

# AXIAL SKELETON

## Lec. 6

# AXIAL SKELETON:

## **Sternum:**

The sternum bone lies in the midline of the anterior chest wall.

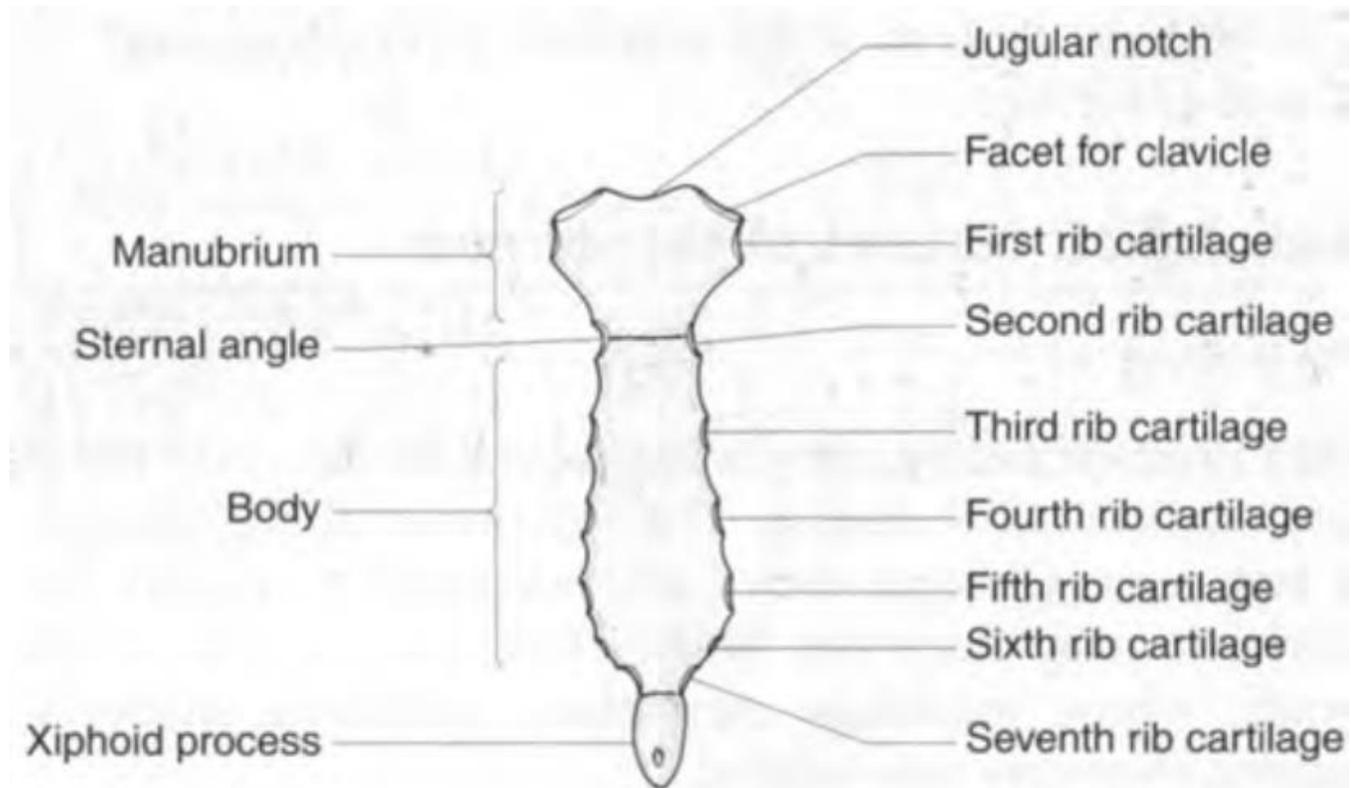
It is a flat bone that can be divided into three parts:

- 1**-manubrium sterni,
- 2**-body of the sternum,
- 3**-and xiphoid process.

The manubrium is the upper part of the sternum.

- ❖ The body of the sternum articulates above with the manubrium at the **manubriosternal** joint and below with the xiphoid process at the **xiphisternal** joint.
- ❖ The xiphoid process is a thin plate of cartilage that becomes ossified at its proximal end during adult life.

# Sternum:



**Fig. 4.4** The sternum.

## **Ribs:**

There are **12** pairs of ribs, all of which are attached posteriorly to the thoracic vertebrae .

**The ribs are divided into three categories:**

**1-True ribs**

**2-False ribs**

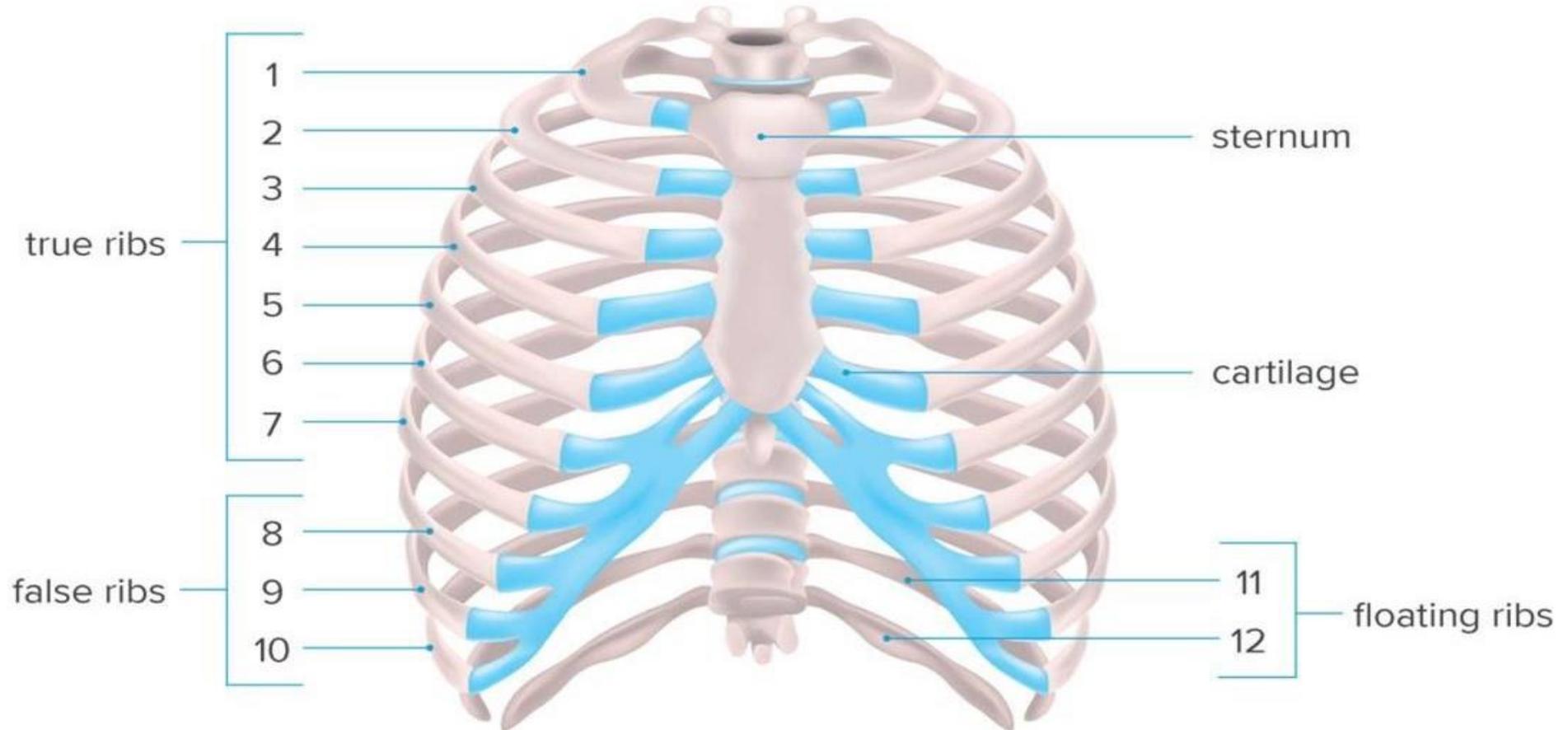
**3-Floating ribs**

**True ribs:** The upper seven pairs

**False ribs:** The 8th, 9th, and 10th pairs of ribs are attached

**Floating ribs:** The 11th and 12th pairs

# Ribs Anatomy



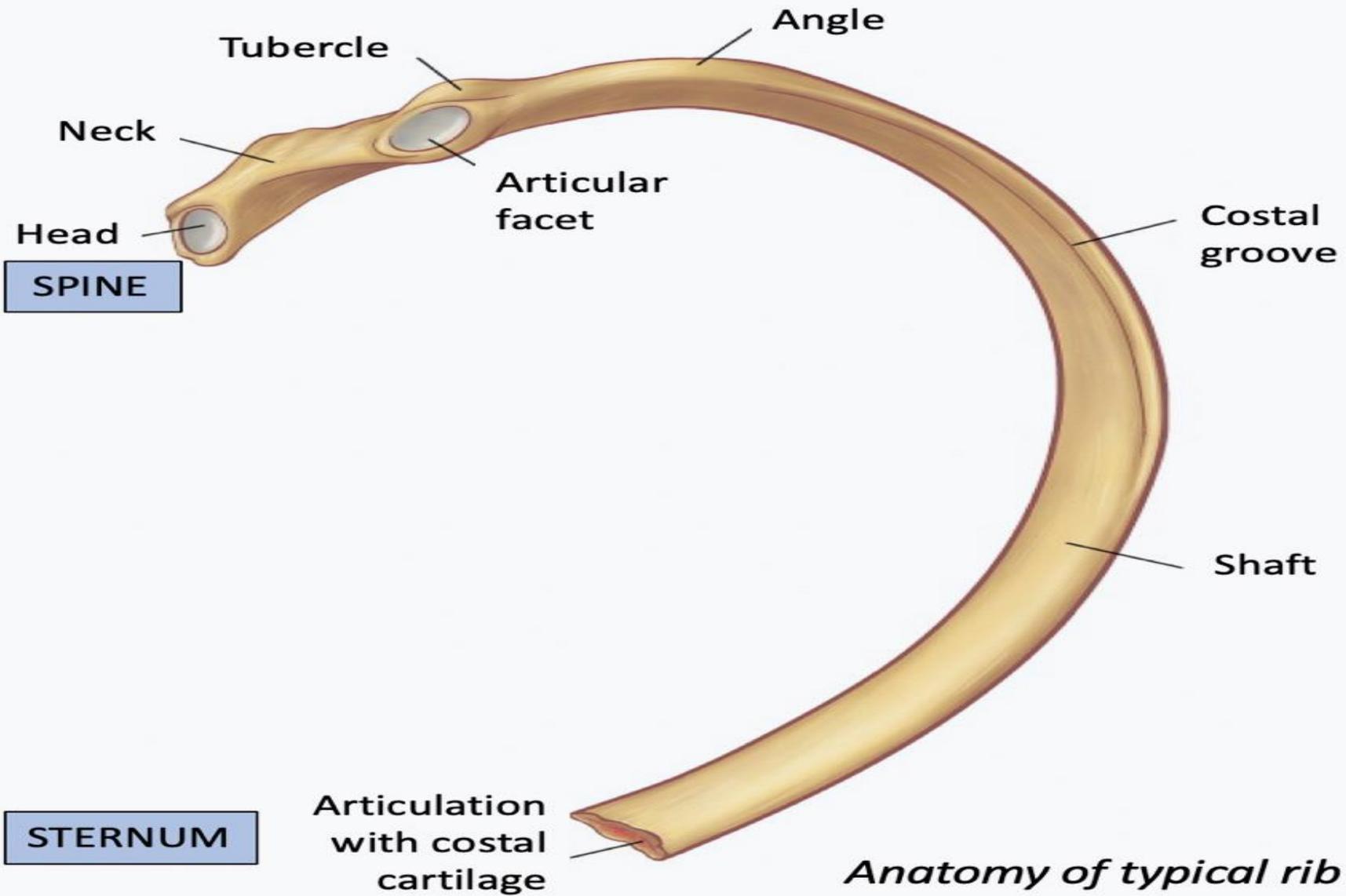
## Typical rib:

A rib has a **head**, **neck**, **tubercle**, **shaft**, and **angle**.

These are 3<sup>rd</sup> to 9<sup>th</sup> ribs

Atypical rib: including:-

- First rib
- Second rib
- Tenth rib
- Eleventh rib
- Twelve rib



*Anatomy of typical rib*

# Costal Cartilages:

**Costal cartilages:** are bars of cartilage connecting the upper seven ribs to the lateral edge of the sternum and the 8th,9th, and 10th ribs to the cartilage immediately above.

- The cartilages of the 11th and 12th ribs end in the abdominal musculature .

# Joints of the Chest Wall:

## Joints of the Sternum:

1- the manubrium + the body of the sternum = manubriosternal joint = cartilaginous joint

2- xiphoid process + body sternum =  
xiphisternal joint = cartilaginous joint

Joints of the Ribs + Costal Cartilages = cartilaginous joints.

- THE END