- Cheilosis (painful lesions at corners of mouth) is seen with riboflavin and/or niacin deficiency.
- Cold sores or clear vesicles with a red base are seen in herpes simplex I.
- Inspect and palpate the tongue.
- Atrophic smooth glossitis is characterized by a bright red tongue. It is seen in B₁₂, folic acid, and iron deficiencies.
- Vertical fissures are seen in dehydration.
- A black, hairy tongue may be seen following antibiotic therapy.
- Inspect and palpate the buccal mucosa.
- Leukoplakia (small white patches) may be a sign of a pre-malignant condition.
- A reddened, dry, swollen mucosa may be seen in stomatitis.
- Candidiases (white cheesy patches that bleed when scraped) may be seen in immune-suppressed clients receiving antibiotics or chemotherapy and in terminally ill clients.
- Inspect and palpate the teeth.
- Cavities and excessive plaque are seen with poor nutrition and/or poor oral hygiene.

Assessment Technique:
- Inspect and palpate the gums.
- Swollen, red gums that bleed easily (gingivitis) are seen in periodontal disease, vitamin C deficiencies, or with hormonal changes.
- Inspect the throat and tonsils.
- In acute infections, tonsils are red and swollen and may have white spots.
- Note the client’s breath.
- Sweet, fruity breath is noted in diabetic ketoacidosis.
- Acetone breath may be a sign of uremia.
- Foul breath may result from liver disease, respiratory infections, and poor oral hygiene.

Abdominal Assessment with Abnormal Findings
Box 19–1 provides guidelines for abdominal assessment.
- Inspect abdominal contour, skin integrity, venous pattern, and aortic pulsation.
- Generalized abdominal distention may be seen in gas retention or obesity.
- Lower abdominal distention is seen in bladder distention, pregnancy, or ovarian mass.
- General distention and an everted umbilicus is seen with ascites and/or tumors.
- A scaphoid (sunken) abdomen is seen in malnutrition or when fat is replaced with muscle.
- Striae (whitish-silver stretch marks) are seen in obesity and during or after pregnancy.
- Spider angiomas may be seen in liver disease.
- Dilated veins are prominent in cirrhosis of the liver, ascites, portal hypertension, or venocaval obstruction.
- Pulsation is increased in aortic aneurysm.
- Auscultate all four quadrants of the abdomen with the diaphragm of the stethoscope (Figure 19–8 ). Begin in the lower right quadrant, where bowel sounds are almost always present. Normal bowel sounds (gurgling or clicking) last 5 to 30 minutes. Listen for at least 5 minutes in each of the four quadrants to confirm the absence of bowel sounds.
- Borborygms (hyperactive high-pitched, tinkling, rushing, or growling bowel sounds) is heard in diarrhea or at the onset of bowel obstruction.
- Bowel sounds may be absent later in bowel obstruction, with an inflamed peritoneum, and/or following surgery of the abdomen.
- Auscultate the abdomen for vascular sounds with the bell of the stethoscope (Figure 19–9 ).

### Guidelines for Assessing the Abdomen

Ask the client to empty the bladder before beginning the examination. Assist the client to the dorsal recumbent (supine) position, with a small pillow under the head, a pillow under the knees (if desired), and the arms at the sides of the body. Warm the stethoscope before applying it to the client’s skin. Ask the client to point to areas that are painful, and explain that those areas will be examined last. Expose the abdomen from below the breasts to the pubic symphysis, and drape the client’s thoracic and genital areas. When you document your findings, specify the location by abdominal quadrant.

General guidelines for abdominal assessment are as follows:

1. Inspect the abdomen under a good light source that is shining across the abdomen. Sit at the right side of the client, and note symmetry, distention, masses, visible peristalsis, and respiratory movements. If masses are detected, ask the client to take a deep breath, which decreases the size of the abdominal cavity and makes any abnormality more visible.

2. Auscultate each quadrant of the abdomen, using the diaphragm of the stethoscope. Listen for bowel sounds, arterial bruits, venous hums, and friction rubs.

3. Percuss several areas within each quadrant of the abdomen, using a systematic path. (For example, always begin in the lower left quadrant, then proceed to the lower right quadrant, upper right quadrant, and upper left quadrant, respectively.) The predominant percussion tones for the entire abdomen are tympany and dullness. Tympany is present over gas-filled intestines. Dullness is present over the liver, the enlarged kidney, or a full stomach. Percuss for fluid, gaseous distention, and masses.

4. Palpate each quadrant of the abdomen for shape, position, mobility, size, consistency, and tenderness of the major abdominal organs. Begin this part of the assessment with light palpation, and increase the depth of palpation to elicit tenderness or better identify organ size and shape. Deep palpation should be conducted only by nurses with considerable experience. Remember to palpate areas of indicated tenderness last and to use gentle pressure. Palpation may be difficult or impossible if the client exhibits muscle guarding from pain or is ticklish. The gallbladder and the spleen are normally not palpable.