

# LESSON 5

- **Fractures & Healing**

- **True or False?**

**TRUE!**

1. Arms are among the most commonly broken bones, accounting for almost half of all adults' broken bones.
2. The collarbone is the most commonly broken bone among children.

# Bone Fractures

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- **Fracture: break in a bone**
- **Types of bone fractures**
  - **Closed (simple) fracture: bone does not penetrate the skin**
  - **Open (compound) fracture: bone penetrates through the skin**
- **Bone fractures are treated by reduction and immobilization**
  - **Closed reduction – no surgery to realign**
  - **Open reduction – surgical realignment**

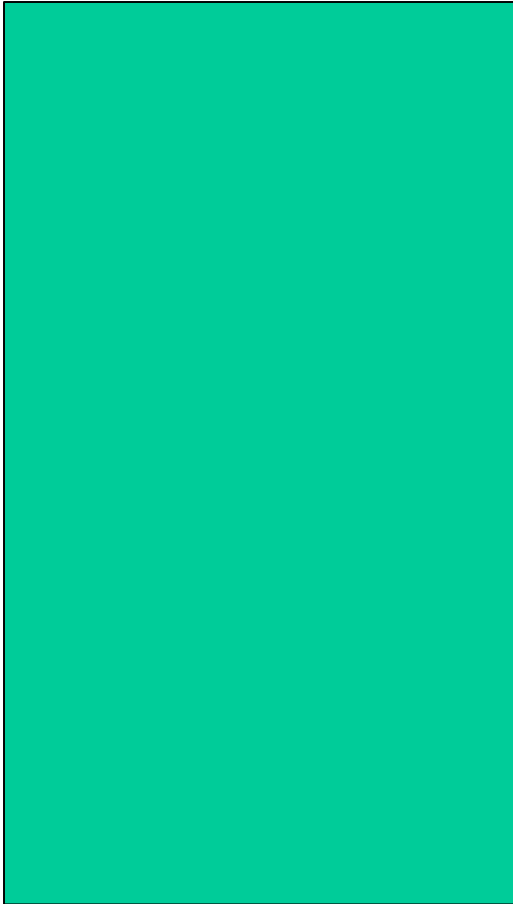
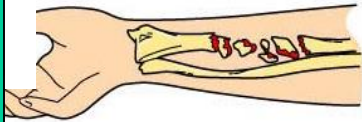
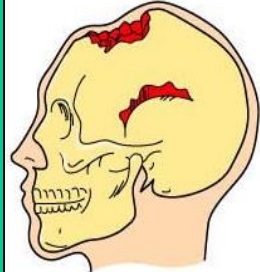
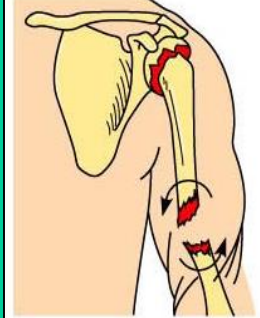

# Common Types of Fractures

[Video: Fracture Types](#)

**TABLE 5.2**

**Common Types of Fractures**

Table 5.2

Fracture type	Illustration	Description	Comment
			
			
			
			


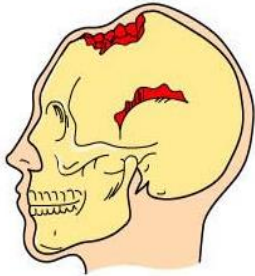
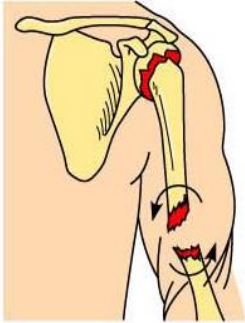

# Common Types of Fractures

[Video: Fracture Types](#)

TABLE 5.2

Common Types of Fractures

Table 5.2

Fracture type	Illustration	Description	Comment
<b><u>1. Comminuted</u></b>		1. Many fragments; common in older brittle bones	
<b><u>2. Compression</u></b>		2. crushed; common in porous bones (older people)	
<b><u>3. Depressed</u></b>		3. Pressed inward; typical on skull	
<b><u>4. Impacted</u></b>		4. Ends forced into each other; common falling w/ outstretched arms	
<b><u>5. Spiral</u></b>		5. Ragged break due to twisting force; common sports fracture	
<b><u>6. Greenstick</u></b>		6. Incomplete like a green twig; common in children w/ flexible bones	

# Repair of Bone Fractures

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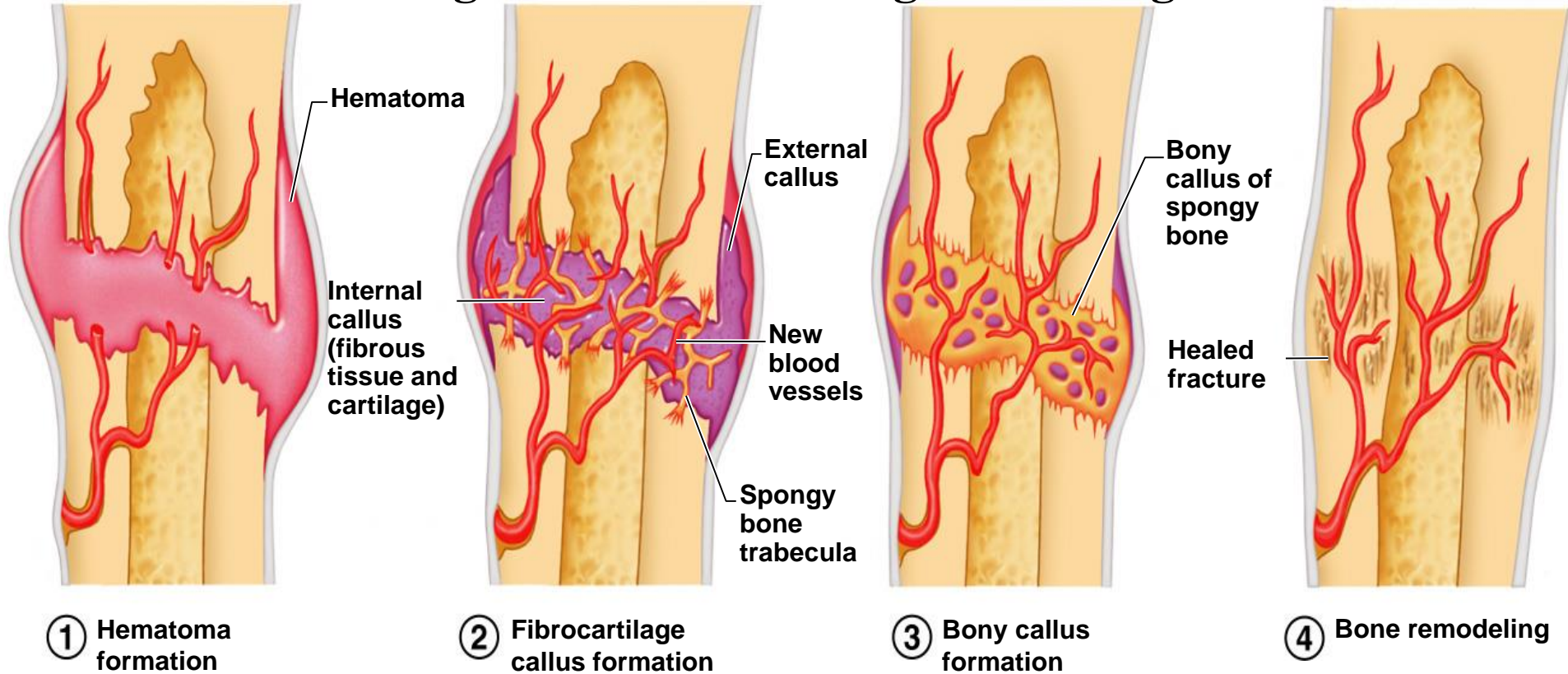
- 1) Hematoma (**blood-filled swelling**) is formed
- 2) Break is splinted by **fibrocartilage** to form a callus
- 3) Fibrocartilage callus is replaced by a **bony callus**
- 4) Bony callus is **remodeled** to form a permanent patch

[Video: Principles of Fracture Healing](#)

# Stages in the Healing of a Bone Fracture

Describe a change between each stage of healing:

Figure 5.5



**1-2: new blood vessels form; spongy bone trabeculae form**

**2-3: fibrocartilage callus begins to harden to bone**

**3-4: blood vessels and bone are fully repaired**