

60% TO 80% OF  
BALLET AND  
MODERN  
DANCERS HAVE  
A HISTORY OF  
BACK INJURY

## 'Good' Posture:

*when your joints are aligned so there is no extra stress or un-needed muscle work*

### *Why does having good posture matter?*

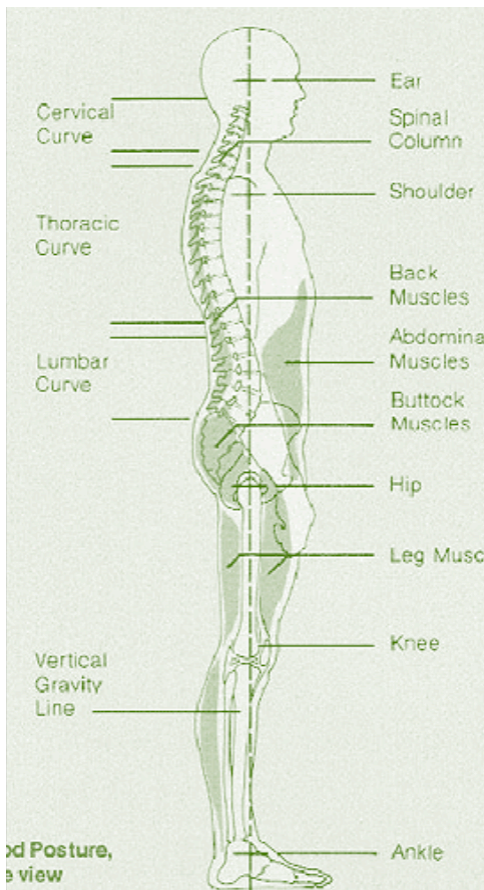
Poor spinal posture and technique can contribute to pelvic and lower extremity malalignment and injury.

Fatigue

Ineffective breathing

Pain

Overuse injuries such as muscle strains, inflammation, irritation



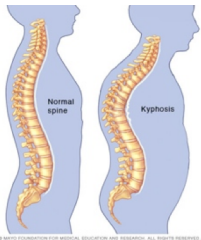
### *5 steps to finding 'good' posture:*

- 1 Align your legs to be shoulder width apart, or comfortably apart with feet flat on the floor [when standing, do not lock your knees]
- 2 Pull in your stomach to contract your abdomen; this may decrease the curve in your low back slightly but do NOT tuck your hips under your body
- 3 Slightly lift your chest bone [sternum] so your shoulders fall backward
- 4 Balance your head on your neck keeping your head from protruding forward
- 5 Consciously check to make sure your weight is not shifted toward one direction. Your weight should be balanced between your right and left, front and back.

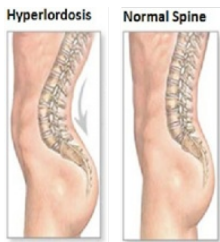
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This information is intended to be general advice; always consult with your healthcare provider

## Common Problems in dance Posture?



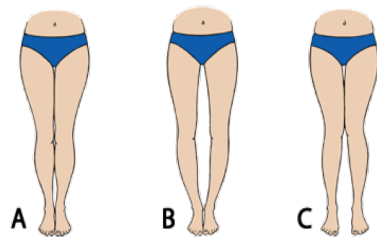
A. NORMAL CURVE  
B. THORACIC KYPHOSIS



A. SPINAL LORDOSIS  
B. NORMAL CURVE



A. GENU RECURVATUM  
B. CORRECTED KNEES



A. NORMAL POSTURE  
B. GENU VARUM  
C. GENU VALGUS

### THORACIC KYPHOSIS (Rounded-back)

Increases risk for: damage in the lumbar spine; increases spinal lordosis

Due to: Frequently no apparent cause but can be aggravated by poor posture and weak thoracic spinal extensors; Scheuermann's disease

### SPINAL LORDOSIS/HYPERLORDOSIS (Swayback)

Increases risk for: stress fractures; strains of the back muscles; sprain of the spinal ligaments.

Due to: Thoracic kyphosis; Tight or weak hip flexors; weak abdominals; weak gluteals; tight hamstrings; turning out from the feet instead of from the hips (weak external rotators and adductors); genu recurvatum (knee hyperextension); genu varum(bowlegs); weak forefeet; improper weight distribution towards the back of the feet; tight shoes

### GENU RECURVATUM (Knee Hyperextension)

Increases risk for: weak knees; lordotic posture; improper weight distribution towards the back of the feet; faulty trunk posture and upper trunk tension

Due to: Hypermobile or general loose joints; can be exacerbated by failing to pull up with the thigh keeping the knee in neutral and instead pushing the knee back to achieve extension

### GENU VARUM (Bowlegs)

Increases risk for: Improper weight distribution through the outside of the foot increases supination of foot increasing risk for ankle sprains, and peroneus longus and brevis tendinitis; sickling the foot increasing risk of stress fractures specifically in the 2<sup>nd</sup> metatarsal

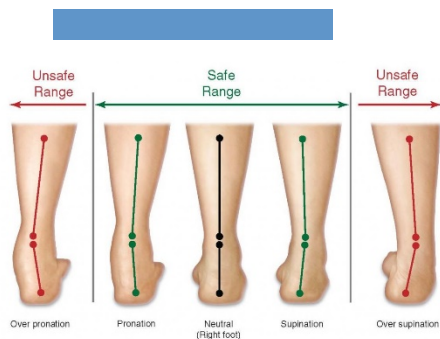
Due to: normal variation in anatomy; weak intrinsic foot muscles, weak turn out, and weak lateral calves

### GENU VALGUS (Knock-knees)

Increases risk for: pronation of the feet; poor turnout; stress on the knee; increases risk up the kinetic chain for hip injuries

Due to: normal variation in anatomy; can be exasperated by weak intrinsic foot muscles

## FEET PRONATION (Roll In) and SUPINATION (Roll Out)



Increases risk for: ankle sprains; increases risk up the kinetic chain for knee and hip injuries; uncontrolled turnout; strain on inner knee; strain on tibialis anterior and tibialis posterior; damage to lateral ligament of ankle; stress fracture of the metatarsals; sprains of the metatarsophalangeal joint capsule

Due to: weak intrinsic muscles of the feet; overturning; incorrect foot placement

### *Quick facts to remember:*

When sitting or standing and leaning forward you are placing approximately 50% more stress on the discs of your low back than when standing with 'good' posture.

Your posture should be relaxed and balanced with your weight evenly distributed between your right, left, front and back.

Compensation and increased effort often lead to pain and injury over time.

#### Resources used in this handout:

1. Howse J, McCormack M. *Anatomy, Dance Technique & Injury Prevention*. 3<sup>rd</sup> ed. London: Methuen Drama; 2000.
2. Solomon R, Solomon J, Minton SC. *Preventing Dance Injuries*. 2nd ed. Champaign, IL: Human Kinetics; 2005.