Technique/Normal Findings

Percuss the liver (see Box 21–3 for guidelines for liver percussion and palpation; see Figure 21–13 for landmarks). The lower border of liver dullness is located at the costal margin to 1 to 2 cm below.

Abnormal Findings

- In cirrhosis and/or hepatitis, the liver is greater than 6 to 10 cm in the MCL and greater than 4 to 8 cm in the midsternal line (MSL).

**BOX 21–3  Guidelines for Percussing and Palpating the Liver**

The size of the liver may be determined by percussion and palpation, as follows:

1. Percuss, in the midclavicular line (MCL), beginning below the umbilicus (see Figure 21–13). Begin to percuss over a region of tympany, and move upward. The first dull percussion tone occurs at the lower border of the liver. Determine the upper liver border by beginning percussion over an area of lung resonance (in the MCL) and percussing downward to the first dull tone. Usually at the 5th to 7th interspace. Mark each of these locations, and measure the distance from one mark to the other to determine liver size. The normal liver size is 6 to 12 cm in the MCL; however, men have larger livers than women.

2. Conduct bimanual palpation of the liver by placing your left hand under the client at the level of the 11th to 12th ribs and applying upward pressure. Place your right hand below the costal margin, ask the client to take a deep breath, and palpate for the liver border. The liver is not normally palpable in a healthy adult, although it may be in very thin people.

Percuss the spleen for dullness posterior to the midaxillary line at the level of the 6th to 11th rib (Figure 21–14). The spleen is percussed as an oval area of dullness approximately 7 cm wide near the left 10th rib and slightly posterior to the midaxillary line.

- A large area of dullness that extends to the left anterior axillary line on inspiration is associated with an enlarged spleen and may be related to trauma, infection, or mononucleosis.

**Figure 21–13** Anatomic location of the liver, with the midclavicular line (MCL) and midsternal line (MSL) superimposed. The normal liver span is 6 to 12 cm.