



**FIGURE 3-1** Normal and abnormal jugular venous pulse (JVP) tracings. **A**, Normal jugular pulse tracing with simultaneous electrocardiogram (ECG) and phonocardiogram. **B**, Loss of the *a* wave in atrial fibrillation. **C**, Large *a* wave in tricuspid stenosis. **D**, Large *c-v* wave in tricuspid regurgitation. **E**, Prominent *x* and *y* descents in constrictive pericarditis. **F**, Prominent *x* descent and diminutive *y* descent in pericardial tamponade. **G**, JVP tracing and simultaneous ECG during complete heart block demonstrates cannon *a* waves occurring when the atrium contracts against a closed tricuspid valve during ventricular systole. P, P waves correlating with atrial contraction; S<sub>1</sub> to S<sub>4</sub>, heart sounds.

### Examination of Arterial Pressure and Pulse

Arterial blood pressure is measured noninvasively with the use of a sphygmomanometer. Before the blood pressure is taken, the patient ideally should be relaxed, allowed to rest for 5 to 10 minutes in a quiet room, and seated or lying comfortably. The cuff is typically applied to the upper arm, approximately 1 inch above

the antecubital fossa. A stethoscope is then used to auscultate under the lower edge of the cuff. The cuff is rapidly inflated to approximately 30 mm Hg above the anticipated systolic pressure and then slowly deflated (at approximately 3 mm Hg/sec) while the examiner listens for the sounds produced by blood entering the previously occluded artery. These sounds are the Korotkoff sounds. The first sound is typically a very clear tapping sound