disease are given a combination of drugs that allow smaller doses of medications to achieve the dopamine levels needed. These patients tend to become acclimatized or tolerant of their medication, and thus the doses must be increased to have the same effect. When the dose cannot be increased or the side effects become intolerable, the doctor will request a **drug holiday,** in which the patient stops taking antiparkinsonian medications for a week or so and then restarts them at a lower dose, to produce the desired effects.

LOCAL AND GENERAL ANESTHETIC MEDICATIONS

Anesthesia means loss of sensation. Anesthesia administered locally creates a lack of feeling without a loss of consciousness. For instance, lidocaine is used to numb the skin before stitches are placed to close a wound. General anesthesia causes patients to lose both feeling and consciousness, such as during a surgical procedure.

Local Anesthesia

Local anesthesia can be applied to a body surface to numb an area before a procedure. The local anesthetic blocks the entry of sodium ions into nerve fibers. Adequate amounts must be applied or injected to keep the area numb throughout the procedure. Local anesthetics come in a variety of forms: cream (lidocaine/prilocaine [EMLA]), aerosol spray (benzocaine/butamben/tetracaine [Exactacain]), otic (benzocaine [Americaine otic]) or ophthalmic drops (tetracaine [Tetcaine ophthalmic]), or an injectable solution such as lidocaine (Xylocaine). Local anesthetics are classified as esters or amides, depending on the structure of their molecules.

Amides, such as lidocaine and novocaine, tend to last longer, so they are more popular. Adverse effects and allergies are rare. The patient must be observed during the procedure to be sure that the anesthetic is still in effect and to monitor any negative reactions. Be sure to document your observations.

Esters, such as procaine and tetracaine, have the potential for severe allergic reactions such as anaphylactic shock because of the release of para-aminobenzoic acid (PABA), a known allergen, during the metabolism process. Because of this, the use of esters is limited to topical preparations, in which exposure to PABA is much less significant than in injections.

General Anesthesia

General anesthetics can be administered by intravenous (IV) infusion or inhalation. For longer procedures, an IV agent such as midazolam (Versed), propofol (Diprivan), or ketamine (Ketalar) may be used initially, followed by inhalation therapy with medications such as desflurane (Suprane), isoflurane (Forane), or sevoflurane (Ultane). Use of the IV agent allows smaller doses of inhalation therapy medications to be used and thus reduces the risk for severe side effects of these medications.

CRITICAL THINKING

Why would an IV anesthetic be given before an inhaled gas is administered by mask?

Inhaled general anesthetics are volatile agents that can depress respiratory and cardiovascular function, so patients must be observed carefully during procedures in which these drugs are used. An example of an inhaled general anesthetic in ambulatory care is nitrous oxide, which is used for dental and brief surgical procedures.

Contraindications to inhalation anesthetics include any known hypersensitivity to specific anesthetic agents or respiratory system disease.