

Smallpox (variola major). Worldwide eradication of smallpox was achieved in 1977; the United States and Russia have the only known storage sites of the virus. The virus is considered a potential agent for biological warfare. Initial signs and symptoms include high fever, malaise, prostration, severe headache, backache, and abdominal pain. A maculopapular rash develops on the oral mucosa, pharynx, face, and forearms and then spreads to the trunk and legs. Within 2 days, the rash becomes vesicular and later pustular. The lesions develop at the same time, appear identical, and are more prominent on the face and extremities. The pustules are round, firm, and deeply embedded in the skin. After 8 to 9 days, the pustules form a crust, which later separates from the skin, leaving a pitted scar. Death may result from encephalitis, extensive bleeding, or secondary infection. ☐ Spinal neoplasm (benign). Spinal neoplasm typically causes severe localized back pain and scoliosis. ☐ Spinal stenosis. Resembling a ruptured intervertebral disk, spinal stenosis produces back pain with or without sciatica, which commonly affects both legs. The pain may radiate to the toes and may progress to numbness or weakness unless the patient rests. ☐ Spondylolisthesis. A major structural disorder characterized by forward slippage of one vertebra onto another, spondylolisthesis may produce no symptoms or may cause low back pain with or without nerve root involvement. Associated symptoms of nerve root involvement include paresthesia, buttock pain, and pain radiating down the leg. Palpation of the lumbar spine may reveal a “step-off” of the spinous process. Flexion of the spine may be limited. ☐ Transverse process fracture. This type of fracture causes severe localized back pain with muscle spasm and hematoma. ☐ Vertebral compression fracture. A vertebral compression fracture may be painless