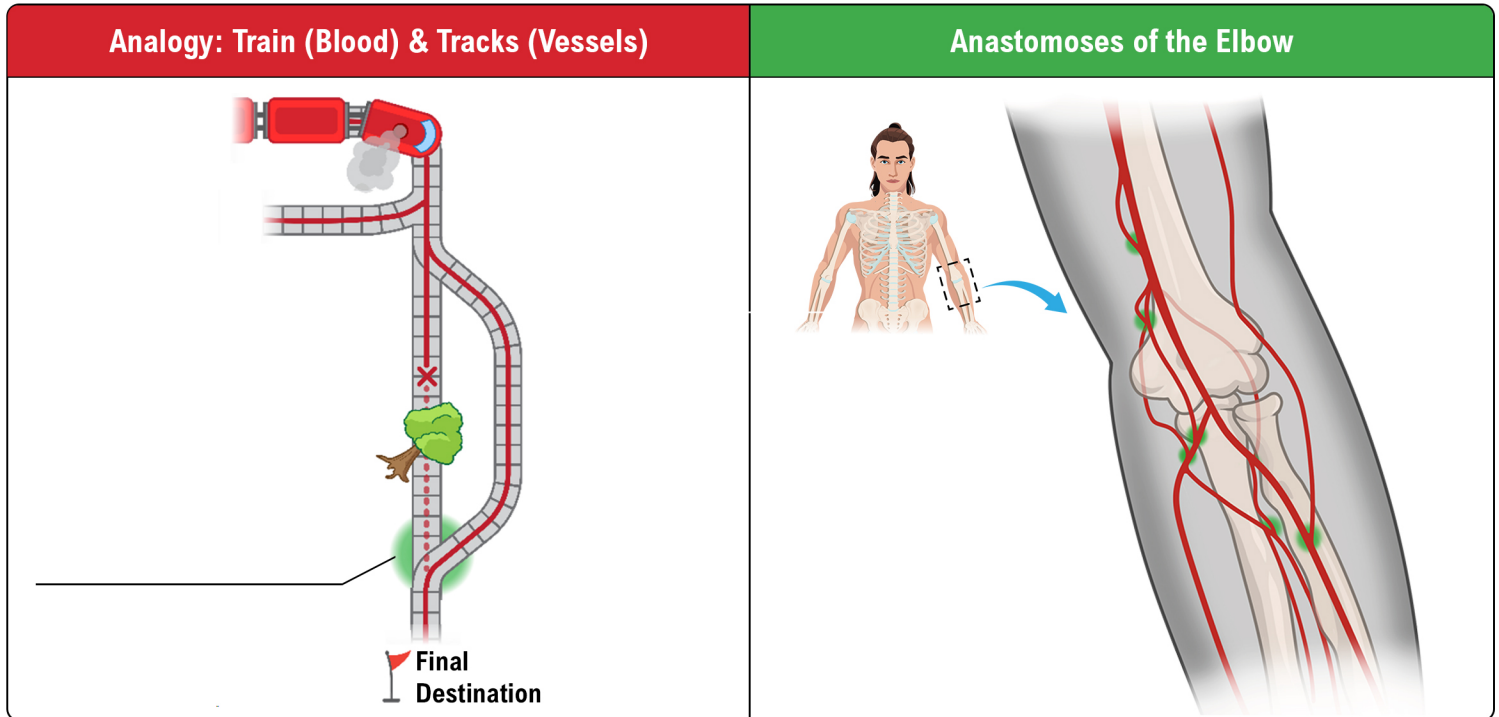


## TOPIC: ANASTOMOSES

### Anastomoses Form Collateral Channels

- ◆ **Collateral Channels:** alternative \_\_\_\_\_ for blood to reach its *same* specific destination.
  - Divergence points of blood vessels do \_\_\_\_\_ always form collateral channels (may supply *distinct areas*).
  - **Anastomosis:** *convergence* point (\_\_\_\_\_) of blood vessels; often a component of *collateral channels*.
- ◆ \_\_\_\_\_/terminal blood vessels do NOT anastomose/merge & obstruction can result in tissue *death*.



### EXAMPLE

During which scenario would anastomoses be the most important?

- a) When blood oxygen levels are higher than usual.
- b) During physical exercise.
- c) When there is a blockage in an artery.
- d) When the body is at rest.

### PRACTICE

What is the primary function of anastomoses in blood vessels?

- |   |  |
|---|--|
| a) Remove impurities from blood.        | c) Control blood temperature.                    |
| b) Regulate oxygen levels in the blood. | d) Help provide alternate routes for blood flow. |

## TOPIC: ANASTOMOSES

### Types of Anastomoses

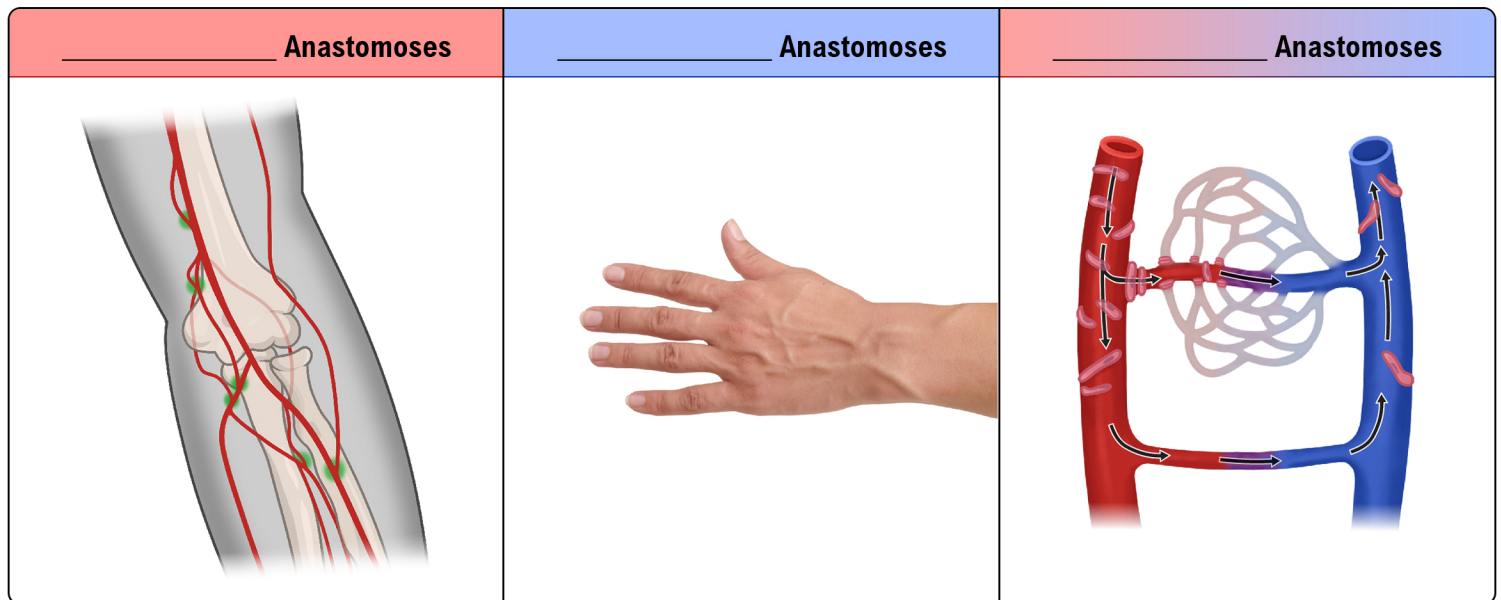
◆ There are \_\_\_\_ types of anastomoses:

**1. Arterial Anastomoses:** convergence points of \_\_\_\_; found in joints & near vital organs.

**2. Venous Anastomoses:** convergence points of \_\_\_\_; are significantly \_\_\_\_ common.

**3. Arteriovenous Anastomoses:** convergence points of arteries *directly* into veins, \_\_\_\_ capillaries.

▸ Common in mesenteries, skin, fingers, toes, & ears to more precisely \_\_\_\_ blood flow.



### EXAMPLE

True or false: A blockage in a vein is typically more life-threatening than a blockage in an artery.

- a) True.
- b) False, blockages in veins tend to be less life-threatening as veins have more anastomoses than arteries.
- c) False, blockages in arteries are more life-threatening because they contain more blood.
- d) False, blockages in arteries are more life-threatening because they have lower blood pressure.

### PRACTICE

Which of the following is a reason that the retina, kidney, & spleen may be more susceptible to cell death than other organs?

- a) Arteries that supply these organs do not have many anastomoses.
- b) Veins that carry blood away from these organs do not have many anastomoses.
- c) There are very few arteriovenous anastomoses near these organs.
- d) They have many capillary beds.