



# BACK INJURY PREVENTION PROGRAM OUTLINE

## Common Misconceptions

- Back injuries are the result of accidents, one-time incidents, falls or bad luck.
- Little can be done to prevent an injury.
- Back injury is something that happens when we are older.

Key Areas in Preventing Back Problems: *Posture, Body Mechanics, Exercise*

## ANATOMY

### Three Curves

Cervical region (7 vertebrae)  
Thoracic region (12 vertebrae)  
Lumbar region (5 vertebrae)

### Important Components

24 Vertebrae  
Discs  
Muscles/Ligaments  
Spinal Cord  
Nerve Roots

## POSTURE - *Good Posture Means Maintaining the 3 Curves.*

### Standing Posture

1. The ears over the shoulders
2. The shoulders back and over the hips
3. The hips over the knees
4. The knees over the ankles
5. Weight evenly distributed on both feet
6. Abdominal muscles tight

### Sitting Posture...Especially important when sitting at the computer.

1. The ears over the shoulders
2. The shoulders back and over the hips
3. Sit up straight, avoid slouching or pronounced forward lean
4. Low back against seat / Abdominal muscles tight
5. The feet on the floor with the knees even with hips
6. Do not sit on the tailbone
7. Get up frequently and move around

## BODY MECHANICS - *Refers to how we use our bodies, i.e., legs, arms, hips and trunk.*

### Three Simple Rules of Good Body Mechanics

1. Maintain trunk as upright as possible, use legs as much as you can.
2. Keep loads / work as close to the body as possible.
3. Always face your work. Avoid twisting when lifting.

### Remember these tips when carrying your backpack...

1. Keep the load in the backpack as light as possible.
2. Use both straps
3. Tighten straps so the load stays snug against the lower back.

## EXERCISE - *Proper alignment of the spine (good posture & body mechanics) helps you perform better in sports.*

### Strength: Important areas to address with trunk strength/stability

Abdominal muscles	Gluteals	Shoulders
Quadriceps	Upper back	Neck

### Flexibility: Important areas to address with trunk flexibility

Hamstrings	Quadriceps	Pectorals
Hips	Shoulders	Neck

### *General reminders*

- Proper flexibility allows the body to move thru its optimal range of motion
- Stretch muscles slowly and comfortably
- Do not bounce when stretching

Endurance: Important to raise heart rate and maintain it for extended periods of time (20-30 minutes)

Walking/running	Swimming	(Stairmaster, Nordic Trac)	Dancing
Biking (stationary or road)	Aerobic equipment	Aerobic Classes	Games

## FINAL THOUGHTS

Your weight has a significant impact on the health of your back. If you are overweight, you greatly increase the stress on your back. Smoking will destroy the discs in your back. DO NOT SMOKE!!!!