

gel, or liquid. This drug can be extremely irritating to the skin and requires careful patient education for optimal usage. The patient should be instructed to begin with a pea-sized dot of medication, which is divided into the three main areas of the face and then gently rubbed into each area. The medication should not be applied for at least 20 to 30 minutes after washing to decrease the burning sensation. The avoidance of the sun and the daily use of sunscreen must be emphasized because sun exposure can result in severe sunburn. Adolescents should be advised to apply the medication at night and to use a sunscreen with a sun protection factor (SPF) of at least 15 in the daytime.

Topical **benzoyl peroxide** is an antibacterial agent that inhibits the growth of *P. acnes*. Benzoyl peroxide is effective against both inflammatory and noninflammatory acne and is an effective first-line agent. This medication is available as a cream, lotion, gel, or wash. Benzoyl peroxide and salicylic acid are the most effective acne treatment kits available over the counter. The patient should be informed that the medication may have a bleaching effect on sheets, bedclothes, and towels. The adolescent can be reassured that skin bleaching will not occur. Accommodation to the medication can be gained with a gradual increase in the strength and frequency of application.

When inflammatory lesions accompany the comedones, a **topical antibacterial agent** may be prescribed. These agents are used to prevent new lesions and to treat preexisting acne. Clindamycin, erythromycin-metronidazole, and azelaic acid are currently available topical antibacterial therapy. Side effects of these medications include erythema, dryness, and burning; using the medications every other day will decrease the adverse effects. Topical antimicrobials combined with benzoyl peroxide are more effective than either product alone. Retinoids in combination with antimicrobials also improve the penetration of these topical agents and are the only means to address three of the pathogenic causes of acne: keratinization, *P. acnes*, and inflammation. **Systemic antibiotic therapy** is initiated when moderate to severe acne does not respond to topical treatments. The foundation for using systemic antibiotics in acne treatment has been the elimination of the inflammatory effects of *P. acnes* by suppressing the bacteria. Tetracycline, erythromycin, minocycline, and doxycycline are