painted surfaces when teething. They ingest small quantities of paint that over time can build to toxic levels. Lead interferes with normal cell function, particularly nervous system, blood cells, kidneys, and vitamin D and calcium metabolism. Once in the body, lead is deposited in bones and teeth. It is slowly released from the bones. Even when the source is removed, toxic levels can take time to be resolved.

**Manifestations**
Symptoms include cognitive deficit, learning disabilities, hearing impairment, and growth delays. Lead ingestion by pregnant women can cause fetal malformation, low birth weight, and premature birth.

**Diagnosis and Treatment**
A blood test (Pb-B) is the most useful tool in the screening, diagnosis, and monitoring of lead poisoning. Treatment is with **chelation therapy**, the administration of a chemical that will bind to the lead and increase the rate of excretion. Calcium disodium edetate (CaNa$_2$EDTA), dimercaprol (BAL), d-penicillamine, or succimer (DMSA) may be used alone or in combination for several days followed by a rest period and then repeated. Before the child is discharged, a lead-free environment must be assured.

**Nursing Considerations**
Nursing implications include community teaching regarding lead poison risks, environmental assessment, and screening individuals at risk. The school nurse should suspect lead poisoning in children with learning disabilities and children with growth delays. Nurses must teach the parents about individual risk, administration of chelation therapy, and the need to avoid all sources of lead. This teaching may find resistance in some cultures (Box 22-4).

**LEAD POISONING**
Lead poisoning (toxic levels of lead in the blood) is decreasing in the United States but remains a concern in many poor families living in older housing in inner cities or rural areas. The main sources are from lead-based paint, drinking water flowing through lead pipes, lead holding tanks or pipes and tanks soldered with lead, food grown in lead-contaminated dirt, and airborne lead from smelters and battery manufacturing plants.

Children are at greater risk for toxic levels because they absorb and retain more lead in proportion to body weight than adults. Children younger than 7 years are particularly at risk. Young children often chew on crib rails, pencils, or other painted surfaces when teething. They ingest small quantities of paint that over time can build to toxic levels. Lead interferes with normal cell function, particularly nervous system, blood cells, kidneys, and vitamin D and calcium metabolism. Once in the body, lead is deposited in bones and teeth. It is slowly released from the bones. Even when the source is removed, toxic levels can take time to be resolved.

**NURSING CARE**
**PRIORITIES IN NURSING CARE**
Priorities for the nurse in caring for children with gastrointestinal disorders include the following: