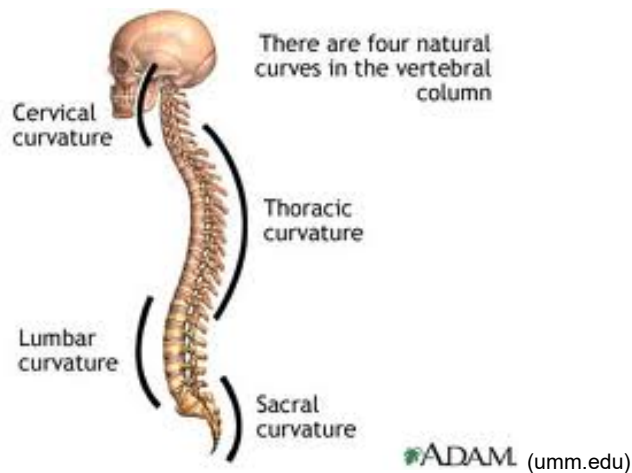


## CURVATURE OF THE SPINE

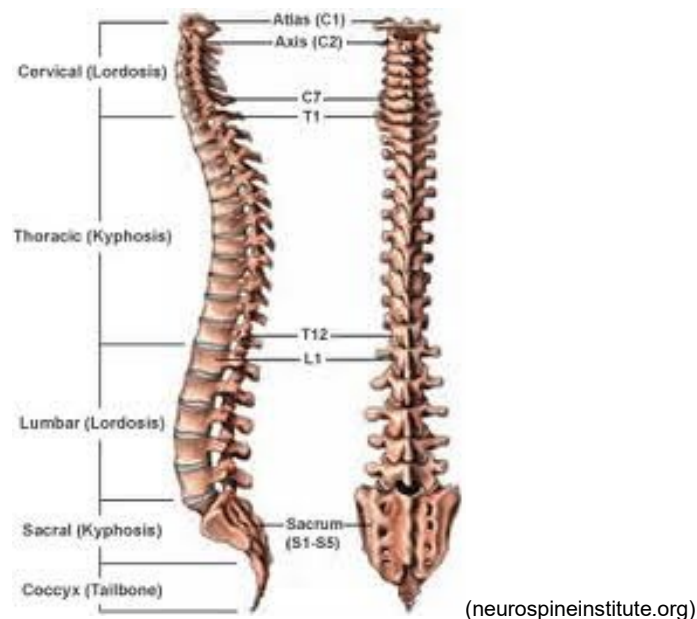
### Side profile

- From this view, the spine normally has a healthy S- shape
- This shape facilitates efficient load bearing



### Rear profile

- From this view, the spine is normally straight with the bones stacked up in a line on top of one another



The shape of the spine relates closely to how the muscles, joints, ligaments, nerves and other body structures function.

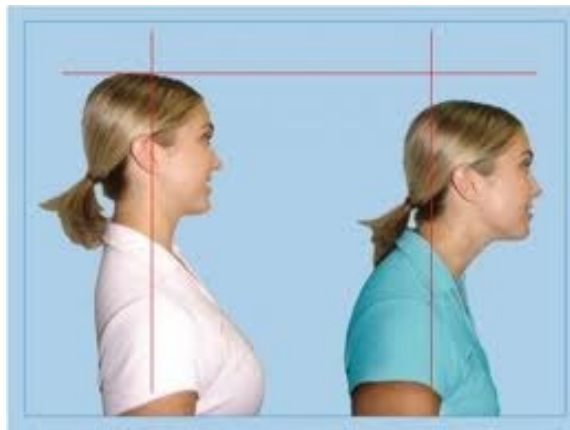
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## Common Unhealthy curves of the spine

### Side profile

#### 1) Poking chin/forward head

- This is when the head travels forward relative to the shoulder and the chin pokes out
- This causes increased pressure in the back of the skull and neck
- Common in computer users
- Can result in headaches, neck and shoulder pain



(jmaxfitness.com)

#### 2) Kyphosis (increased)

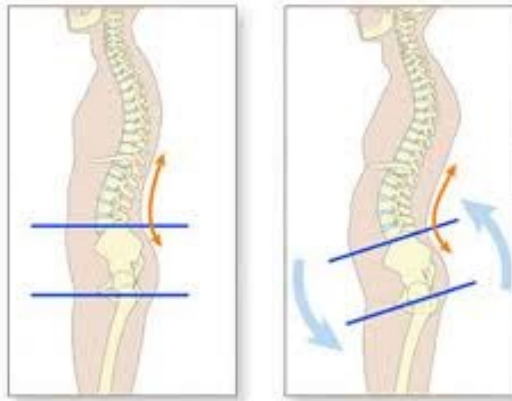
- This is when the normal rounding in the mid or thoracic spine is exacerbated
- This may compress the rib cage and alter the way you breathe



ADAM (umm.edu)

### 3) Lordosis (increased)

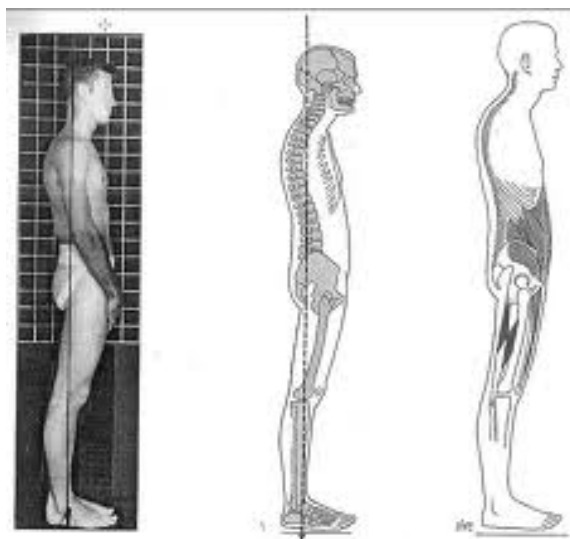
- This occurs when the arch in the lower or lumbar spine increases as may be seen in a pregnant lady.
- This can increase the pressure on the muscles and joints in the lower back and pelvis and result in low back pain



perfectyouranatomy.wordpress.com

### 4) Sway

- This occurs when the hips “sway” forward but your trunk leans backward – like your are sticking your belly button out to the world

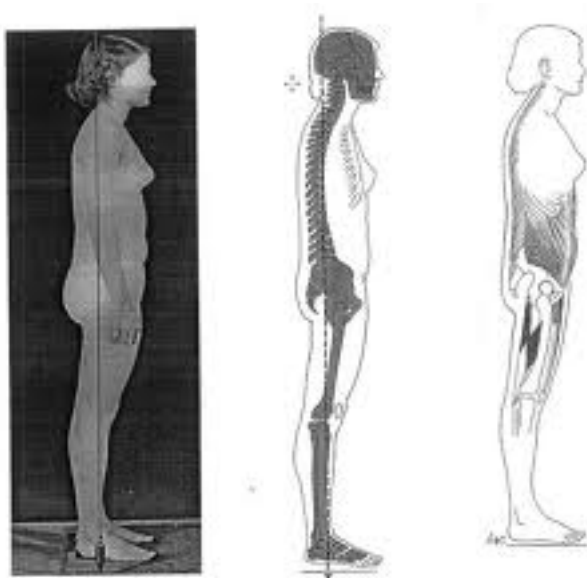


pilatespatio.blogspot.com

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### 5) Flat

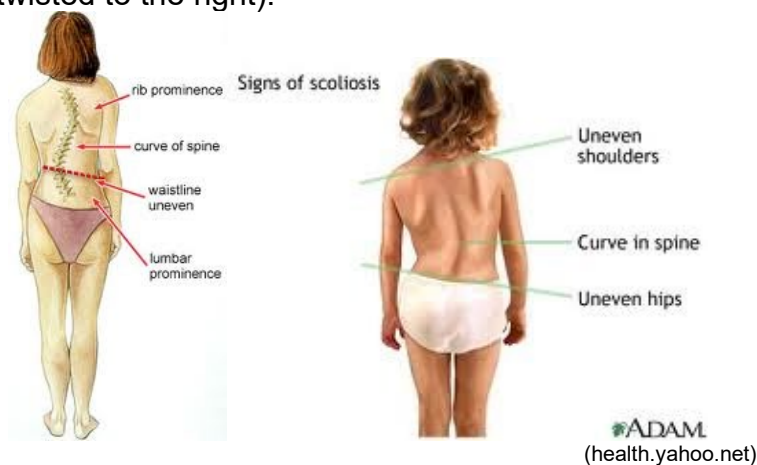
- As the name implies, there is a flattening of all the spinal curves with your spine almost being like a rigid pole i.e. an inefficient shock absorbing structure.



(pilatespatio.com)

## SCOLIOSIS

- This is a combination of a twist and a sidebend in the spine.
- It tends to occur either in the lower or mid spine.
- According to the laws of spinal mechanics, the movements occur in separate directions.
- For example, if someone had a scoliosis in the mid or thoracic spine, and the trunk was side bent to the left (left shoulder dropping to left hip/left rib cage squashed) then they will be twisted to the right (breastbone twisted to the right).



- The extent of the deformity varies according to each individual.
- A scoliosis can have different causes in an adult and a child.
- Causes of an adult scoliosis can be found at:  
<http://www.nhs.uk/Conditions/Scoliosis/Pages/Causes.aspx>
- Many factors may contribute to the development of an adult scoliosis including:
  - Growth spurts
  - Asymmetrical activities
  - Poor posture
  - Psychosocial e.g. low self esteem
  - Height
  - Surgery
  - Trauma
  - Certain medical conditions
  - Age

Please speak to your physical therapist regarding any queries.

This handout is by no means comprehensive and serves merely as an introductory guide and should be discuss with your healthcare professional.