscle/bone strengthening at least 3 days a week .
18–64 years	150–300 minutes moderate, or 75–150 minutes vigorous aerobic activity per week; muscle strengthening 2 or more days a week.
65 years and above	Same as adults, plus multi-component activity emphasising balance and strength at least 3 days a week to prevent falls.

2. Common Postural Deformities and Corrections

Side view, person facing right — except scoliosis, which is only visible from BEHIND.



Lordosis is **low and inward**, kyphosis is **high and outward**, scoliosis is **sideways**. Each correction bends the opposite way.

THE SEVEN — cause, description, correction

Deformity	What it is / cause	Corrective measures
Knock Knees <i>Genu Valgum</i>	Knees touch each other, ankles stay apart . Caused by vitamin D and calcium deficiency, obesity, rickets, early walking.	Horse riding , Padmasana, Gomukhasana, walking on the outer edge of the feet, keeping a pillow between the ankles

Bow Legs <i>Genu Varum</i>	Knees stay apart, ankles touch — opposite of knock knees. Caused by calcium/phosphorus deficiency, obesity, forcing a child to walk early.	Walking on the inner edge of the feet, Ardha Matsyendrasana, Garudasana, vitamin D supplementation
Flat Foot <i>Pes Planus</i>	No arch in the sole; the whole foot touches the ground. Causes pain in walking and running.	Walking on toes and heels , jumping on toes, picking up objects with the toes, using an arch support , Vajrasana
Round Shoulders	Shoulders are drawn forward and the head hangs down. Caused by poor posture, sitting hunched, carrying heavy bags.	Chakrasana , Dhanurasana, Bhujangasana, holding a rod behind the back, backward stretching
Lordosis	Inward (forward) curve of the lower back ; abdomen protrudes. Caused by obesity, weak abdominal muscles, improper exercise.	Halasana , Paschimottanasana, forward bending, sit-ups, toe touching
Kyphosis	Outward (backward) curve of the upper back — humpback. Caused by malnutrition, weak muscles, poor sitting posture, illness.	Dhanurasana , Bhujangasana, Chakrasana, backward bending
Scoliosis	Sideways (lateral) curve of the spine — C or S shape. Caused by carrying weight on one shoulder, unequal leg length, poor posture.	Trikonasana , Ardha Chakrasana, hanging on a bar, bending to the opposite side, swimming

THE THREE SPINE DEFORMITIES — never mix these up **Lordosis** → **LOWER** back, curves **INWARD** → corrected by **forward** bending (Halasana, Paschimottanasana).
Kyphosis → **UPPER** back, curves **OUTWARD** → corrected by **backward** bending (Dhanurasana, Chakrasana).
Scoliosis → **SIDEWAYS** → corrected by **lateral** bending (Trikonasana).
The correction is always the **opposite direction** of the deformity.

3. Women's Participation in Sports

Benefits — Physical

- Improves **cardiovascular** health and bone density
- Controls **weight** and body composition
- Reduces risk of **osteoporosis**, diabetes, heart disease
- Improves posture and physical fitness

Benefits — Psychological

- Reduces **stress, anxiety and depression**
- Improves **self-esteem** and body image
- Develops **confidence** and emotional stability
- Improves concentration

Benefits — Social

- Develops **leadership** and teamwork
- Promotes **gender equality** and empowerment
- Widens the **social circle**
- Provides career and financial independence

Reasons for low participation in India

- **Social and cultural** restrictions
- Lack of **facilities** and female coaches
- Lack of **awareness** about benefits
- Safety concerns and family responsibilities
- Fewer **role models** and less media coverage

4. Special Considerations — Menarche and Menstrual Dysfunction

Term	Meaning
Menarche	The first menstrual bleeding, marking the start of reproductive capacity. Usually 11–15 years. Intense training may delay menarche.

Menstrual dysfunction	Any abnormality of the menstrual cycle in athletes.
Amenorrhoea	Absence of menstruation. Primary = never started by age 15. Secondary = stops for 3 or more consecutive cycles.
Dysmenorrhoea	Painful menstruation with cramps.
Oligomenorrhoea	Infrequent or irregular menstruation.

Causes in athletes: intense training, low body fat, inadequate calorie intake, hormonal imbalance, physical and emotional stress.

5. The Female Athlete Triad

DEFINITION — a guaranteed question The Female Athlete Triad is a syndrome of three interrelated conditions found in physically active girls and women:

1. Eating disorders (low energy availability) → 2. Amenorrhoea → 3. Osteoporosis.

They occur as a chain: inadequate energy intake lowers oestrogen, which stops menstruation, which weakens bone.

Component	Meaning
Eating disorders	Anorexia nervosa — extreme food restriction from fear of gaining weight. Bulimia — binge eating followed by purging.
Amenorrhoea	Absence of menstruation caused by low oestrogen from insufficient energy availability.
Osteoporosis	Loss of bone mineral density making bones brittle and prone to stress fractures .

Prevention: adequate calorie, calcium and vitamin D intake · balanced training load · regular medical checks · counselling and awareness · avoiding pressure to be thin.

6. Question Triggers identify the condition

If the case says...	The answer is
"knees touch but ankles remain apart"	Knock knees (Genu Valgum)
"ankles touch but knees remain apart"	Bow legs (Genu Varum)
"no arch in the sole"	Flat foot
"inward curve of the lower back, abdomen out"	Lordosis → forward bending asanas
"humpback, outward curve of upper back"	Kyphosis → backward bending asanas
"spine curved sideways, C shape"	Scoliosis → Trikonasana
"shoulders drawn forward, head hangs"	Round shoulders → Chakrasana
"athlete stopped menstruating"	Amenorrhoea
"painful menstruation with cramps"	Dysmenorrhoea
"thin athlete, no periods, stress fracture"	Female Athlete Triad
"fear of gaining weight, refuses food"	Anorexia nervosa
"binge eating then vomiting"	Bulimia
"60 minutes daily for a 14-year-old"	WHO guideline for 5–17 years

MOST-ASKED BOARD QUESTIONS

1. [5M] Explain any three postural deformities with their causes and corrective measures.

2. [3-5M] What is the female athlete triad? Explain its components.
3. [3M] Explain the WHO exercise guidelines for different age groups.
4. [3M] Discuss the physical, psychological and social benefits of women's participation in sports.
5. [1M] Sideways curve of the spine is called? → **Scoliosis**
6. [1M] What is menarche? → **The first menstrual period**

THE HABIT THAT SCORES — For every deformity, answer in three parts: **what it looks like** → **cause** → **two corrective asanas by name**. Naming the asana is where the mark sits — “do stretching exercises” earns nothing.