

### Anticholinergic Medications

As discussed in Chapter 13, anticholinergic medications block the effects of the neurotransmitter acetylcholine. It is thought to act on the brain's chemoreceptor trigger zone in an area of the medulla. This zone initiates vomiting and can be stimulated by blood-borne medications or hormones. Trimethobenzamide (Benzacot, Tigan, Ticon) is an anticholinergic that can be given orally, rectally, or by IM injection and is available by prescription only. Another prescription anticholinergic medication is scopolamine (Maldemar, Scopace, Transderm-Scōp), which can be given by the IV, IM, or subcutaneous route for nausea and vomiting. In addition, scopolamine can be used as a transdermal disc placed behind the ear before exposure to a motion sickness-causing event.

### Cannabinoids

These are manufactured forms of cannabis. Marijuana is the herbal form of cannabis. An example of a cannabinoid is nabilone (Cesamet), and it works by affecting the area of the brain that controls the nausea and vomiting impulses. This medication has a high level of addiction possibility and therefore should be prescribed only when other antiemetics are unsuccessful for the patient receiving chemotherapy. In addition, the patient may suffer from altered thinking and thus should take this medication with care. Cesamet is taken orally before the start of chemotherapy and for a period of time during and after each chemotherapy dose. This drug and marijuana are controlled substances. According to the National Conference of State Legislatures, as of August 2017, a total of 29 states, the District of Columbia, Guam, and Puerto Rico now allow for comprehensive public medical marijuana and cannabis programs. There are varying laws in each state as to who can grow and dispense marijuana and what medical conditions are eligible. There are also some states that allow only cannabis oils with low THC and not the actual marijuana plant. It is important to check the most up-to-date regulations in your state if you are involved with patients that would benefit from medical marijuana.

#### A CLOSER LOOK: Illnesses Qualifying Patients for Medical Marijuana

The following list provides examples of the qualifying illnesses; the list may differ by state.

- Cancer
- Glaucoma
- HIV/AIDS
- Hepatitis C
- Amyotrophic lateral sclerosis
- Crohn's disease
- Alzheimer's disease
- PTSD
- Peripheral neuropathy
- Severe arthritis
- Chronic or debilitating diseases or treatments causing:
  - Wasting
  - Severe pain

### Phosphorated Carbohydrate Solution

The trade name of phosphorated carbohydrate solution is Emetrol, and it contains dextrose, fructose (a type of sugar), and phosphoric acid. It decreases the hyperactivity of the smooth muscle of the gastric mucosa. This medication is contraindicated in patients with diabetes mellitus because of the fructose content. It is available OTC and is taken by mouth. It is thought to be safe to use during pregnancy, but, as always, the physician's advice should be sought before any medication is taken.