* Chapter 28
* The Child with a Gastrointestinal Condition
* Objectives
* Define each key term listed.
* Discuss three common gastrointestinal anomalies in infants.
* Discuss the postoperative nursing care of an infant with pyloric stenosis.
* Discuss the dietary management of celiac disease.
* Understand the symptoms, treatment, and nursing care of a child with Hirschprung’s disease.
* Objectives *(cont.)*
* Understand the treatment and nursing care of a child with intussusception.
* Interpret the nursing management of an infant with gastroesophageal reflux.
* Differentiate among three types of dehydration.
* Explain why infants and young children become dehydrated more easily than adults.
* Understand how nutritional deficiencies influence growth and development.
* Objectives *(cont.)*
* Review the prevention of the spread of thrush in infants and children.
* Trace the route of the pinworm cycle and describe how reinfection takes place.
* Prepare a teaching plan for the prevention of poisoning in children.
* List two measures to reduce acetaminophen poisoning in children.
* Indicate the primary source of lead poisoning.
* Overview of the   
  Gastrointestinal (GI) Tract
* Transports and metabolizes nutrients necessary for the life of the cell
* Extends from mouth to anus
* Nutrients are broken down into absorbable products by enzymes from various digestive organs
* GI System Differences Between Children and Adults
* Laboratory and Diagnostic Studies
* Clinical laboratory
* CBC with differential: anemia, infections, chronic illness
* Erythrocyte sedimentation rate (ESR) is indicative of inflammation
* Comprehensive chemistry panel will reveal electrolyte and chemical imbalances
* Liver function test (LFT)
* Stool cultures
* X-ray studies
* GI series, barium enema, flat plates of the abdomen
* Endoscopy allows direct visualization and biopsy of the GI tract
* Upper—esophagus, stomach, duodenum, bile and pancreatic ducts
* Can remove foreign objects and cauterize bleeding vessels
* Lower colon—sigmoidoscopy
* Entire colon—colonoscopy
* Symptoms of GI Disorders
* Systemic signs
* Failure to thrive (FTT)—failure to develop according to established growth parameters
* Pruritus (itching) in the absence of allergy may indicate liver dysfunction
* Local signs
* Pain
* Vomiting
* Diarrhea
* Constipation
* Rectal bleeding
* Hematemesis
* Nursing Interventions
* Focuses on providing adequate nutrition and preventing infection
* Can result from malnutrition or depressed immune function
* Developmental delays should be investigated
* Skin problems may be related to pruritus, irritation from frequent bowel movements, or other disorders
* Pain and discomfort need to be addressed
* Congenital Disorders
* Esophageal Atresia (Tracheoesophageal Fistula [TEF])
* TEF is caused by a failure of the tissues of the GI tract to separate properly in prenatal life
* Four types
* Upper and lower esophagus (from the stomach) end in a blind pouch
* Upper esophagus ends in a blind pouch; lower esophagus (from stomach) connects to the trachea
* Upper esophagus is attached to trachea; lower esophagus (from stomach) also attached to trachea
* Upper esophagus connects to trachea; lower esophagus (from stomach) ends in a blind pouch
* Three Most Common Forms of TEF
* Manifestations of TEF
* Earliest sign is when mother develops polyhydramnios
* If it ends in blind pouch, fetus cannot swallow amniotic fluid and it will accumulate
* At birth, the infant will vomit and choke when the first feeding is introduced
* Drooling may also be present at birth and is related to atresia
* If upper esophagus enters trachea, the first feeding will enter the trachea and result in coughing, choking, cyanosis, and apnea
* If lower end of esophagus enters trachea, air will enter stomach each time infant breathes, causing abdominal distention
* Nursing Care of TEF
* Prevent pneumonia, choking, and apnea in the newborn
* Assessment of the newborn during the first feeding for signs/symptoms of TEF is essential
* Feeding usually is with clear water or colostrum to minimize seriousness of aspiration
* Surgical repair is essential for survival
* Imperforate Anus
* Lower GI and anus arise from two different types of tissue during fetal development
* Once the two meet, perforation occurs allowing for a passageway
* When perforation does not take place, the lower end of the GI tract and anus end in a blind pouch
* Four types ranging from stenosis to complete separation or failure of the anus to form
* Imperforate Anus *(cont.)*
* Manifestations
* Failure to pass meconium in the first 24 hours must be reported
* Infant should not be discharged home until a meconium stool has passed
* Treatment
* Once established, infant is NPO and prepared for surgery
* Initial surgical procedure may be a colostomy
* Subsequent surgeries will reestablish patency of anal canal
* Pyloric Stenosis
* Obstruction of the lower end of the stomach caused by overgrowth of the circular muscles of the pylorus or spasms of the sphincter
* Commonly classified as a congenital anomaly
* Symptoms usually do not appear until the infant is 2 or 3 weeks old
* Most common surgical condition of GI tract in infancy
* Incidence is higher in boys
* Manifestations of Pyloric Stenosis
* Projectile vomiting is outstanding symptom from force or pressure being exerted on the pylorus
* Vomitus contains mucus and ingested milk
* Infant is constantly hungry and will eat again immediately after vomiting
* Dehydration and olive-shaped mass may be felt in upper right quadrant of abdomen
* Treatment of Pyloric Stenosis
* Surgery is called pyloromyotomy
* Preoperative nursing care
* Intravenous fluids to treat or prevent dehydration
* Thickened feedings may be given by a teaspoon or through a nipple with a large hole
* Burped before and during feedings to remove any gas accumulated in the stomach
* Place on right side (preferably Fowler’s position) after feeding to facilitate stomach drainage into the intestines
* If infant vomits, nurse is instructed to refeed the infant
* Postoperative nursing care
* Monitor intravenous fluids, provide feedings as prescribed by surgeon, document intake and output, monitor surgical site
* Celiac Disease
* Also known as *gluten enteropathy* and  *sprue*
* Leading malabsorption problem in children
* Thought to be caused by inherited disposition with environmental triggers
* Symptoms not evident until 6 months to 2 years of age when foods containing gluten are introduced
* Wheat, barley, oats, and rye
* Celiac Disease *(cont.)*
* Repeated exposure to gluten damage the villi of intestines resulting in malabsorption
* Characteristic profile is abdominal distention with atrophy of the buttocks
* Celiac Disease *(cont.)*
* Infant presents with failure to thrive
* Infant is irritable
* Stools are large, bulky, and frothy
* Diagnosis confirmed by serum immunoglobin A (IgA) and small bowel biopsy
* Treatment
* Lifelong diet restricted in wheat, barley, oats, and rye
* Detailed parent teaching is essential
* A professional nutritionist or dietitian can aid in identifying foods that are gluten-free
* Hirschsprung’s Disease   
  (Aganglionic Megacolon)
* Absence of ganglionic innervation to the muscle of a segment of bowel
* Usually in lower portion of sigmoid colon
* Lack of normal peristalsis, results in constipation
* Stools are ribbonlike due to feces passing through the narrow segment of colon
* Portion of bowel nearest obstruction dilates, causing abdominal distention
* Seen more often in boys and in children with Down syndrome
* May be acute or chronic
* Hirschsprung’s Disease   
  (Aganglionic Megacolon) *(cont.)*
* Newborns: failure to pass meconium stools within 24 to 48 hours may be a symptom
* Infants: constipation, ribbonlike stools, abdominal distention, anorexia, vomiting, and failure to thrive
* Young children: usually seen in clinic after parents have tried over-the-counter laxatives to treat the constipation
* Hirschsprung’s Disease   
  (Aganglionic Megacolon) *(cont.)*
* If untreated, other signs of intestinal obstruction and shock may be seen
* Enterocolitis (inflammation of the small bowel and colon) is a serious condition
* Fever, explosive stools, and depletion of strength
* Diagnostics
* Barium enema
* Rectal biopsy
* Anorectal manometry
* Measures pressure in anal sphincter
* Hirschsprung’s Disease   
  (Aganglionic Megacolon) *(cont.)*
* Treatment
* Surgery to remove impaired part of colon and an anastomosis of intestine is performed
* In newborns, a colostomy may be needed until 12 to 18 months of age, when more extensive repair may be performed
* Nursing Care
* Dependent upon age of child
* In newborns, detection is high-priority
* As child grows, careful attention to a history of constipation and diarrhea is important
* Signs of undernutrition, abdominal distention, and poor feedings are suspect
* Hirschsprung’s Disease   
  (Aganglionic Megacolon) *(cont.)*
* Enemas
* Due to increased size of mucous membranes’ surface area, an increased absorption of the fluid can be anticipated
* Therefore, normal saline solution should be used to prevent water intoxication and death
* Parents should check with the pediatrician to see how much saline should be administered with each enema
* Intussusception
* A slipping of one part of the intestine into another part just below it
* Often seen at the ileocecal valve
* The mesentery, a double fan-shaped fold of peritoneum that covers most of intestine and is filled with blood vessels and nerves, is also pulled along
* Edema occurs
* At first, intestinal obstruction occurs, but then strangulation of the bowel occurs as peristalsis occurs
* Affected portion may burst, leading to peritonitis
* Intussusception *(cont.)*
* Generally occurs in boys between 3 months and 6 years
* Frequency decreases after age 36 months
* Can have spontaneous reduction
* Onset is usually sudden
* May have a fever as high as 106° F (41.1° C)
* As it progresses, child may show signs of shock, sweating, weak pulse, shallow, grunting respirations; abdomen is rigid
* In infants, severe pain in abdomen, loud cries, straining efforts, and kicking and drawing of legs toward abdomen
* Child vomits green or greenish-yellow fluid (bilious)
* Bowel movements diminish, little flatus is passed
* Blood and mucus with no feces are common about 12 hours after onset of obstruction, called currant jelly stools
* Treatment of Intussusception
* This condition is an emergency
* Diagnosis is determined by history and physical findings
* May feel a sausage-shaped mass in right upper abdomen
* Barium enema is treatment of choice, with surgery if reduction does not occur
* Meckel’s Diverticulum
* Usually occurs near ileocecal valve and may be connected to umbilicus by a cord
* A fistula may also form
* This sac is subject to inflammation
* Most common congenital malformation of the GI tract
* Seen more often in boys
* Meckel’s Diverticulum *(cont.)*
* Symptoms can occur at any age, but typically appear by 2 years of age
* Painless bleeding from rectum
* Bright-red or dark-red blood is more usual than tarry stools
* Abdominal pain may or may not be present
* Diagnostics
* Barium enema or radionuclide scintigraphy are used in diagnosing
* X-ray films are not helpful
* Treatment
* Surgical removal of the diverticulum
* Nursing care is same for any patient having undergone abdominal surgery
* Hernias
* Inguinal
* Protrusion of part of the abdominal contents through the inguinal canal in the groin
* Umbilical
* Protrusion of a portion of the intestine through the umbilical ring
* Appears as a soft swelling covered by skin, which protrudes when infant cries or strains
* Hernias *(cont.)*
* May be present at birth (congenital) or acquired
* Is reducible if it can be put back into place by gentle pressure
* If it cannot be put back, it is irreducible or incarcerated
* Strangulated hernia is when intestine becomes caught in the passage and the blood supply is diminished
* Child may vomit and have severe abdominal pain
* Emergent surgery is indicated in this type of situation
* In most cases, same-day surgery is performed
* Disorders of Motility
* Gastroenteritis
* Involves inflammation of the stomach and intestines
* Colitis involves an inflammation of the colon
* Enterocolitis involves an inflammation of the colon and small intestines
* Most common noninfectious causes of diarrhea
* Food intolerance
* Overfeeding
* Improper formula preparation
* Ingestion of high amounts of sorbitol
* Priority problem in diarrhea is fluid and electrolyte imbalance and failure to thrive
* Gastroenteritis *(cont.)*
* Treatment is focused on identifying and eradicating cause
* Priority goal of care is restoring fluid and electrolyte balance
* Accurate intake and output, weighing of diapers, observing for dehydration or overhydration, and keeping infant/child warm
* Review with parents proper hand hygiene techniques, safe food handling and storage, principles of cleanliness, and infection prevention
* Clarifying Food Labels
* Children may have food allergies, so teach parents the following

**Ingredient What it may contain**

Binder Egg

Bulking agent Soy

Casein Cow’s milk

Coagulant Egg

Emulsifier Egg

Protein extender Soy

* Vomiting
* Results from sudden contractions of diaphragm and muscles of the stomach
* Persistent vomiting requires investigation because it results in dehydration and electrolyte imbalance
* Continuous loss of hydrochloric acid and sodium chloride from the stomach can cause alkalosis
* Can result in death if left untreated
* Multiple causes of vomiting
* Improper feeding technique
* Systemic illness such as increased intracranial pressure or infection
* Child at risk for aspiration pneumonia
* Vomiting *(cont.)*
* Nursing care
* Carefully feed and burp infant
* Place infant on side after feeding to prevent aspiration if vomiting occurs
* When an older child vomits, turn head to one side and offer emesis basin
* IV fluids may be ordered
* Slowly introduce foods to allow stomach to rest
* Documentation
* Time, amount, color, consistency, force, frequency, and whether vomiting was preceded by nausea or feedings
* Administration of antiemetic agents should also be documented, including time given and if/when vomiting subsided
* Gastroesophageal Reflux
* Lower esophageal sphincter is relaxed or not competent, allowing stomach contents to regurgitate into esophagus
* Associated with neuromuscular delay, such as Down syndrome or cerebral palsy
* Often seen in preterm infants
* Symptoms often decrease once child is able to stand upright and eats more solid foods
* Symptoms
* Vomiting
* Weight loss
* Failure to thrive
* Infant is fussy and hungry
* Respiratory problems can occur when vomiting stimulates closure of epiglottis and infant presents with apnea
* Gastroesophageal Reflux *(cont.)*
* History includes
* When vomiting started
* Type of formula
* Type of vomiting
* Feeding techniques
* Infant’s eating in general
* Tests include
* Barium swallow
* Esophageal sphincter pressure
* pH monitoring—most diagnostic
* Nursing care
* Careful burping
* Prevent overfeeding
* Proper positioning
* Feedings are thickened with cereal
* After being fed, infant is place in an upright position or propped
* Sitting upright in an infant seat is not recommended as it increases intra-abdominal pressure
* Administer medications to relax pyloric sphincter before meals
* Diarrhea
* Diarrhea in infant is a sudden increase in stools from the infant’s normal pattern, with a fluid consistency and a color that is green or contains mucus or blood
* Acute sudden diarrhea most often caused by inflammation, infection, or a response to medications, food, or poisoning
* Chronic diarrhea lasts more than 2 weeks and may indicate malabsorption problem, long-term inflammatory disease, or allergic responses
* Infectious diarrhea caused by viral, bacterial, or parasitic infection, usually involves gastroenteritis
* Symptoms of Diarrhea
* Stools watery and explosive; may be yellowish-green
* Listlessness, refusal to eat, weight loss, temperature may be elevated, possible vomiting
* Dehydration evidenced by sunken eyes and fontanel; dry skin, tongue, and mucous membranes; less frequent urination
* In severe cases, excessive loss of bicarbonate from GI tract results in acidosis
* Constipation
* Difficult or infrequent defecation with the passage of hard, dry fecal material
* May be periods of diarrhea or encopresis (constipation with fecal soiling)
* May be a symptom of other disorders
* Diet, culture, and social, psychological, and familial patterns may also influence occurrence
* Daily use of laxatives or enemas should be discouraged
* Constipation *(cont.)*
* Fewer than 7 bowel movements in a 2-week period
* Ask caregiver to define constipation
* Evaluate dietary and bowel habits
* Some infants develop constipation due to high iron content in formula
* Note frequency, color, and consistency of stool
* Document any medications child is taking
* Dietary modifications include increasing roughage in diet
* Foods high in fiber include whole-grain breads and cereals, raw vegetables and fruits, bran, and popcorn for older children
* Stool softener may be prescribed
* Fluid and Electrolyte Imbalance
* Fluid and Electrolyte Imbalance *(cont.)*
* In children under 2 years of age, surface area is important because more water is lost through the skin than through the kidneys
* Metabolic rate and heat production are also 2 to 3 times greater in infants per kg of body weight
* Produces more waste products, which must be diluted to be excreted
* Stimulates respirations, which increase evaporation through the lungs
* Greater percentage of body water in children under 2 years is contained in extracellular compartment
* Fluid and Electrolyte Imbalance *(cont.)*
* *Fluid turnover is rapid, and dehydration occurs more quickly in infants than in adults*
* A sick infant does not adapt as readily to shift in intake and output
* Less able to concentrate urine and require more water than an adult’s kidneys to excrete a given amount of solute
* Fluid and Electrolyte Imbalance *(cont.)*
* Electrolyte balance depends on fluid balance and cardiovascular, renal, adrenal, pituitary, parathyroid, and pulmonary regulatory mechanisms
* Signs of dehydration may not be evident until the fluid loss reaches 4%, and severe dehydration may not be evident until the fluid loss reaches 10%
* Can treat with oral fluids or parenteral fluids
* Dehydration
* Causes fluid and electrolyte disturbances
* Evaluation of type and severity, including clinical observation and chemical analysis of the blood
* Types of dehydration are classified according to level of serum sodium, which depends on the relative losses of water and electrolytes
* Isotonic
* Hypotonic
* Hypertonic
* Dehydration *(cont.)*
* *Maintenance fluid therapy* replaces normal water and electrolyte losses
* Deficit therapy restores preexisting body fluid and electrolyte deficiencies
* Shock is greatest threat to life in isotonic dehydration
* Children with hypotonic dehydration are at risk for water intoxication
* Potassium is lost in almost all degrees of dehydration and is replaced only after normal urinary excretion is confirmed
* Overhydration
* The body receives more fluid than it can excrete
* Manifests as edema (excess fluid in interstitial spaces)
* Interstitial fluid is similar to plasma, but contains little protein
* Any factor causing sodium retention can cause edema
* Flow of blood out of the interstitial compartments depends on adequate circulation of blood and lymph
* Low protein levels disturb osmotic cellular pressure
* Anasarca is severe generalized edema
* Overhydration *(cont.)*
* Treatment
* IV therapy is ordered and child is monitored
* Is dependent upon type of electrolyte imbalance child has
* If child has a hypertonic type of dehydration, tomato juice should *not* be offered
* If child has a hypotonic type of dehydration, plain water should *not* be offered
* Nursing care
* Early detection and management of edema are essential
* Accurate daily weight, vital signs, observing physical appearance, and noting changes in urine output
* Important for nurse to monitor clinical laboratory results and adjust fluids and foods offered to the child
* Nutritional Deficiencies
* Failure to Thrive
* Failure to gain weight and often lose weight
* Can be caused by
* Physical (organic) pathology (OFTT), such as congenital heart or malabsorption syndrome
* Non-organic (NFTT) is from the lack of parent-infant interaction resulting from environmental factors or neglect
* Failure to Thrive *(cont.)*
* Often admitted to hospital
* Presents with weight loss, irritability, disturbances of food intake, vomiting, diarrhea, and general neuromuscular spasticity sometimes accompany the condition
* Children fall below the third percentile in weight and height on standard growth charts
* Development is delayed
* Due to multiple factors, there may be a disturbance in the mother-child relationship
* Prevention of environmental FTT consists chiefly of social measures
* Pregnancy history sometimes reveals circumstances that may contribute to a lack of mother-infant bonding
* Failure to Thrive *(cont.)*
* Multidisciplinary approach in accordance with circumstances
* In some cases, child is removed from home environment and placed elsewhere
* Assigning the same nursing staff to care for the child may increase nurturing and interaction with the infant and parent
* Failure to Thrive *(cont.)*
* Nurse is vital in supporting rather than in rejecting the mother
* Encourages mother to assist with daily care of child
* Points out developmental patterns and provides anticipatory guidance in this area
* Prognosis is uncertain
* Emotional starvation, particularly in the early years, can be psychologically traumatic
* Inadequacies in intelligence, language, and social behavior have been documented in children who fail to thrive
* Kwashiorkor
* Severe deficiency of protein in the diet despite the fact that the number of calories consumed may be nearly adequate
* Belongs to a class of disorders termed *protein-energy malnutrition*
* Seen most often in third-world countries
* Kwashiorkor *(cont.)*
* Occurs in children 1 to 4 years of age who have been weaned from the breast
* Oral intake is deficient in protein
* Child fails to grow normally
* Muscles become weak and wasted
* Edema of abdomen
* Diarrhea, skin infections, irritability, anorexia, and vomiting may be present
* Hair thins and is dry and may contain a white streak
* Child looks apathetic and weak
* Kwashiorkor *(cont.)*
* Treatment is mainly preventive
* Simple protein powder sprinkled on the culturally prepared meal will alleviate the problem
* Rickets
* Caused by deficient amounts of vitamin D
* Exposure to sunshine is necessary for proper absorption and metabolism of calcium and phosphorus
* Classic symptoms are bow-legs; knock-knees; beading of the ribs, called rachitic rosary; and, improper formation of teeth
* Vitamin supplements along with exercise and exposure to outdoor sunlight is primary form of treatment
* Scurvy
* Caused by insufficient fruits and vegetables that contain vitamin C
* Symptoms include joint pain, bleeding gums, loose teeth, lack of energy
* Vitamin C
* Easily destroyed by heat and exposure to air
* Not stored in the body and daily intake of the vitamin is necessary
* Vitamin supplements and dietary intake such as citrus fruits and raw leafy vegetables
* Infections
* Appendicitis
* Most common reason for emergency abdominal surgery
* Small appendage arising from the cecum
* Lumen may become obstructed with fecal matter or with lymphoid tissue after a viral illness or with parasites
* Stasis, increased swelling, edema, and growth of organisms
* Initial pain usually in periumbilical and increases within a 4-hour period
* When inflammation spreads to peritoneum, pain localizes in RLQ of abdomen
* Appendix may become gangrenous or rupture
* Can lead to peritonitis and septicemia
* Appendicitis *(cont.)*
* Characteristic symptoms
* Tenderness in RLQ, known as McBurney’s point
* Guarding
* Rebound tenderness
* Pain on lifting thigh while in supine position
* Pain in RLQ
* Diagnostics can include
* Blood tests
* Abdominal X-ray
* CT scan
* Ultrasound
* Treatment
* Surgical intervention typically required
* Nursing care is the same as with most other abdominal surgery patients
* Thrush (Oral Candidiasis)
* Usually caused by a fungus, Candida
* Anorexia may be present
* Systemic symptoms are generally mild if infection remains in the mouth; can pass into GI tract causing inflammation of the esophagus and stomach
* Responds well to local application of antifungal suspension, such as nystatin
* Medication should remain in contact with “patches” as long as possible
* With proper care, the condition disappears within a few days after onset
* Worms
* Pinworms (Enterobiasis)
* Looks like a white thread; lives in lower intestine but lays eggs outside anus
* Eggs become infective within hours of being deposited
* Route of entry into the body is through the mouth
* “Scotch tape” test
* Antihelminth medications are given for both types of worm infestations
* Roundworms (Ascariasis)
* Seen more in U.S. southern states and among immigrants and migratory workers
* Caused by unsanitary disposal of human feces and poor hygiene
* Eggs can survive for weeks in soil
* If child eats soil, eggs develop into larvae in intestine, penetrate intestinal wall and enter liver; from there, the worms circulate to the lungs and heart
* Chronic cough without fever is characteristic of this form of infestation
* Patient Teaching
* Main nursing responsibility is educating parents and child about the prevention of worm infestation through general hygiene, food handling and preparation, as well as through environmental controls
* Poisoning
* Goals of treatment
* Remove the poison
* Prevent further absorption
* Call the poison control center
* Provide supportive care—seek medical help
* Detecting the Poison by   
  Specific Odor of Vomitus

**Odor of Vomitus Probable Content**

Sweet Chloroform, acetone

Bitter almond Cyanide

Pear Chloral hydrate

Garlic Phosphorus, arsenic

Shoe polish Nitrobenzene

Violet Turpentine

* Poisoning *(cont.)*
* General concepts
* Volume of swallow
* Principles of care—education
* Poison control centers—nationwide phone number is 1-800-222-1222
* Ipecac syrup—no longer recommended
* Activated charcoal—given for some substances
* Charcoal or any gastric lavage is not effective if administered after 1 hour post-ingestion
* Poisonous Plants
* Selected OTC Drugs   
  that Are Deadly to Toddlers
* Safety Alert
* Many over-the-counter medications are considered harmless by parents but can be deadly to the toddler or small child
* Keep all medications (prescription or otherwise), including herbal supplements, out of reach of small children
* Poisons Commonly   
  Encountered in Pediatrics
* Acids
* Alkalines
* Medications
* Cyanide
* Ethanol
* Petroleum distillates
* Carbon monoxide
* Lead
* Arthropods, insect stings
* Snakes
* Poisonous plants
* Lead Poisoning (Plumbism)
* Results when a child repeatedly ingests or absorbs substances containing lead
* Incidence higher in inner-city tenements
* Children who chew on window sills and stair rails ingest flakes of paint, putty, or crumbled plaster
* Eating nonfood items is called pica
* Can have a lasting effect on the CNS, especially the brain
* Mental retardation occurs in severe cases of lead poisoning
* Lead Poisoning (Plumbism) *(cont.)*
* Symptoms occur gradually
* Lead settles in soft tissues and bones
* Is excreted in urine
* Beginning stages, signs may be weakness, weight loss, anorexia, pallor, irritability, vomiting, abdominal pain, and constipation
* Later stages, signs may be anemia and nervous system involvement
* Lead Poisoning (Plumbism) *(cont.)*
* Lead is toxic to the synthesis of heme in the blood, which is necessary for hemoglobin formation and renal tubule functioning
* Blood lead levels are primary screening test
* X-ray films of bones may show further lead deposits
* History may reveal pica
* Treatment is aimed at reducing concentration of lead in blood
* Chelating agents may be taken for several months
* Prognosis depends on extent of poisoning
* Foreign Bodies
* 80% of all ingestions occur in children between 6 months and 3 years of age
* About 80% of items ingested pass through the GI tract without difficulty
* May take up to 6 days to occur
* Caution parents not to use laxatives and to maintain a normal diet to avoid intestinal spasms
* Review Question
* What should the nurse monitor before administering intravenous fluid to a child who is dehydrated?
* Review
* Objectives
* Key Terms
* Key Points
* Online Resources
* Review Questions