the time after which the medication should be discarded. When beyond-use dates are applied, the pharmacist should emphasize to the patient that the dates are applicable only when proper storage conditions are observed. Patients should be encouraged to clean out their drug storage cabinets periodically.

RECTAL SUPPOSITORIES

Examples of rectal suppositories are presented in Table 12.1. As noted earlier, drugs like aspirin given for pain, ergotamine tartrate for treating migraine headaches, theophylline as a smooth muscle relaxant in treating asthma, and chlorpromazine and prochlorperazine, which act as antiemetics and tranquilizers, are intended to be absorbed into the general circulation to provide systemic effects. The rectal route of administration is especially useful if the patient is unwilling or unable to take medication by mouth.

Suppositories are also intended to provide local action within the perianal area. Local anesthetic suppositories are commonly employed to relieve *pruritus ani* of various causes and the pain sometimes associated with hemorrhoids. Many commercial hemorrhoidal suppositories contain a number of medicinal agents, including astringents, protectives, anesthetics, lubricants, and others, intended to relieve the discomfort of the condition. Cathartic suppositories are contact-type agents that act directly on the colonic mucosa to produce normal peristalsis. Because the contact action is restricted to the colon, the motility of the small intestine is not appreciably affected. Cathartic suppositories are more rapid acting than orally administered medication. Suppositories of bisacodyl are usually effective within 15 minutes to an hour and glycerin suppositories usually within a few minutes following insertion.

Some commercially prepared suppositories are available for both adult and pediatric use. The difference is in the shape and drug content. Pediatric suppositories are more narrow and pencil shaped than the typical bullet-shaped adult suppository. Glycerin suppositories are commonly available in each type.

A formula for glycerin suppositories is as follows:

Glycerin	91 g
Sodium stearate	9 g
Purified water	5 g
To make about	105 g

In preparation of this suppository, the glycerin is heated in a suitable container to about 50°C (120°F). Then the sodium stearate is dissolved with stirring in the hot glycerin, the purified water added, and the mixture immediately poured into the suppository mold. It is recommended that if the mold is metal, it also be heated prior to addition of the glycerin mixture. After cooling to solidification, the suppositories are removed. This formula will prepare about 50 adult suppositories. Approximately the same formulation is used in pharmaceutical and cosmetic stick products, such as deodorants and antiperspirants.

Glycerin, a hygroscopic material, contributes to the laxative effect of the suppository by drawing water from the intestine and from its irritant action on the mucous lining. The sodium stearate, a soap, is the solidifying agent and may also contribute to the laxative action. Because of the hygroscopic nature of glycerin, the suppositories attract moisture and should be maintained in tight containers, preferably at temperatures below 25°C (77°F).

URETHRAL SUPPOSITORIES

Suppositories for urethral administration tend to be thinner and tapered, often about 5 mm in diameter. They have been used in the treatment of local infections, and a much smaller urethral suppository has been introduced for the administration of alprostadil in the treatment of erectile dysfunction.

Compounding Urethral Suppositories

In addition to a urethral mold, a straw or thin glass tube can be used as the mold when preparing urethral suppositories. A