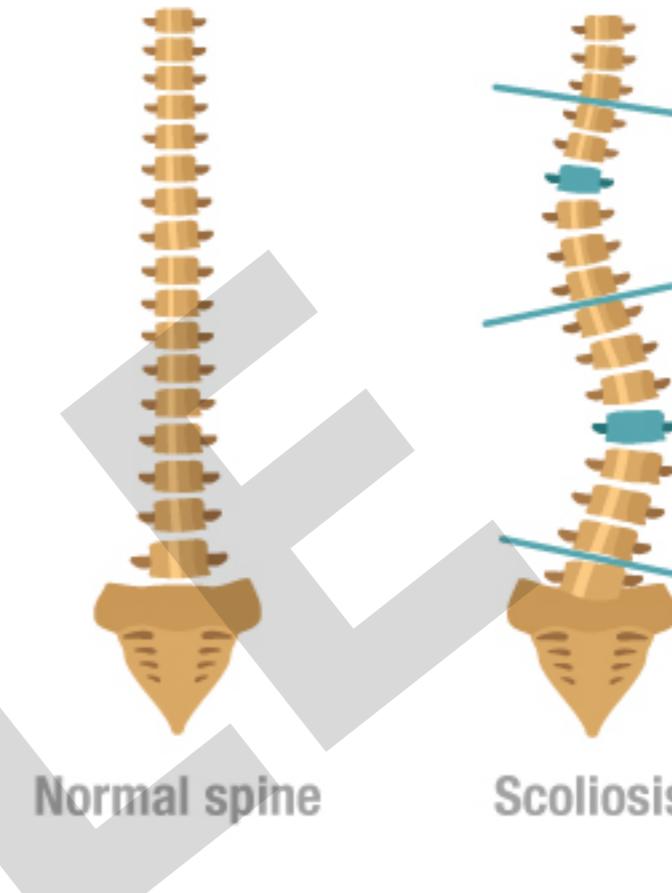


# Scoliosis

## Clinical examination findings

- Shoulder and waistline asymmetry
- Truncal shift
- Rib prominence on Adam's forward bend test



Less apparent in overweight and obese adolescents

Delayed diagnosis

Late referral to an orthopaedic surgeon for treatment

## Effects of Obesity in adolescent idiopathic scoliosis (AIS)

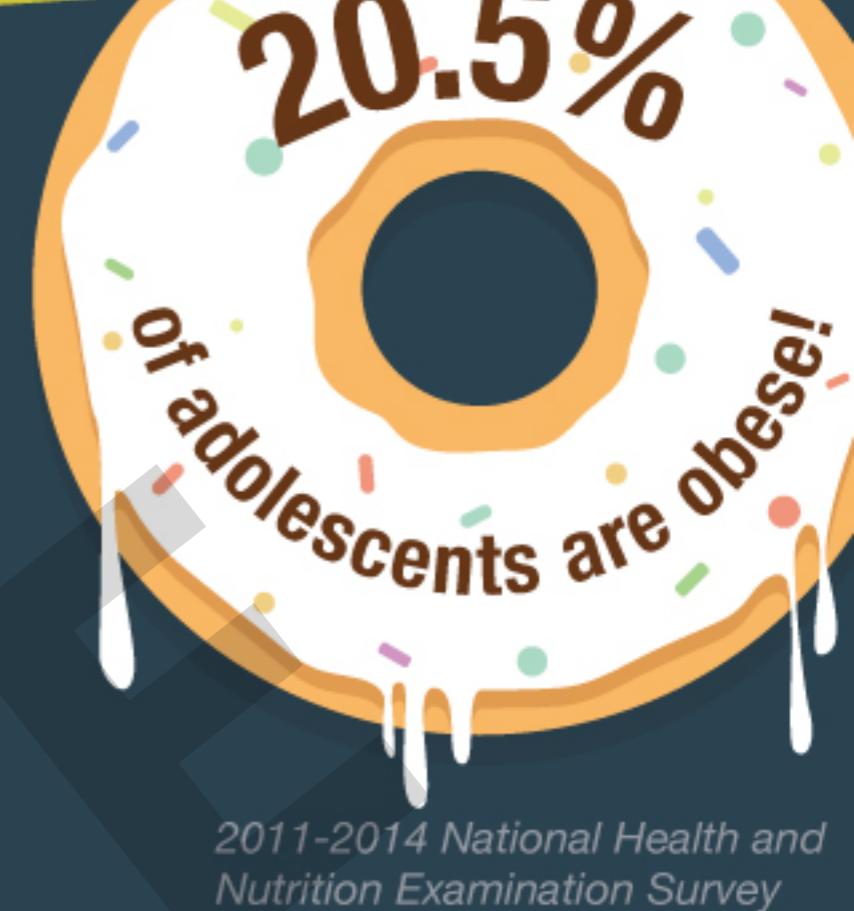
### Radiographic measurements

- Preoperative curve magnitude
- Preoperative thoracic kyphosis
- Lumbar lordosis at first follow-up
- Minor curve magnitude at last follow-up

Reported brace compliance was similar between the groups.

588 adolescents (11-17 year olds)  
496 girls | 92 boys

454 Healthy weight (HW)  
134 Overweight (OW)  
71 Obese (OB)



2011-2014 National Health and Nutrition Examination Survey

### Major curve magnitude

(At first presentation to orthopedic surgeon)

43.9°

276 min

49.3°

307 min

50.4°

320 min

### Surgical time

(Posterior spinal fusion)

28.3%

HW  
≤84

37.0%

OW  
≥85

47.8%

OB  
≥95

### Postoperative complications

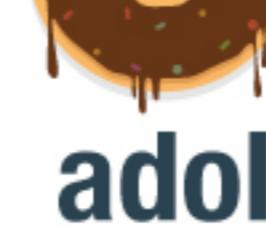
(≥ 2-year follow-up)

! Higher risk of postoperative complications

! Larger curve magnitude

! Increased surgical times

## Outcomes of posterior spinal fusion in obese adolescents with AIS



Obese adolescents should be closely monitored for scoliosis to avoid delayed diagnosis and consequent referral for surgical treatment