

micronized, to minimize eye irritation and/or scratching of the cornea. The suspended particles must not associate into larger particles upon storage and must be easily and uniformly redistributed by gentle shaking of the container prior to use.

PACKAGING OPHTHALMIC SOLUTIONS AND SUSPENSIONS

Although a few commercial ophthalmic solutions and suspensions are packaged in small glass bottles with separate glass or plastic droppers, most are packaged in soft plastic containers with a fixed built-in dropper (Figs. 17.3 and 17.4). This type of packaging is preferred both to facilitate administration and to protect the product from external



FIGURE 17.3 Commercial ophthalmic solution in a plastic container with built-in dropper device. (Courtesy of Alcon.)



FIGURE 17.4 Ophthalmic product packaging. Liquids are in 5- and 15-mL Drop-Tainer dispensers, and ointments are in tubes containing 3.5 g of product. (Courtesy of Alcon.)

contamination. Ophthalmic solutions and suspensions are commonly packaged in containers holding 2, 2.5, 5, 10, 15, and 30 mL of product.

Patients must be careful to protect an ophthalmic solution or suspension from external contamination. Obviously, the fixed-dropper containers are less likely to acquire airborne contaminants than screw-type bottles, which are fully opened when in use. However, each type is subject to contamination during use by airborne contaminants and by the inadvertent touching of the tip of the dropper to the eye, eyelids, or other surface.

Ophthalmic solutions used as eyewashes are generally packaged with an eye cup, which should be cleaned and dried thoroughly before and after each use.

PROPER ADMINISTRATION OF OPHTHALMIC SOLUTIONS AND SUSPENSIONS

Prior to the administration of an ophthalmic solution or suspension, the patient or caregiver should be advised to wash the hands thoroughly. If the ophthalmic drops are supplied with a separate dropper, the person should inspect the dropper to make sure it has no chips or cracks. Ophthalmic solutions should be inspected for color and clarity. Out of date or darkened solutions should be