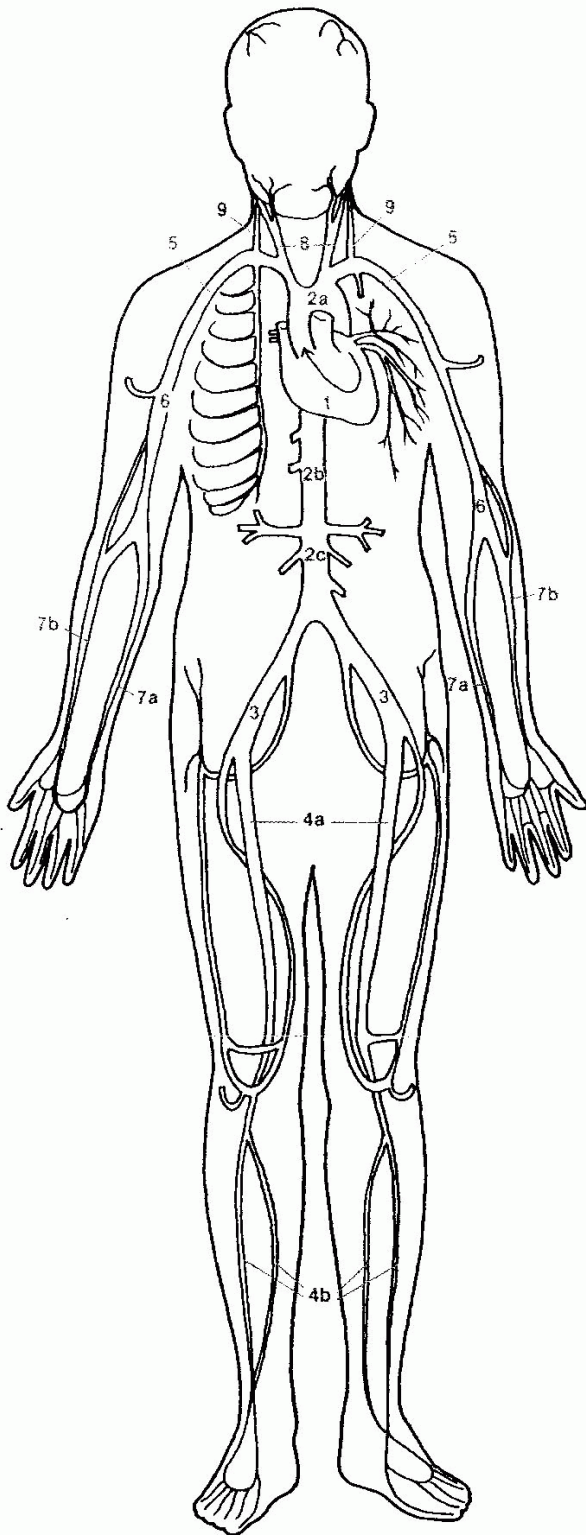


# ARTERIES



The arteries carry blood from the heart to the capillaries, dividing and then subdividing on the way until they become smaller and smaller and more and more numerous, and end in the *capillary beds* located in the body tissues. The *aorta* is the first and largest of the arteries. Adults have about seven thousand square miles of capillaries. If laid end to end, all the elements of the *vascular* (blood vessel) *system*—arteries, capillaries, and veins—would extend about seventy thousand miles. The arteries have three layers—muscle tissue, elastic fibers, and connective tissue—and expand and contract in coordination with the flow of blood passing through them. Each heartbeat pushes blood into the arteries, which expand to hold the blood and then contract behind it as the heart pumps the blood to the next section of the vascular system. The arteries' structure prevents them from collapsing when broken, but the arteries will constrict to reduce the size of the opening and thereby diminish the loss of blood. Many parts of the body are served by more than one artery, a system called *collateral circulation*. Thus if a blood vessel serving such an area is damaged or restricted, the flow of blood will not stop completely.

- |  |              |
|--|--------------|
| 1. HEART   | Purple       |
| 2. a. ARCH OF AORTA, b. THORACIC AORTA, and c. ABDOMINAL AORTA | Pink         |
| 3. COMMON ILIAC  | Orange       |
| 4. a. FEMORAL and b. TIBIAL                                    | Light Brown  |
| 5. SUBCLAVIAN  | Yellow       |
| 6. AXILLARY AND BRACHIAL                                       | Green        |
| 7. a. ULNAR and b. RADIAL                                      | Light Green  |
| 8. CAROTID   | Light Orange |
| 9. VERTEBRAL   | Brown        |
| 10. ARTERIAL BLOOD   | Red          |
| 11. CONNECTIVE TISSUE  | Light Purple |
| 12. SMOOTH MUSCLE TISSUE                                       | Turquoise    |
| 13. SEROUS MEMBRANE  | Flesh        |

