

# Hemivertebra

Hemivertebra is a type of vertebral anomaly and results from a lack of formation of one half of a vertebral body.

Hemivertebra, associated with a failure in the formation and fusion of vertebral body ossification nuclei, are a common cause of thoracic or lumbar scoliosis. A cervical location is rare and even rarer as a cause of cervical subluxation in flexion and extension (for which only one previous case has been found).

see [cervical hemivertebra](#)

## Epidemiology

The estimated incidence is at ~0.3 per 1000 live births 2.

## Pathology

It falls under the spectrum of segmentational anomalies and can involve one or multiple levels.

A hemivertebra acts as a wedge within the vertebral column, resulting in curvature away from the side on which it is present.

## Associations

Recognised associations are many and include:

Aicardi syndrome cleidocranial dysostosis gastroschisis 3 Gorlin syndrome fetal pyelectasis 3

[Jarcho Levin syndrome](#)

OEIS complex

[VACTERL](#) association

mucopolysaccharidosis 9 This list supposed to be lot longer than this. If you know more, do add in with a relevant journal reference.

## Classification

A hemivertebra can be classified according to many types which include:

### Attachment

fully segmental (free) not attached to either vertebra above or below most concerning  
 segmental: half segment is fused with vertebra above or below with no intervening intervertebral disc  
 non segmental not separated from (i.e. connected to) either level above or below causes less of a concern  
 incarcerated joined by pedicles to levels above and below causes less of a concern  
 Orientation

dorsal hemivertebra: classically results in a kyphosis lateral hemivertebra: classically results in a scoliosis ventral hemivertebra (extremely rare): results in the lordosis Radiographic features

## Antenatal ultrasound

A hemivertebra may be seen as an asymmetrical vertebral body on sagittal or coronal scanning, while on axial scanning, a focal defect may be seen at either side of the vertebral column 5.

## Plain film/CT

Usually directly outlines the bony anomaly and often seen as a wedge shaped vertebral body.

## Prognosis

The prognosis can be variable dependant on the type from being a progressive to non progressive deformity. The strongest negative impact is when a hemivertebra occurs at the lumbo-sacral level 7.

## Differential diagnosis

For antenatal sonographic appearances consider:

[Block vertebra](#)

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Last update: **2024/06/07 02:55**

