Pulse

- Pulse pressure wave of blood
- Monitored at "pressure points" where pulse is easily palpated



Figure 11.16

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Blood Pressure

- Measurements by health professionals are made on the pressure in large arteries
 - Systolic pressure at the peak of ventricular contraction
 - Diastolic pressure when ventricles relax
- Pressure in blood vessels decreases as the distance away from the heart increases

Measuring Arterial Blood Pressure



Figure 11.18

Comparison of Blood Pressures in Different Vessels



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Blood Pressure: Effects of Factors

- Neural factors
 - Autonomic nervous system adjustments (sympathetic division)
- Renal factors
 - Regulation by altering blood volume
 - Renin hormonal control

Blood Pressure: Effects of Factors

• Temperature

- Heat has a vasodilation effect
- Cold has a vasoconstricting effect

Chemicals

 Various substances can cause increases or decreases

Diet

Factors Determining Blood Pressure



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Variations in Blood Pressure

- Human normal range is variable
 - Normal
 - 140–110 mm Hg systolic
 - 80–75 mm Hg diastolic
 - Hypotension
 - Low systolic (below 110 mm HG)
 - Often associated with illness
 - Hypertension
 - High systolic (above 140 mm HG)
 - Can be dangerous if it is chronic